

Safety Data Sheet – Inventory Form

Control Tech USA Ltd | Control Tech 2011 Ltd.

Hazardous Chemical	Operation/Area	SDS on File	Date of last review
-40 Windshield Washer Fluid	Field Duties	Yes	3/9/2023
6662	Shop Duties	Yes	9/16/2014
Air Tool Oil	Shop Duties	Yes	6/29/2020
Anti-Freeze	Field Duties	Yes	2/27/2015
Badger Multi-Purpose ABC Dry Chemical	Shop Duties	Yes	12/10/2019
Bleach	Office Duties	Yes	7/24/2018
Blue DEF (Diesel Exhaust Fluid)	Field Duties	Yes	10/01/2019
Blue Monster + Citrus Scrubbing Towels	Shop Duties	Yes	2/10/2014
Brakleen Brake Parts Cleaner	Field Duties	Yes	05/26/2015
Canned Air	Office Duties	Yes	3/12/2015
Cascade Dishwasher Pods	Office Duties	Yes	3/25/2015
Castle Endura	Field Duties	Yes	09/04/2020
CerMark	Shop Duties	Yes	5/6/2020
Chico X Fiber/Chico X4/Chico X6/Chico X7	Field Duties	Yes	2/21/2014
Citrol	Shop Duties	Yes	7/30/2019
Clorox Wipes	Office Duties	Yes	6/2/2020
CLR	Shop Duties	Yes	1/16/2019
Cut-Max SE	Field Duties	Yes	1/30/2015
Dawn Ultra Dishwashing Liquid	Office Duties	Yes	10/05/2015

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Dowsil RTV Sealant 732 (Aluminum)	Field Duties	Yes	4/27/2017
Dyna 140	Shop Duties	Yes	4/3/2017
Febreeze	Office Duties	Yes	8/27/2020
Formula 50	Shop Duties	Yes	7/6/2016
Free All	Shop Duties	Yes	03/23/2018
Gasket Remover 03017	Shop Duties	Yes	10/15/2014
Gasola Soft Set Thread Sealant	Field Duties	Yes	05/26/2020
Gasoline (All Grades)	Shop Duties	Yes	3/18/2014
Glyptal Spray	Field Duties	Yes	2/25/2022
GoJo Natural Orange Pumice Hand Cleaner	Shop Duties	Yes	2/12/2018
Good & Clean Disinfectant Wipes	Office Duties	Yes	6/17/2015
Gorilla Heavy Duty Construction Adhesive	Shop Duties	Yes	08/19/2019
High Performance V2100 System Enamel	Shop Duties	Yes	3/26/2009
High Temperature MP Synthetic Lithium Complex Grease	Shop Duties	Yes	2/9/2012
Hydrogen Sulfide 0.0001% to 2% in Air	Field Duties	Yes	3/4/2013
Hydrogen Sulfide/Inert Gas Mixture	Field Duties	Yes	10/15/2016
Jasco Paint Thinner	Shop Duties	Yes	04/21/2015
Jet Lube 550	Shop Duties	Yes	02/01/2019

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Kopr-Kote Aerosol	Shop Duties	Yes	7/3/2013
Krylon Camouflage Paint	Shop Duties	Yes	1/30/2023
Krylon Crystal Clear Acrylic Spray Coating	Shop Duties	Yes	11/25/2022
Lock Cylinder Spray	Shop Duties	Yes	2/22/2016
Loctite 248 TL 9G Stick M/L	Field Duties	Yes	12/07/2020
Loctite 5113 Thread Sealant	Field Duties	Yes	08/06/2014
Loctite Superflex Red High Temp RTV Silicone Adhesive Sealant	Field Duties	Yes	08/01/2014
Low Sulphur Diesel	Shop Duties	Yes	4/9/2012
Lubriplate 630-AA	Field Duties	Yes	9/10/2020
Lysol	Office Duties	Yes	5/1/2017
Magic Mix Metal Polish	Shop Duties	Yes	10/1/2015
Methane 0.0001% to 3.0% in Air	Field Duties	Yes	5/15/2018
Methanol	Field Duties	Yes	6/25/2020
Molykote 33 Extreme Low Temp Bearing Grease, Light	Shop Duties	Yes	11/13/2018
Motor Medic Air Brake System Anti-Freeze & Rust Guard	Shop Duties	Yes	09/04/2019
Mr. Clean All Purpose Cleaner	Office Duties	Yes	04/29/2015
Nikal	Field Duties	Yes	9/2/2020

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Non- Flammable Gas Mixtiure	Field Duties	Yes	6/7/2012
Permatex 133 Anti-Seize Lubricant	Shop Duties	Yes	05/11/2020
Prostar Anti-Spatter Spray	Field Duties	Yes	7/1/2012
Rapid Tap	Shop Duties	Yes	1/10/2014
Raw Natural Gas, Sweet	Field Duties	Yes	10/8/2015
Ridgid Dark Thread Cutting Oil	Field Duties	Yes	03/27/2017
Ridgid Nu-Clear Thread Cutting Oil	Field Duties	Yes	5/2/2018
Roots Meter Oil	Field Duties	Yes	10/4/2012
Round Up Transorb	Shop Duties	Yes	1/15/2021
SC4-Kit- 1 Part A	Field Duties	Yes	3/31/2021
SC4-Kit- 1 Part B	Field Duties	Yes	3/31/2021
SC65	Shop Duties	Yes	11/18/2019
Sealing Compound Putty Type	Shop Duties	Yes	10/7/2015
Spectracide Wasp & Hornet Killer	Shop Duties	Yes	06/22/2022
Spray Nine	Shop Duties	Yes	4/27/2020
STL2 Thread Lubricant	Field Duties	Yes	1/1/2019
Swak And Classic Swak	Field Duties	Yes	3/16/2018
TF-15 Jet Lube	Field Duties	Yes	9/12/2021

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Hazardous Chemical	Operation/Area	SDS on File	Date of last review
Threadlocker Blue	Shop Duties	Yes	10/5/2020
Uline All Purpose Foaming Soap	Shop Duties	Yes	3/2/2020
Univis J 13	Field Duties	Yes	6/12/2004
Van-sol	Shop Duties	Yes	1/18/2021
WD-40 Aerosol	Shop Duties	Yes	8/2/2021
White Lithium Grease	Shop Duties	Yes	10/06/2017
Windex	Office Duties	Yes	2/25/2015
Windshield Washer Fluid	Shop Duties	Yes	3/9/2023
Wypall Waterless Cleaning Wipes	Shop Duties	Yes	06/11/2020
Zep 45	Shop Duties	Yes	6/29/2016



Monarch Oil

INDUSTRIAL - AUTOMOTIVE - COMMERCIAL
2216 Shirley Dr. Kitchener, ON, Canada N2B 3Y1
TEL: 519-743-8241 FAX: 519-743-9802

SAFETY DATA SHEET

CCH550

-40 Windshield Washer Fluid

SECTION 1. IDENTIFICATION

Product name: -40 Windshield Washer Fluid

Product code: WWBM

SDS number: CCH550

Use of product: Windshield washer fluid.

Please refer to Product label.

Company Identification:

Monarch Oil LTD

2216 Shirley Dr

Kitchener ON

Tel.: 519-743-8241

Fax: 519-743-9802

EMERGENCY TELEPHONE NUMBER:

24-Hour Emergency Contact CANUTEC: 613-996-6666

Local Emergency Contact: 613-996-6666

SECTION 2. HAZARDS IDENTIFICATION

GHS Classification:

Flammable liquid - Category 3; Acute toxicity (Oral) - Category 3; Acute toxicity (Dermal) - Category 3; Acute toxicity (Inhalation) - Category 3; Serious eye damage/eye irritation - Category 2A; Specific target organ toxicity (single exposure) - Category 1.

GHS Label Elements:

Hazard pictograms:



Signal Word:

Danger

Hazard Statement(s):

H226 Flammable liquid and vapour.

H301+H311+H331 Toxic if swallowed, in contact with skin or if inhaled.

H315 Causes skin irritation

H319 Causes serious eye irritation.

H370 Causes damage to organs (eyes) if swallowed.

Precautionary Statement(s):

Prevention:

P102 Keep out of reach of children.

P103 Read label before use.

P101 If medical advice is needed, have product container or label at hand.

P210 Keep away from heat, sparks, open flames, and hot surfaces. No smoking.

P233 Keep container tightly closed.

P240 Ground/bond container and receiving equipment.

P241 Use explosion-proof electrical, ventilating, lighting, and other equipment.

P242 Use only non-sparking tools.

P243 Take precautionary measures against static discharge.
 P260 Do not breathe fume, mist, vapours, spray.
 P264 Wash hands and skin thoroughly after handling.
 P270 Do not eat, drink or smoke when using this product.
 P271 Use only outdoors or in a well-ventilated area.
 P280 Wear protective gloves/protective clothing/eye protection/face protection.

Response:

P301 + P310 IF SWALLOWED: Immediately call a POISON CENTRE/doctor.P330 Rinse mouth.
 P303 + P361 + P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.P312 Call a POISON CENTRE/doctor if you feel unwell.P363 Wash contaminated clothing before reuse.

P305+P338+P351 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.P313+P337 If eye irritation persists: Get medical advice/attention.

P304 + P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.

P321 Specific treatment (see supplemental first aid instruction on this label).

P370 + P378 In case of fire: Use appropriate foam, carbon dioxide, dry chemical powder, water spray or fog to extinguish.

Storage:

Store in a well ventilated place. Keep cool. Keep container tightly closed. Store locked up. Do not eat, drink or smoke when using this product.

Disposal:

Dispose of contents/container in accordance with applicable regional, national and local laws and regulations.

Other Hazards:

None known.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Mixture:

Chemical Name	%	CAS No.
Methanol	40-50	67-56-1

The specific chemical identity and/or exact percentage of composition (concentration) have been withheld as a trade secret.

SECTION 4. FIRST-AID MEASURES

Description of first aid measures:

General:

Never give anything by mouth to an unconscious person. Take proper precautions to ensure your own safety before attempting rescue (e.g. wear appropriate protective equipment and remove any sources of ignition).

Inhalation:

If inhaled, remove victim to fresh air and keep at rest in a position comfortable for breathing. If breathing is difficult, give oxygen. Immediately call a poison center or doctor/physician.

Skin contact:

If on skin or hair, remove/take off immediately all contaminated clothing. Rinse skin with water/shower. Wash contaminated clothing before reuse.

Contact with eyes:

Rinse immediately and cautiously with water, pulling the eyelids well away from the eye for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Ensure that folded skin of eyelids is thoroughly washed with water. Obtain medical attention if pain, blinking or redness persists.

Ingestion:

If swallowed immediately call a POISON CENTRE or doctor. Rinse mouth. Swallowing methanol is potentially life threatening. Onset of symptoms may be delayed for 18 to 24 hours after digestion. If conscious and medical aid is not immediately available, do not induce vomiting. In actual or suspected cases of ingestion, transport to medical facility immediately. (See note to physician)

Most important symptoms and effects, both acute and delayed:

Can cause headache, nausea, vomiting, dizziness, drowsiness and confusion. A severe exposure can cause stomach pain, muscle pain, difficult breathing and coma. Vision can be impaired and permanent blindness can result. There may be other permanent effects on the nervous system e.g. tremor, seizures.

Indication of any immediate medical attention and special treatment needed:

Acute exposure to methanol, either through ingestion or breathing high airborne concentrations can result in symptoms appearing between 40 minutes and 72 hours after exposure. Symptoms and signs are usually limited to CNS, eyes and gastrointestinal tract. Because of the initial CNS's effects of headache, vertigo, lethargy and confusion, there may be an impression of ethanol intoxication. Blurred vision, decreased acuity and photophobia are common complaints. Treatment with ipecac or lavage is indicated in any patient presenting within two hours of ingestion. A profound metabolic acidosis occurs in severe poisoning and serum bicarbonate levels are a more accurate measure of severity than serum methanol levels. Treatment protocols are available from most major hospitals and early collaboration with appropriate hospitals is recommended.

Medical Conditions Aggravated by Exposure

Respiratory conditions.

SECTION 5. FIRE-FIGHTING MEASURES

Extinguishing methods:**Suitable extinguishing media:**

Synthetic Fire fighting foam AR-FFF (3% solution). Dry powder. Carbon dioxide. Water spray. Sand.

Unsuitable extinguishing media:

Do not use a heavy water stream. Water may be effective for cooling, diluting, or dispersing methanol, but may not be effective for extinguishing a fire because it will not cool methanol below its flash point. If water is used for cooling, the solution will spread if not contained. Mixtures of methanol and water at concentrations greater than 20% methanol are still considered flammable.

Fire Hazard:

Highly flammable liquid and vapor. Can accumulate in confined spaces, resulting in a toxicity and flammability hazard. Incomplete combustion releases dangerous carbon monoxide, carbon dioxide and other toxic gases. Under fire conditions closed containers may rupture or explode. Flame may be invisible during the day. The use of infrared and or heat detection devices is recommended.

Explosion hazard:

May form flammable/explosive vapor-air mixture.

SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures:**General:**

Remove ignition sources. Use special care to avoid static electric charges. No open flames. No smoking.

Protective equipment:**For non-emergency personnel:****Protective equipment:**

Wear suitable protective clothing, gloves and eye or face protection.

Emergency procedures:

Evacuate unnecessary personnel.

For emergency responders:

Protective equipment:

Wear suitable protective clothing and eye or face protection.

Emergency procedures:

Remove ignition sources. Ensure adequate ventilation. Avoid inhalation of vapors. Avoid contact with eyes, skin and clothing.

Environmental precautions:

Prevent entry to sewers, on the ground or into any waterway.

Methods for cleaning up:

Stop leak if safe to do so. Remove all sources of ignition. Small quantities of liquid spill: take up in non-combustible absorbent material and shovel into container for disposal. Use a non-sparking shovel. Wash spill area with soapy water. Large spills: Dike to collect large liquid spills. Alcohol resistant foams may be applied to spill to diminish vapour and fire hazard. Remove liquid by intrinsically safe pumps or vacuum equipment designed for vacuuming flammable materials (i.e. equipped with inert gases and ignition sources controlled). Place in suitable, covered, labelled containers.

SECTION 7. HANDLING AND STORAGE

Precautions for safe handling:

Additional hazards when processed:

Handle empty containers with care because residual vapors are flammable.

Precautions for safe handling:

Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work. Provide good ventilation in process area to prevent formation of vapor. No open flames. No smoking. Use only explosion-proof equipment. Use only non-sparking tools. Do not breathe Vapors

Conditions for safe storage, including any incompatibilities:

Technical measures:

Proper grounding procedures to avoid static electricity should be followed. Ground/bond container and receiving equipment. Use explosion-proof electrical equipment. Have appropriate fire extinguishers and spill cleanup equipment in or near storage area.

Storage conditions:

Keep only in the original container in a cool, well ventilated place away from : Ignition sources, Oxidising agents. Keep in fireproof place. Keep container tightly closed. Do not store in confined spaces.

Storage area:

Store at room temperature. Keep out of direct sunlight. Store in a dry area. Keep container in a well-ventilated place. Fireproof storeroom. Keep locked up.

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters:

Chemical name	ACGIH TWA	ACGIH STEL	ACGIH TWA	ACGIH STEL
Methanol	262 mg/m ³	327 mg/m ³	200 ppm	250 ppm

Exposure controls:

Engineering controls:

Carry out operations in the open/under local exhaust/ventilation or with respiratory protection. Both local exhaust and good general room ventilation must be provided not only to control exposure but also to prevent formation of flammable mixtures. Emergency safety showers should be available in the immediate vicinity of any potential exposure. Use only explosion-proof equipment.

Eye protection:

Chemical goggles or safety glasses. Face-shield. (EN166)

Skin and body protection:

Wear chemical resistant overall.

Respiratory protection:

Where exposure through inhalation may occur from use, respiratory protection equipment is recommended. Wear a positive pressure full face self-contained breathing apparatus or a full face supplied air respirator.

Other information:

Smoking, eating and drinking should be prohibited in areas of storage and use.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES
Information on basic physical and chemical properties:

Physical State : Liquid	Appearance : Blue	Odor : Alcohol	Odor threshold : Not available
Vapor Tension : Not available	Vapor Density : Not available	Evaporating Rate : Not available	
Boiling Range : 79°C	Freezing Point : -40°C	pH : N/A	
Density (20°C) : 0,934	Distribution factor: WATER/OIL : Not available	Solubility in water(25°C) : 100%	
Flash point : 27.7°C	Auto-ignition temperature: Not available	Flammability limits: Not available	

NOTE: The physical data presented above are typical values and should not be construed as a specification.

SECTION 10. STABILITY AND REACTIVITY
Reactivity:

Stable under normal conditions.

Chemical stability:

The product is stable under storage at normal ambient temperatures. Highly flammable liquid and vapor. May form flammable/explosive vapor-air mixture. Hygroscopic.

Possibility of hazardous reactions:

Under fire conditions closed containers may rupture or explode.

Conditions to avoid:

Direct sunlight. High temperature. Open flame. Ignition sources.

Incompatible materials:

Oxidizing agents. Strong acids. Strong bases. Methanol is not compatible with gasket and O-rings materials made of Buna-N and Nitrile.

Hazardous Decomposition Products:

Very toxic carbon monoxide, carbon dioxide; very toxic, flammable formaldehyde.

SECTION 11. TOXICOLOGICAL INFORMATION
Information on likely routes of exposure:

Ingestion; eye contact; skin contact; inhalation.

Acute Toxicity

Chemical name	LD50 oral rat	LD50 dermal rabbit	CL50 inhalation rat (ppm)
Methanol	5628 mg/kg	15800 mg/kg	64000 ppm/4h rat

LC50: Not applicable.

LD50 - Oral - Rat - 5628 mg/kg

LD50 (dermal): Not applicable.

Skin Corrosion/Irritation:

Human experience shows very mild irritation.

Serious Eye Damage/Irritation:

Animal tests show serious eye irritation.

STOT (Specific Target Organ Toxicity) - (single exposure):

Inhalation

May be harmful based on human experience and animal tests. Depression of the central nervous system.

Symptoms may include headache, nausea, dizziness, drowsiness and confusion. A severe exposure can cause unconsciousness.

Toxic, can cause death based on human experience. At high concentrations.

Skin Absorption

Harmful based on human experience. Can cause effects as described for inhalation. Depression of the central nervous system. Symptoms may include headache, nausea, dizziness, drowsiness and confusion. A severe exposure can cause unconsciousness.

Ingestion

Toxic, can cause death depression of the central nervous system, impaired vision and blindness. In some cases, there may be delayed effects on the nervous system. Symptoms may include headache, nausea, vomiting, dizziness, drowsiness and confusion. A severe exposure may cause stomach pain, muscle pain, difficult breathing and coma. Vision can be impaired and permanent blindness can result. There may be other permanent effects on the nervous system e.g. tremor, seizures.

Aspiration hazard:

Not classified

STOT (Specific Target Organ Toxicity) - Repeated Exposure

May cause damage to organs based on limited evidence. If inhaled: effects on the central nervous system. Symptoms may include restlessness, reduced ability to think, muscle tremors, memory loss and personality changes. effects similar to STOT (Specific Target Organ Toxicity) - Single Exposure, as described above.

May cause Following skin contact: dermatitis. Symptoms may include dry, red, cracked skin (dermatitis). effects similar to STOT (Specific Target Organ Toxicity) - Single Exposure, as described above.

May cause If inhaled: at high concentrations visual disturbances, cataracts, opacities.

May cause If inhaled: at high concentrations harmful effects on the liver.

Chronic symptoms:

Some teratogenic and fetotoxic effects, were observed in animal studies but are inconclusive.

Germ cell mutagenicity:

Not classified

Carcinogenicity:

Not classified

Reproductive toxicity:

Not classified

SECTION 12. ECOLOGICAL INFORMATION

Eco toxicity:

Acute Aquatic Toxicity

Chemical name	LC50 fish	EC50 Daphnia	EC50 other aquatic organisms l
Methanol	15400 - 29400 mg/l 96 h - Fish	> 10000 mg/l 48 h – Daphnia	22000 mg/l EC50 72h Algae [mg/l]

Persistence and degradability:

Rapidement dégradable.

Bioaccumulation:

This product and its degradation products are not expected to bio accumulate.

Mobility in Soil:

Mobile

SECTION 13. DISPOSAL CONSIDERATIONS

Disposal Methods:

The generation of waste should be avoided or minimized wherever possible. Methanol waste should be handled and stored in a similar manner to methanol products or mixtures. Avoid release to the environment. Collect methanol waste in secure and sealable containers. Refer to section 6 and 7 for information on accidental releases, handling and storage conditions. Methanol waste shall not be mixed together with other waste. Dispose methanol waste in a safe manner in accordance with local and/or national regulations. Use qualified hazardous waste companies to transport and dispose of methanol waste. Recycle wherever possible. Large volumes may be suitable for re-distillation. Empty containers may contain hazardous residue. Never weld cut or grind empty containers. Empty containers should be thoroughly rinsed with large quantities of clean water. Rinse water should be disposed of as methanol waste.

SECTION 14. TRANSPORT INFORMATION

Regulation	UN No.	Proper Shipping Name	Transport Hazard Regulation Class	Packing Group
Canadian TDG	1230	METHANOL SOLUTION (METHANOL), (> 450L only)	3 (6.1)	II

Special Precautions for User

Please note: In containers of 450L or less, this product meets the requirements for exemption under TDG regulation special provisions, part 1, section 1.36b: Class 3, Flammable liquids: Alcohol Exemption.

In containers of 5 L (5Kg) capacity or less this product is classified as a "Consumer Commodity" under DOT regulations.

SECTION 15. REGULATORY INFORMATION

Safety, Health and Environmental Regulations Canada

Domestic Substances List (DSL) / Non-Domestic Substances List (NDSL)

All ingredients are listed on the DSL/NDSL.

SECTION 16. OTHER INFORMATION

Prepared by:

Hall Chem Mfg. Inc.

Date / Revised: February 2018

The information in this detailed M.S.D.S. is available on request, for the customer service. It must not be used for any other purpose and its reproduction and/or publication is forbidden without the consent of HALL CHEM MFG. INC. Even though this information is based on reliable sources, HALL CHEM MFG. INC. cannot guarantee its accuracy and formally excludes all explicit guarantee relative to the exactitude of this information or of the results following its application.

MATERIAL SAFETY DATA SHEET

LINDON MANUFACTURING AND LABORATORY

7614 WALLISVILLE, HOUSTON, TX 77020

PHONE (713) 672-4450 FAX (713) 675-2206

PRODUCT NAME: 6662

CHEMTREC EMERGENCY: 1-800-424-9300 U.S. OR CANADA 1-703-527-3887

HAZARD RATING

N4 - EXTREME	FIRE	1
F3 - HIGH	HEALTH	2
P2 - MODERATE	REACTIVITY	0
A1 - SLIGHT	SPECIAL	0
0 - INSIGNIFICANT		

MANUFACTURER

LINDON MANUFACTURING
7614 WALLISVILLE ROAD
HOUSTON, TEXAS 77020

SECTION 1 - PRODUCT IDENTIFICATION

TRADE NAME (USED ON LABELS): 6662
CAS NUMBER: BLEND
CHEMICAL DESCRIPTION: H2S SCAVENGER
DOT CLASSIFICATION: FLAMMABLE LIQUID N.O.S.
HAZARD CLASSIFICATION: 3, UN1993, PG III
LAST REVISION DATE: 9/16/2014

SECTION II - HAZARDOUS INGREDIENTS

<u>CAS NUMBER</u>	<u>MATERIAL</u>	<u>ACGIH LTV</u>	<u>OSHA PEL</u>
67-56-1	METHANOL	250 PPM	200 PPM
110-91-8	MORPHOLINE	NOT DET	20 PPM

SECTION III - PHYSICAL PROPERTIES

SPECIFIC GRAVITY: 1.075 – 1.10
FLASH POINT: 120 F
POUR POINT: -22 F
pH: 10.8 – 11.9
SOLUBILITY IN WATER: DISPERSABLE
APPEARANCE AND ODOR: CLEAR TO AMBER LIQUID, MILD ODOR

CHEMICAL NAME: 6662

SECTION IV - FIRE AND EXPLOSION HAZARD DATA

UEL: N/A

LEL: N/A

EXTINGUISHING MEDIA: DRY CHEMICAL,ALCOHOL FOAM,CARBON DIOXIDE

COOL CHEMICAL DRUMS EXPOSED TO FIRE WITH WATER SPRAY. FIGHT FIRE FROM A SAFE DISTANCE. HEAT MAY BUILD UP PRESSURE IN CLOSED CONTAINERS, CAUSING RUPTURES WHICH INCREASES RISK OF SPREADING FIRE AND/OR CAUSING INJURY. AVOID STATIC ELECTRICITY.

SECTION V - REACTIVITY DATA

AVOID: N/A

CHEMICALLY STABLE? Y N

INCOMPATIBLE TO: N/A

HAZARDOUS DECOMPOSITION (ACUTE AND CHRONIC) BYPRODUCTS: OXIDES OF CARBON

SECTION VI - HEALTH HAZARD DATA

**HEALTH HAZARDS (ACUTE & CHRONIC): MAY CAUSE SKIN AND EYE IRRITATION, BREATHING FUMES MAY CAUSE HEADACHE, DIZZINES. TOXIC IF SWALLOWED.
CARCINOGENICITY - OSHA REGULATED: N/A**

SIGNS & SYMPTOMS OF OVEREXPOSURE

INHALATION: HEADACHE AND OR DIZZINESS.

SKIN & EYE CONTACT: SKIN IRRITATION DEVELOPS SLOWLY AFTER CONTACT. EYE IRRITATION DEVELOPS IMMEDIATELY AFTER CONTACT.

INGESTION: IF SWALLOWED, MAY CAUSE DROWSINESS, UNCONSCIOUSNESS, GASTROINTESTINAL PAIN,CRAMPS, NAUSEA,VOMITING AND DIARRHEA.

EMERGENCY & FIRST AID PROCEDURES

IN CASE OF EYE CONTACT FLUSH IMMEDIATELY WITH LARGE AMOUNTS OF WATER FOR AT LEAST 15 MINUTES. GET IMMEDIATE MEDICAL ATTENTION. FOR SKIN, WASH THOROUGHLY WITH SOAP AND WATER. IF INHALED REMOVE TO FRESH AIR. IF NOT BREATHING, GIVE ARTIFICIAL RESPIRATION, PREFERABLY MOUTH-TO-MOUTH. IF BREATHING IS DIFFICULT GIVE OXYGEN. IF SWALLOWED INDUCE VOMITING. GET IMMEDIATE MEDICAL ATTENTION.

CHEMICAL NAME: 6662

MEDICAL CONDITIONS GENERALLY AGGRAVATED BY EXPOSURE

CHRONIC SKIN AND EYE DISORDERS

SECTION VII - SPILL & LEAK PROCEDURES

IF MATERIAL IS SPILLED OR RELEASED

IN CASE OF SPILLAGE, ABSORB WITH INERT MATERIAL AND DISPOSE OF IN ACCORDANCE WITH ALL APPLICABLE REGULATIONS.

HAZARDOUS WASTE: DISPOSE OF ACCORDING TO FEDERAL AND STATE REGULATIONS.

PRECAUTIONS TO BE TAKEN IN STORAGE AND HANDLING

STORE AWAY FROM HEAT AND FLAMES IN A DRY COOL AREA.

OTHER PRECAUTIONS

KEEP AWAY FROM HEAT, SPARKS AND FLAME. USE WITH ADEQUATE VENTILATION AND PROPER RESPIRATORY PROTECTION (FILTER MASKS OR POSITIVE PRESSURE BREATHING MASKS.)

SECTION VIII - CONTROL MEASURES

IF TLV OR PEL IS EXCEEDED WORKERS SHOULD USE ADEQUATE VENTILATION AND PROPER RESPIRATORY PROTECTION (FILTER MASKS OR POSITIVE PRESSURE BREATHING MASKS).

LOCAL EXHAUST SHOULD BE USED IN CLOSED AREAS.

PROTECTIVE GLOVES SUITABLE FOR HYDROCARBON SOLVENTS OR ACIDS SHOULD BE WORN.

CHEMICAL GOGGLES OR FULL FACE SHIELD SHOULD BE WORN AT ALL TIMES.

SECTION IX - SPECIAL PRECAUTIONS

STORE AWAY FROM IGNITION SOURCES. WASH CONTAMINATED CLOTHING BEFORE REUSE.

CHEMICAL NAME: 6662

FEDERAL EPA

COMPREHENSIVE ENVIRONMENTAL RESPONSE , COMPENSATION AND LIABILITY ACT OF 1990 (CERCLA) REQUIRES NOTIFICATION OF THE NATIONAL RESPONSE CENTER OF THE RELEASE OF HAZARDOUS SUBSTANCES EQUAL OR GREATER THAN THE REPORTABLE QUANTITIES (Rq's) IN 40 CFR 302.4

COMPONENTS PRESENT IN THIS PRODUCT AT A LEVEL WHICH COULD REQUIRE REPORTING UNDER THE STATUTE ARE:

**REPORTING
67-56-1 METHANOL RQ = 5000 % IN FORMULA**

THIS MATERIAL AND THE CONTAINER IT IS SHIPPED IN MUST DISPOSED OF IN ACCORDANCE WITH ALL FEDERAL, STATE, AND LOCAL REGULATIONS AND REQUIREMENTS. NO WARRANTY, EXPRESSED OR IMPLIED OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE OR OTHERWISE IS MADE. BUYER ASSUMES ALL RISK OF USE, STORAGE, AND HANDLING. LINDON MAN. & LAB. L.L.C. SHALL NOT BE LIABLE FOR ANY INCIDENTAL OR CONSEQUENTIAL DAMAGE ARISING DIRECTLY OR IN- DIRECTLY IN CONNECTION WITH THE PURCHASE, USE, STORAGE, OR HANDLING OF IT.



SAFETY DATA SHEET

OSHA HCS (29 CFR 1910.1200)

SECTION 1: PRODUCT AND COMPANY IDENTIFICATION

Product identifier

Chemical Name	Not applicable.
CAS No.	Mixture
Trade Name	Air Tool Oil

Product Codes	None
---------------	------

Relevant identified uses of the substance or mixture and uses advised against

Identified Use(s)	Lubricant
Uses Advised Against	None
Company Identification	Tribology, Inc./Tech-Lube 35 Old Dock Road Yaphank, New York 11980 USA

Telephone	(631) 345-3000
E-mail	info@tribology.com

Emergency telephone number

Emergency Phone No.	PROSAR 24 hr: 1-800-217-5157 / 1-651-523-0304 & CHEMTREC 24 hr. 1-800-424-9300 / 1 (703) 527-3887 (Collect calls accepted)
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SECTION 2: HAZARDS IDENTIFICATION

Classification of the substance or mixture

OSHA HCS (29 CFR 1910.1200)	Not classified as dangerous for supply/use.
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Label elements

Hazard Symbol	None
Hazard Statement(s)	None
Precautionary Statement(s)	If SWALLOWED: Immediately call a POISON CENTER or doctor/physician. Do NOT induce vomiting. IF ON SKIN: Wash with plenty of soap and water. Keep out of reach of children.

Other hazards

None

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

Hazardous Ingredient(s)	% wt.	CAS No.
None	----	----

Additional Information - None

SECTION 4: FIRST AID MEASURES



Description of first aid measures

Inhalation	Unlikely to be required but if necessary treat symptomatically.
Skin Contact	Wash affected skin with soap and water. If symptoms develop, obtain medical attention.
Eye Contact	Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists, get medical advice/attention.
Ingestion	Do not induce vomiting wash out mouth with water. Do not give anything by mouth to an unconscious person. Seek medical treatment.

Most important symptoms and effects, both acute and delayed None known.

Indication of any immediate medical attention and special treatment needed None

SECTION 5: FIRE-FIGHTING MEASURES

Extinguishing Media	
-Suitable Extinguishing Media	Extinguish with carbon dioxide, dry chemical, foam or waterspray.
-Unsuitable Extinguishing Media	Do not use water jet.
Special hazards arising from the substance or mixture	None known.
Advice for fire-fighters	A self contained breathing apparatus and suitable protective clothing should be worn in fire conditions. Keep containers cool by spraying with water if exposed to fire.

SECTION 6: ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures	Wear protective gloves/eye protection.
Environmental precautions	Prevent substance entering sewers.
Methods and material for containment and cleaning up	Cover spills with inert absorbent material. Transfer to a container for disposal or recovery.
Reference to other sections	None
Additional Information	None

SECTION 7: HANDLING AND STORAGE

Precautions for safe handling	Avoid contact with skin and eyes. When using do not eat, drink or smoke.
Conditions for safe storage, including any incompatibilities	
-Special storage conditions:	Keep container tightly closed and dry.
-Incompatible materials	None known
Specific end use(s)	Lubricant

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

Occupational Exposure Limits

SUBSTANCE.	CAS No.	(8hr TWA)		(STEL)		Note:
		PEL (OSHA)	TLV (ACGIH)	PEL (OSHA)	TLV (ACGIH)	
None	----	----	----	----	----	

Recommended monitoring method

Exposure controls

Appropriate engineering controls

No special measures are required.

Personal protection equipment

The following to be used as necessary:

Eye/face protection

Wear protective eyewear (goggles, face shield, or safety glasses).



Skin protection (Hand protection/ Other)

Wear suitable gloves if prolonged skin contact is likely (Nitrile rubber)



Respiratory protection

Normally no personal respiratory protection is necessary.



Thermal hazards

Not normally required. Use gloves with insulation for thermal protection, when needed.

Environmental Exposure Controls

None known

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

Appearance	Liquid
Color.	Clear/yellowish
Odor	Slight
Odor Threshold (ppm)	Not available
pH (Value)	Not available
Melting Point (°C) / Freezing Point (°C)	Not available
Boiling point/boiling range (°C):	Not available
Flash Point (°C)	221
Evaporation Rate	Not available
Flammability (solid, gas)	Not applicable
Explosive Limit Ranges	Not applicable
Vapor pressure (Pascal)	Not available
Vapor Density (Air=1)	Not available
Specific Gravity	Not available
Solubility (Water)	Slightly
Solubility (Other)	Not available
Partition Coefficient (n-Octanol/water)	Not available
Auto Ignition Point (°C)	Not available

Decomposition Temperature (°C)	Not available
Explosive properties	Not explosive.
Oxidizing properties	Not oxidizing.

SECTION 10: STABILITY AND REACTIVITY

Reactivity	Stable under normal conditions.
Chemical stability	Stable.
Possibility of hazardous reactions	None anticipated.
Conditions to avoid	None known
Incompatible materials	None known
Hazardous decomposition product(s)	None known

SECTION 11: TOXICOLOGICAL INFORMATION

Exposure routes Oral, Skin Contact, Eye Contact

This material is unlikely to present a significant health hazard under normal conditions of handling and use.

SECTION 12: ECOLOGICAL INFORMATION

Toxicity	
Short term	Not available
Long Term	Not available
Persistence and degradability	Not available
Bioaccumulative potential	The product has low potential for bioaccumulation.
Mobility in soil	The product has low mobility in soil.
Results of PBT and vPvB assessment	Not classified as PBT or vPvB.
Other adverse effects	None known.

SECTION 13: DISPOSAL CONSIDERATIONS

Waste treatment methods	Disposal should be in accordance with local, state or national legislation. Consult an accredited waste disposal contractor or the local authority for advice.
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SECTION 14: TRANSPORT INFORMATION

	Land transport (U.S. DOT)	Sea transport (IMDG)	Air transport (ICAO/IATA)
UN number			
Proper Shipping Name			
Transport hazard class(es)			
Packing group		Not classified as dangerous for transport	
Environmental hazards			
Special precautions for user			

Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code: Not applicable

SECTION 15: REGULATORY INFORMATION

Safety, health and environmental regulations/legislation specific for the substance or mixture:

TSCA (Toxic Substance Control Act) - Inventory Status: All components listed or polymer exempt.

Designated Hazardous Substances and Reportable Quantities (40 CFR 302.4):

Chemical Name	CAS No.	Typical %wt.	RQ (Pounds)
None	----	----	----

SARA 311/312 - Hazard Categories: None

- Fire
 Sudden Release
 Reactivity
 Immediate (acute)
 Chronic (delayed)

SARA 313 - Toxic Chemicals (40 CFR 372):

Chemical Name	CAS No.	Typical %wt.
None	----	----

SARA 302 - Extremely Hazardous Substances(40 CFR 355):

Chemical Name	CAS No.	Typical %wt.	TPQ (pounds)
None	----	----	----

California Proposition 65 List:

Chemical Name	CAS No.	Type of Toxicity
None	----	----

SECTION 16: OTHER INFORMATION

The following sections contain revisions or new statements: 1-16.

Date of preparation: June 29, 2015

Disclaimer: We believe the statements, technical information and recommendations contained herein are reliable, but they are given without warranty or guarantee of any kind. The information contained in this document applies to this specific material as supplied. It may not be valid for this material if it is used in combination with any other materials. It is the user's responsibility to satisfy oneself as to the suitability and completeness of this information for the user's own particular use.



NFPA	HMIS (U.S.A.)	Rating	Protective Clothing	DOT (pictograms)
	Health Hazard (2*)	0 Insignificant		
	Fire Hazard (1)	1 Slight		
	Reactivity (0)	2 Moderate		
	Personal Protection (H)	3 High		
		4 Extreme		

Section I. Chemical Product and Company Identification	
Product Name	ANTIFREEZE
Synonym	Universal Antifreeze, Radiator Antifreeze, Diesel Antifreeze, Petro-Canada Antifreeze-Coolant, Petro-Canada Heavy Duty Antifreeze-Coolant, Pre-Mix Antifreeze, Petro-Canada Premium Radiator Antifreeze.
Manufacturer	PETRO-CANADA P.O. Box 2844 Calgary, Alberta T2P 3E3
Material Uses	Used as an engine antifreeze coolant.
Code	W269
DSL	On the DSL.
TSCA	On TSCA list.
In case of Emergency	Petro-Canada: 403-296-3000 Canutec Transportation: 613-996-6666 Poison Control Centre: Consult local telephone directory for emergency number(s).

Section II. Composition and Information on Ingredients					
Name	CAS #	% (V/V)	Exposure Limits (ACGIH)		
			TLV-TWA(8 h)	STEL	CEILING
1) Ethylene glycol	107-21-1	≥55	Not established	Not established	100 mg/m ³ (aerosol)
2) Sodium tetraborate pentahydrate	1330-43-4	≤5	1 mg/m ³	Not established	Not established
Manufacturer	Not applicable				
Recommendation					
Other Exposure Limits	Consult local, state, provincial or territory authorities for acceptable exposure limits.				

Section III. Hazards Identification.	
Potential Health Effects	Contact can cause slight irritation of skin, eyes and respiratory tract. Extremely dangerous in case of ingestion. For more information, refer to Section 11.

Section IV. First Aid Measures	
Eye Contact	IMMEDIATELY flush eyes with running water for at least 15 minutes, keeping eyelids open. Seek medical attention.
Skin Contact	Remove contaminated clothing - launder before reuse. Wash gently and thoroughly the contaminated skin with running water and non-abrasive soap. Seek medical attention.
Inhalation	Evacuate the victim to a safe area as soon as possible. If the victim is not breathing, perform artificial respiration. Allow the victim to rest in a well ventilated area. Seek medical attention.
Ingestion	DO NOT induce vomiting because of danger of aspirating liquid into lungs. Seek medical attention.
Note to Physician	Not available

Section V. Fire-fighting Measures	
Flammability	May be combustible at high temperature.
Flash Points	Closed Cup: 116°C (Tagliabue) Open Cup: 116°C (Cleveland)
Fire Hazards in Presence of Various Substances	Combustible in presence of open flames and sparks.
Products of Combustion	Carbon oxides (CO, CO ₂), smoke and irritating vapours as products of incomplete combustion.
Fire Fighting Media and Instructions	SMALL FIRE: Use DRY chemicals, CO ₂ , water spray or foam. LARGE FIRE: Use water spray, fog or foam. DO NOT use water jet.
Flammable Limits	Lower: 3.2%, Upper: 15.3%
Auto-Ignition Temperature	413°C
Explosion Hazards in Presence of Various Substances	Not a product presenting risks of explosion.

Section VI. Accidental Release Measures

Material Release or Spill	Small spill or leak: Dilute with water and mop up or absorb with an inert DRY material and place in an appropriate waste disposal container. Large spill or leak: Absorb with an inert material and put the spilled material in an appropriate waste disposal. Dispose of in accordance with regional regulations.
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Section VII. Handling and Storage

Handling	Avoid contamination with reactive substances. After handling, always wash hands thoroughly with soap and water.
Storage	Keep container dry. Keep container tightly closed. Keep in a cool, well-ventilated place.

Section VIII. Exposure Controls/Personal Protection

Engineering Controls	For normal application, special ventilation is not necessary. If user's operations generate vapours or mist, use ventilation to keep exposure to airborne contaminants below the exposure limit. Make-up air should always be supplied to balance air removed by exhaust ventilation. Ensure that eyewash station and safety shower are close to work-station.
Personal Protection -	<i>The selection of personal protective equipment varies, depending upon conditions of use.</i>
Eyes	Eye protection (i.e., safety glasses, safety goggles and/or face shield) should be determined based on conditions of use. If product is used in an application where splashing may occur, the use of safety goggles and/or a face shield should be considered.
Body	Wear appropriate clothing to prevent skin contact. As a minimum long sleeves and trousers should be worn.
Respiratory	Where concentrations in air may exceed the occupational exposure limits given in Section 2 (and those applicable to your area) and where engineering, work practices or other means of exposure reduction are not adequate, NIOSH approved respirators may be necessary to prevent overexposure by inhalation.
Hands	Wear appropriate chemically protective gloves. When handling hot product ensure gloves are heat resistant and insulated.
Feet	Wear appropriate footwear to prevent product from coming in contact with feet and skin.

Section IX. Physical and Chemical Properties

Physical State and Appearance	Clear viscous liquid.	Viscosity	Not available
Colour	Green.	Pour Point	Not available
Odour	Odourless.	Softening Point	Not applicable.
Odour Threshold	Not available	Dropping Point	Not applicable.
Boiling Point	129 to 197°C (264 to 387°F)	Penetration	Not applicable.
Density	1.115 to 1.145 (Water = 1)	Oil / Water Dist. Coeff.	Not available
Vapour Density	2.1 (Air=1).	Ionicity (in water)	Not available
Vapour Pressure	0.06 mmHg @ 20°C (68°F).	Dispersion Properties	Not available
Volatility	0% (w/w)	Solubility	Soluble in water, methanol and diethyl ether.

Section X. Stability and Reactivity

Corrosivity	Not available		
Stability	The product is stable.	Hazardous Polymerization	Will not occur under normal working conditions.
Incompatible Substances / Conditions to Avoid	Reactive with oxidizing agents, acids and alkalis.	Decomposition Products	May release COx, smoke and irritating vapours when heated to decomposition.

Section XI. Toxicological Information

Routes of Entry	Eye contact and ingestion.
Acute Lethality	LD50: 4700 mg/kg (oral/rat). [Ethylene Glycol] LD50: 9530 mg/kg (dermal/rabbit). [Ethylene Glycol]
Chronic or Other Toxic Effects	
Dermal Route:	Slightly hazardous in case of skin contact (irritant).
Inhalation Route:	Slightly hazardous in case of inhalation (lung irritant). Can cause nausea, headaches and vomiting.
Oral Route:	Extremely dangerous in case of ingestion.
Eye Irritation/Inflammation:	Slightly hazardous in case of eye contact (irritant).
Immunotoxicity:	Not available
Skin Sensitization:	Not available
Respiratory Tract Sensitization:	Not available
Mutagenic:	Not available

Reproductive Toxicity:	Not available
Teratogenicity/Embryotoxicity:	Fetotoxic and teratogenic in mice at levels below maternal toxicity.
Carcinogenicity (ACGIH):	ACGIH A4: not classifiable as a human carcinogen.
Carcinogenicity (IARC):	Not available
Carcinogenicity (NTP):	Not available
Carcinogenicity (IRIS):	Not available
Carcinogenicity (OSHA):	Not available
Other Considerations	The substance may be toxic to kidneys and liver. Repeated or prolonged exposure to the substance can produce target organs damage. Repeated exposure to a highly toxic material may produce general deterioration of health by an accumulation in one or many human organs.

Section XII. Ecological Information

Environmental Fate	Not available	Persistence/ Bioaccumulation Potential	Not available
BOD5 and COD	Not available	Products of Biodegradation	Not available
Additional Remarks	No additional remark.		


Section XIII. Disposal Considerations

Waste Disposal	Preferred waste management priorities are: (1) recycle or reprocess; (2) incineration with energy recovery; (3) disposal at licensed waste disposal facility. Ensure that disposal or reprocessing is in compliance with government requirements and local disposal regulations. Consult your local or regional authorities.
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Section XIV. Transport Information

DOT Classification	Not a DOT controlled material (United States).	Special Provisions for Transport	Not applicable.
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Section XV. Regulatory Information

Other Regulations	<p>This product is acceptable for use under the provisions of WHMIS-CPR. All components of this formulation are listed on the CEPA-DSL (Domestic Substances List).</p> <p>All components of this formulation are listed on the US EPA-TSCA Inventory.</p> <p>This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations (CPR) and the MSDS contains all of the information required by the CPR.</p> <p>Please contact Product Safety for more information.</p>		
DSD/DPD (EEC)	Not evaluated.	WHMIS (Canada)	D-2A
ADR (Europe) (Pictograms)	<p>NOT EVALUATED FOR EUROPEAN TRANSPORT</p> <p>NON ÉVALUÉ POUR LE TRANSPORT EUROPÉEN</p>	TDG (Canada) (Pictograms)	

Section XVI. Other Information

References	<p>Available upon request.</p> <p>* Marque de commerce de Petro-Canada - Trademark</p>		
Glossary	<p>ACGIH - American Conference of Governmental Industrial Hygienists</p> <p>ADR - Agreement on Dangerous goods by Road (Europe)</p> <p>ASTM - American Society for Testing and Materials (</p> <p>BOD5 - Biological Oxygen Demand in 5 days</p> <p>CAN/CGA B149.2 Propane Installation Code</p> <p>CAS - Chemical Abstract Services</p> <p>CEPA - Canadian Environmental Protection Act</p> <p>CERCLA - Comprehensive Environmental Response, Compensation and Liability Act</p> <p>CFR - Code of Federal Regulations</p> <p>CHIP - Chemicals Hazard Information and Packaging Approved Supply List</p> <p>COD5 - Chemical Oxygen Demand in 5 days</p> <p>CPR - Controlled Products Regulations</p> <p>DOT - Department of Transport</p> <p>DSCL - Dangerous Substances Classification and Labeling (Europe)</p> <p>DSD/DPD - Dangerous Substances or Dangerous Preparations Directives (Europe)</p> <p>DSL - Domestic Substance List</p> <p>EEC/EU - European Economic Community/European Union</p> <p>EINECS - European Inventory of Existing Commercial Chemical Substances</p> <p>EPCRA - Emergency Planning and Community Right to Know Act</p>	<p>IRIS - Integrated Risk Information System</p> <p>LD50/LC50 - Lethal Dose/Concentration kill 50%</p> <p>LDLo/LCLo - Lowest Published Lethal Dose/Concentration</p> <p>NAERG'96 - North American Emergency Response Guide Book (1996)</p> <p>NFPA - National Fire Prevention Association</p> <p>NIOSH - National Institute for Occupational Safety & Health</p> <p>NPRI - National Pollutant Release Inventory</p> <p>NSNR - New Substances Notification Regulations (Canada)</p> <p>NTP - National Toxicology Program</p> <p>OSHA - Occupational Safety & Health Administration</p> <p>PEL - Permissible Exposure Limit</p> <p>RCRA - Resource Conservation and Recovery Act</p> <p>SARA - Superfund Amendments and Reorganization Act</p> <p>SD - Single Dose</p> <p>STEL - Short Term Exposure Limit (15 minutes)</p> <p>TDG - Transportation Dangerous Goods (Canada)</p> <p>TDLo/TCLo - Lowest Published Toxic Dose/Concentration</p> <p>TLM - Median Tolerance Limit</p> <p>TLV-TWA - Threshold Limit Value-Time Weighted Average</p> <p>TSCA - Toxic Substances Control Act</p> <p>USEPA - United States Environmental Protection Agency</p>	

FDA - Food and Drug Administration
FIFRA - Federal Insecticide, Fungicide and Rodenticide Act
HCS - Hazardous Communication System
HMIS - Hazardous Material Information System
IARC - International Agency for Research on Cancer

USP - United States Pharmacopoeia
WHMIS - Workplace Hazardous Material Information System

For Copy of MSDS

Western Canada, telephone: 403-296-4158; fax: 403-296-6551
Ontario & Central Canada, telephone: 1-800-668-0220; fax: 1-800-837-1228
Quebec & Eastern Canada, telephone: 514-640-8308; fax: 514-640-8385

For Product Safety Information: (905) 804-4752

Prepared by Product Safety - TAR on 7/3/2001.

Data entry by Product Safety - JDW.

To the best of our knowledge, the information contained herein is accurate. However, neither the above named supplier nor any of its subsidiaries assumes any liability whatsoever for the accuracy or completeness of the information contained herein. Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.



1.1 Identification
1.1.1 Product Name
1.1.2 Manufacturer
1.1.3 Supplier
1.1.4 Product Code
1.1.5 Revision

1.1 Identification

1.1.1 Product Name

Badger Multi-Purpose ABC Dry Chemical
(Fire Extinguishing Agent, Pressurized and Non-pressurized)

1.1.2 Manufacturer

90% MAP, Ammonium Phosphate, Monoammonium Phosphate, Premium ABC

1.1.3 Supplier

Fire Extinguishing Agent

1.1.4 Product Code

Consult applicable fire protection codes

1.1.5 Revision

None

1.1.6 Other Information

Badger Fire Protection
8767 Seminole Trail, Suite 202
Ruckersville, VA 22968
USA
(434)-964-3200

1.1.7 Other Information

(800) 424-9300
(703) 527-3887 (International)

1.1.8 Other Information

December 10, 2019

1.1.9 Other Information

July 11, 2019

1.1.10 Other Information

None

Safety Data Sheet prepared in accordance with OSHA's Hazard Communication Standard (29 CFR 1910.1200, the Canadian Hazardous Products Regulations (HPR) and the Globally Harmonized System of Classification and Labelling of Chemicals (GHS)

1.2 Hazard Identification

1.2.1 Hazard Statement
1.2.2 Hazard Class
1.2.3 Hazard Code

1.2.4 Precedence

1.2.5 Other Information

Gas under pressure – Compressed gas

Hazard Symbols



Signal Word: Warning

1.2.6 Other Information

Contents under pressure; may explode if heated.

1.2.7 Other Information

None

None

None

None



... D ...
... d ... M ... r ... Dr ...
... r ... , ... r ... d ...
... r ... r ... d ...

... RD D ...

... r ...
Protect from sunlight.
Store in well-ventilated place.
D ...
None

... r ... d

... rd ...
This product is classified as not hazardous in accordance with the Globally Harmonized System of Classification and Labelling (GHS).

...
Hazard Symbols
None

Signal Word: None

... rd ...
None

... r ... r ...
... r ...
None
R ...
None
... r ...
None
D ...
None

... r ... rd ...
Mica may contain small quantities of quartz (crystalline silica) as an impurity. Prolonged exposure to respirable crystalline silica dust at concentrations exceeding the occupational exposure limits may increase the risk of developing a disabling lung disease known as silicosis. IARC found limited evidence for pulmonary carcinogenicity of crystalline silica in humans.

... r ...
The values listed below represent the percentages of ingredients of unknown toxicity.
Acute oral toxicity < 10%
Acute dermal toxicity < 10%
Acute inhalation toxicity < 10%
Acute aquatic toxicity < 10%

3 ... M ... RM ... R D ...

This product is a mixture.



600000 D000 00000
0 d0r M00000r0000 000 Dr0 0000 0000
00r 00000000000 0000, 0r0000r00d 00d
0000r0000r00d0

60 000D00000 R000000 M0000R00

0r00000r000000, 0r000000 00000 0000d 00 0r00000 0r00d0r00
Wear appropriate protective clothing. Prevent skin and eye contact. Remove leaking container to a safe place. Ventilate the area.

000r000 00000r0000000
Prevent large quantities of the material from entering drains or watercourses.

M000d0 00d 0 00r000 0r 0000000 0000d 000000 00
Sweep up or vacuum and transfer into suitable containers for recovery or disposal.

00 000D0000 00D 000R000

0r00000000 0r 0000 000d000
Wear appropriate protective clothing. Prevent skin and eye contact.

00d00000 0r 0000 000r000
Pressurized containers should be properly stored and secured to prevent falling or being knocked over. Do not drag, slide or roll pressurized containers. Do not drop pressurized containers or permit them to strike against each other. Never apply flame or localized heat directly to any part of the pressurized or plastic container. Store pressurized and plastic containers away from high heat sources. Storage area should be: - cool - dry - well ventilated - under cover - out of direct sunlight

00 00000R0 0000R0 0000R0 00000 R0 000000 0

000r0000r00 00r0
Exposure limits are listed below, if they exist.

000000 0r000000
OSHA PEL: 15 mg/m³ TWA, total dust
5 mg/m³ TWA, respirable fraction

M000
ACGIH TLV: 3 mg/m³ TWA, measured as respirable fraction of the aerosol.
OSHA PEL: 20 mppcf, <1% crystalline silica

00000
ACGIH TLV: 2 mg/m³ TWA, for particulate matter containing no asbestos and <1% Crystalline silica
OSHA PEL: 15 mg/m³ TWA, total dust
5 mg/m³ TWA, respirable fraction

0r0000000 000000r0 00 000000d r000000d
OSHA PEL: 50 mppcf or 15 mg/m³ TWA, total dust
15 mppcf or 5 mg/m³ TWA, respirable fraction

00r00r000 000000r000 000r000
Use with adequate ventilation. If this product is used in a pressurized system, there should be local procedures for the selection, training, inspection and maintenance of this equipment. When used in large volumes, use local exhaust ventilation.



13000000 D0000 000000
00d00r M000000r00000 000 Dr0 00000 0000
00r0 0000000000000 00000, 0r0000r000d 00d
00000r0000r000d0

130 D0000000 00000D0R0000000

D000000M0000d0
Dispose of container in accordance with all applicable local and national regulations.

100 R000000R0 0000RM00000

Safety Data Sheet information is intended to address a specific material and not various forms or states of containment.

Special Precautions for Shipping:
Individuals must be certified as Hazardous Material Shipper for all transportation modes. Pressurized Fire Extinguishers are considered a hazardous material by the US Department of Transportation and Transport Canada.

- D00 00R 1000101 D0000 Fire extinguishers, 2.2, UN1044
- 00 0r000r 00000000 0000 Fire extinguishers
- 00 00000 (2.2)
- 00 0000 00r UN1044
- 00 000000000 0r0000 Not applicable
- 0 00000000000 0r 0R Consult current IATA Regulations prior to shipping by air.
- 0r00000r0000000 00000
- 0 00000000000 0r 0 000r Consult current IMDG Regulations prior to shipping by water.
- 0r00000r0MD0

When shipping via ground, portable fire extinguishers pressurized to less than 241 psi and of less than 1100 cubic inches in size meet the requirements of "Limited Quantity" as referenced in 49 CFR 173.309 (2010). There is no limited quantity designation for fire extinguishers when shipped by air or water.

This section is believed to be accurate at the time of preparation. It is not intended to be a complete statement or summary of the applicable laws, rules, or hazardous material regulations, and is subject to change. Users have the responsibility to confirm compliance with all laws, rules, and hazardous material regulations in effect at the time of shipping.

100 R0000000R0 0000RM00000

0000d 000000 0000 000000r0
This product contains ingredients that are listed on or exempt from listing on the EPA Toxic Substance Control Act Chemical Substance Inventory.

0000d D00 000000r0
All ingredients in this product are listed on the Domestic Substance List (DSL) or the Non-Domestic Substance List (NDSL) or are exempt from listing.

- 00R0 0000 00000000311 310 000000r0000000000r0000r000d
Gas under pressure
- 00R0 0000 00000000311 310 000000r00000000000r0000r000d
None

00R0 0000 00000000313
This product does not contain any chemicals that are listed in Section 313 at or above de minimis concentrations.

RD D


Classification

This chemical is considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200).

Skin corrosion/irritation	Category 1
Serious eye damage/eye irritation	Category 1

Physical and chemical properties

Color: Clear, pale yellow

<p>rd D</p> <p>rd Causes severe skin burns and eye damage Causes serious eye damage</p>  <p>Color: Clear, pale yellow Consistency: Thin liquid d Bleach</p>
--

First aid measures

Wash face, hands and any exposed skin thoroughly after handling.
Wear protective gloves, protective clothing, face protection, and eye protection such as safety glasses.

Accidental release measures

Immediately call a poison center or doctor.
If swallowed: Rinse mouth. Do NOT induce vomiting.
If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water.
Wash contaminated clothing before reuse.
If inhaled: Remove person to fresh air and keep comfortable for breathing.
Specific treatment (see supplemental first aid instructions on this label).
If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

Storage and handling

Store locked up.

Disposal and recovery

Dispose of contents in accordance with all applicable federal, state, and local regulations.

Information on other hazards

Although not expected, heart conditions or chronic respiratory problems such as asthma, chronic bronchitis, or obstructive lung disease may be aggravated by exposure to high concentrations of vapor or mist.

Product contains a strong oxidizer. Always flush drains before and after use.

DANGER

Precautionary Statements

D Handle in accordance with good industrial hygiene and safety practice. Avoid contact with skin, eyes, and clothing. Do not eat, drink, or smoke when using this product.

Precautionary Statements

R Store away from children. Reclose cap tightly after each use. Store this product upright in a cool, dry area, away from direct sunlight and heat to avoid deterioration. Do not contaminate food or feed by storage of this product.

R Toilet bowl cleaners, rust removers, acids, and products containing ammonia.

R

Precautionary Statements

Precautionary Statements

Chemical Name Sodium hypochlorite 7681-52-9	Health Hazard None	Physical Hazard None	Environmental Hazard None
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ACGIH TLV: American Conference of Governmental Industrial Hygienists - Threshold Limit Value. OSHA PEL: Occupational Safety and Health Administration - Permissible Exposure Limits. NIOSH IDLH: Immediately Dangerous to Life or Health.

Precautionary Statements

M Showers
Eyewash stations
Ventilation systems

Precautionary Statements

R If splashes are likely to occur: Wear safety glasses with side shields (or goggles) or face shield.

D Wear rubber or neoprene gloves and protective clothing such as long-sleeved shirt.

R If irritation is experienced, NIOSH/MSHA approved respiratory protection should be worn. Positive-pressure supplied air respirators may be required for high airborne contaminant concentrations. Respiratory protection must be provided in accordance with current local regulations.

M Handle in accordance with good industrial hygiene and safety practice. Wash hands after direct contact. Do not wear product-contaminated clothing for prolonged periods. Remove and wash contaminated clothing before re-use. Do not eat, drink, or smoke when using this product.

1

31

54 g/kg

58 mg/L

58 mg/L

58 mg/L

1

Very toxic to aquatic life with long lasting effects.

Very toxic to aquatic life with long lasting effects.

This product is toxic to fish, aquatic invertebrates, oysters, and shrimp. Do not allow product to enter storm drains, lakes, or streams.

No information available.

No information available.

No information available.

No information available.

No information available.

No information available.

13 D

Dispose of in accordance with all applicable federal, state, and local regulations.

Dispose of in accordance with all applicable federal, state, and local regulations. Do not contaminate food or feed by disposal of this product.

Do not reuse empty containers.

Do not reuse empty containers. Dispose of in accordance with all applicable federal, state, and local regulations.

1 R R RM

D

Not restricted.

D

Not restricted for road or rail.

Not restricted, as per Special Provision A197, Environmentally Hazardous Substance exception.

Not restricted, as per Special Provision A197, Environmentally Hazardous Substance exception.

MDM

Not restricted, as per IMDG Code 2.10.2.7, Marine Pollutant exception.

1. Registration

Registration

All components of this product are either on the TSCA 8(b) Inventory or otherwise exempt from listing.

DDSL All components are on the DSL or NDSL.

United States Toxic Substances Control Act Section 8(b) Inventory
Canadian Domestic Substances List/Non-Domestic Substances List

Registration

Section 313

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product does not contain any chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372

Section 311/312

- Yes
No
No
No
No

Regulated Pollutants

This product contains the following substances which are regulated pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42)

Table with 5 columns: Chemical Name, CAS No., Weight, etc. Row 1: Sodium hypochlorite, 7681-52-9, 100 lb, X

Section 302

This material, as supplied, contains one or more substances regulated as a hazardous substance under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302)

Table with 4 columns: Chemical Name, Weight, etc. Row 1: Sodium hypochlorite, 100 lb, -, RQ 100 lb final RQ, RQ 45.4 kg final RQ

Pesticide Labeling

This chemical is a pesticide product registered by the Environmental Protection Agency and is subject to certain labeling requirements under federal pesticide law. These requirements differ from the classification criteria and hazard information required for safety data sheets and for workplace labels of non-pesticide chemicals. Following is the hazard information as required on the pesticide label:

Causes irreversible eye damage and skin burns. Harmful if swallowed. Do not get in eyes, on skin, or on clothing. Wear protective eyewear and rubber gloves when handling this product. Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco, or using the restroom. Avoid breathing vapors and use only in a well-ventilated area.

Section 6: Other information

Section 6.1: Other information

This product does not contain any Proposition 65 chemicals.

Section 6.2: Other information

Chemical Name	Prop 65	MSDS	Other	Other	Other
Sodium hypochlorite 7681-52-9	X	X	X	X	
Sodium chlorate 7775-09-9	X	X	X		

Section 9: Physical and chemical properties

Section 9.1: Physical and chemical properties

Section 9.2: Physical and chemical properties

E - Corrosive material



Section 16: Other information

Section 16.1: Other information

Section 16.2: Other information

Product Stewardship
23 British American Blvd.
Latham, NY 12110
1-800-572-6501

Revision D June 12, 2015

Revision Section 14.

Revision 1096036/164964.159

Section 17: Other information

Section 17.1: Other information

Section 17.2: Other information



BlueDEF Diesel Exhaust Fluid

Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

Revision date: 10/01/2019

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier

Product form : Mixture
Product name : BlueDEF Diesel Exhaust Fluid

1.2. Relevant identified uses of the substance or mixture and uses advised against

Use of the substance/mixture : Solution for NOx reduction in SCR systems

1.3. Details of the supplier of the safety data sheet

Old World Industries, LLC
3100 Sanders Road
Northbrook, IL 60062 - USA
T (847) 559-2000
www.oldworldind.com

1.4. Emergency telephone number

Emergency number : 800 424 9300 (United States); 00 1 703 527 3887 (International)
Chemtrec

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

GHS-US classification

Not classified

2.2. Label elements

GHS-US labelling

Hazard pictograms (GHS-US) :
Signal word (GHS-US) : None
Hazard statements (GHS-US) : None
Precautionary statements (GHS-US) : None

2.3. Other hazards

No additional information available

2.4. Unknown acute toxicity (GHS US)

No data available

SECTION 3: Composition/information on ingredients

3.1. Substances

Not applicable

3.2. Mixtures

Name	Product identifier	% by wt	GHS-US classification
water	(CAS-No.) 7732-18-5	67.5	Not classified
urea	(CAS-No.) 57-13-6	32.5	Not classified

Full text of hazard classes and H-statements : see section 16

SECTION 4: First aid measures

4.1. Description of first aid measures

First-aid measures general : Never give anything by mouth to an unconscious person. If you feel unwell, seek medical advice (show the label where possible).
First-aid measures after inhalation : Assure fresh air breathing. Allow the victim to rest.
First-aid measures after skin contact : Remove affected clothing and wash all exposed skin area with mild soap and water, followed by warm water rinse.

BlueDEF Diesel Exhaust Fluid

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according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

- First-aid measures after eye contact : Rinse immediately with plenty of water. Obtain medical attention if pain, blinking or redness persists.
- First-aid measures after ingestion : Rinse mouth. Do NOT induce vomiting. Obtain emergency medical attention.

4.2. Most important symptoms and effects, both acute and delayed

- Symptoms/effects : Not expected to present a significant hazard under anticipated conditions of normal use.

4.3. Indication of any immediate medical attention and special treatment needed

No additional information available

SECTION 5: Firefighting measures

5.1. Extinguishing media

- Suitable extinguishing media : Foam. Dry powder. Carbon dioxide. Sand.
- Unsuitable extinguishing media : Do not use a heavy water stream.

5.2. Special hazards arising from the substance or mixture

- Reactivity : No dangerous reactions known under normal conditions of use.

5.3. Special protective equipment and precautions for fire-fighters

- Firefighting instructions : Use water spray or fog for cooling exposed containers. Exercise caution when fighting any chemical fire. Prevent fire fighting water from entering the environment.
- Protection during firefighting : Do not enter fire area without proper protective equipment, including respiratory protection.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

- General measures : The EPA has no established reportable quantity for spills for this material, secondary containment is not specified.

6.1.1. For non-emergency personnel

- Emergency procedures : Evacuate unnecessary personnel.

6.1.2. For emergency responders

- Protective equipment : Equip cleanup crew with proper protection.
- Emergency procedures : Ventilate area.

6.2. Environmental precautions

Prevent entry to sewers and public waters. Notify authorities if liquid enters sewers or public waters.

6.3. Methods and material for containment and cleaning up

- Methods for cleaning up : Soak up spills with inert solids, such as clay or diatomaceous earth as soon as possible. Collect spillage. Store away from other materials. For minor spillages wash down with excess of water. Mop up small spills.

6.4. Reference to other sections

See Heading 8. Exposure controls and personal protection.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

- Precautions for safe handling : Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work. Provide good ventilation in process area to prevent formation of vapor.

7.2. Conditions for safe storage, including any incompatibilities

- Storage conditions : Keep only in the original container in a cool, well ventilated place away from : Direct sunlight, Heat sources. Keep container closed when not in use.
- Incompatible materials : Strong acids. Strong bases.

7.3. Specific end use(s)

No additional information available

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

BlueDEF Diesel Exhaust Fluid

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urea (57-13-6)

Not applicable

water (7732-18-5)

Not applicable

8.2. Appropriate engineering controls

No additional information available

8.3. Individual protection measures/Personal protective equipment

Personal protective equipment:

Avoid all unnecessary exposure. Gloves. Protective goggles.

Hand protection:

Wear protective gloves.

Eye protection:

Chemical goggles or safety glasses

Respiratory protection:

Wear appropriate mask



Other information:

Do not eat, drink or smoke during use.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	: Liquid
Color	: Colorless
Odor	: characteristic ammonia odor
Odor threshold	: No data available
pH	: 9 - 10
Relative evaporation rate (butylacetate=1)	: < 1
Freezing point	: -11 °C (12 °F)
Boiling point	: > 100 °C (212 °F)
Flash point	: No data available
Auto-ignition temperature	: No data available
Decomposition temperature	: No data available
Flammability (solid, gas)	: No data available
Vapor pressure	: Not Applicable
Relative vapor density at 20 °C	: 0.6 H ₂ O, >1
Specific Gravity	: 1.09
Solubility	: Soluble in water. Water: 100 %
Log Pow	: No data available
Log Kow	: No data available
Viscosity, kinematic	: No data available
Viscosity, dynamic	: No data available
Explosive limits	: No data available
Explosive properties	: No data available
Oxidizing properties	: No data available

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9.2. Other information

No additional information available

SECTION 10: Stability and reactivity

10.1. Reactivity

No dangerous reactions known under normal conditions of use.

10.2. Chemical stability

Stable under normal conditions.

10.3. Possibility of hazardous reactions

Not established.

10.4. Conditions to avoid

Not established.

10.5. Incompatible materials

Strong acids. Strong bases. oxidizing agents (peroxides, chromates, dichromates).

10.6. Hazardous decomposition products

Carbon monoxide. Carbon dioxide. Fume.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity : Not classified

urea (57-13-6)	
LD50 oral rat	14300 mg/kg bodyweight (OECD 401: Acute Oral Toxicity, Rat, Male, Experimental value)
ATE US (oral)	14300 mg/kg bodyweight

Skin corrosion/irritation : Not classified
pH: 9 - 10

Serious eye damage/irritation : Not classified
pH: 9 - 10

Respiratory or skin sensitisation : Not classified

Germ cell mutagenicity : Not classified

Carcinogenicity : Not classified

Reproductive toxicity : Not classified

STOT-single exposure : Not classified

STOT-repeated exposure : Not classified

Aspiration hazard : Not classified

Potential adverse human health effects and symptoms : Based on available data, the classification criteria are not met.

Symptoms/effects : Not expected to present a significant hazard under anticipated conditions of normal use.

SECTION 12: Ecological information

12.1. Toxicity

urea (57-13-6)	
LC50 fish 1	> 6,810.00 mg/l (96 h, Leuciscus idus, Experimental value, Nominal concentration)
EC50 Daphnia 1	> 10,000.00 mg/l (DIN 38412-11, 24 h, Daphnia magna, Static system, Fresh water, Experimental value, Nominal concentration)

12.2. Persistence and degradability

urea (57-13-6)	
Persistence and degradability	Readily biodegradable in water.
ThOD	0.27 g O ₂ /g substance

BlueDEF Diesel Exhaust Fluid

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according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

12.3. Bioaccumulative potential

urea (57-13-6)	
BCF fish 1	1.00 (72 h, Brachydanio rerio, Fresh water, Literature study)
Log Pow	< -1.73 (Experimental value, EU Method A.8: Partition Coefficient)
Bioaccumulative potential	Low potential for bioaccumulation (BCF < 500).

12.4. Mobility in soil

urea (57-13-6)	
Mobility in soil	Not applicable
Log Koc	-1.43 - -1.19 (log Koc, Calculated value)
Ecology - soil	Highly mobile in soil.

12.5. Other adverse effects

Effect on the ozone layer : No additional information available

Other information : Avoid release to the environment.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Product/Packaging disposal recommendations : As a non-hazardous liquid waste, it should be solidified with stabilizing agents such as sand, fly ash, or clay absorbent, so that no free liquid remains before disposal to an industrial waste landfill.

Ecology - waste materials : Avoid release to the environment.

SECTION 14: Transport information

Department of Transportation (DOT)

In accordance with DOT

Not regulated

Transportation of Dangerous Goods

Refer to current TDG Canada for further Canadian regulations

ADR

Not regulated

Transport by sea

In accordance with IMDG / IMO

Not regulated

Air transport

In accordance with IATA / ICAO

Not regulated

SECTION 15: Regulatory information

15.1. US Federal regulations

BlueDEF Diesel Exhaust Fluid

Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

BlueDEF Diesel Exhaust Fluid	
EPA TSCA Regulatory Flag	Toxic Substances Control Act (TSCA): The intentional ingredients of this product are listed
CERCLA RQ	None. This material is not classified as hazardous under U.S. EPA regulations.
SARA Section 302 Threshold Planning Quantity (TPQ)	No extremely hazardous substances are in this product.
SARA Section 311/312 Hazard Classes	Urea. No hazards resulting from the material as supplied.

urea (57-13-6)

EPA TSCA Regulatory Flag Toxic Substances Control Act (TSCA): The intentional ingredients of this product are listed

water (7732-18-5)

Listed on the United States TSCA (Toxic Substances Control Act) inventory

15.2. International regulations

CANADA

BlueDEF Diesel Exhaust Fluid

WHMIS Classification This SDS has been prepared according to the criteria of the Hazardous Products Regulations (HPR) (WHMIS 2015) and the SDS contains all of the information required by the HPR. Applicable GHS information is listed in section 2.2 of this SDS.

15.3. US State regulations

California Proposition 65 - This product does not contain any substance(s) known to the state of California to cause cancer, developmental toxicity and/or reproductive toxicity

SECTION 16: Other information

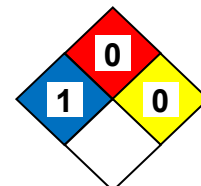
Revision date : 10/01/2019

Full text of H-statements:

NFPA health hazard : 1 - Materials that, under emergency conditions, can cause significant irritation.

NFPA fire hazard : 0 - Materials that will not burn under typical fire conditions, including intrinsically noncombustible materials such as concrete, stone, and sand.

NFPA reactivity : 0 - Material that in themselves are normally stable, even under fire conditions.



SDS GHS US (GHS HazCom 2012) OWI

Old World Industries, LLC makes no warranty, representation or guarantee as to the accuracy, sufficiency or completeness of the material set forth herein. It is the user's responsibility to determine the safety, toxicity and suitability of his own use, handling and disposal of this product. Since actual use by others is beyond our control, no warranty, expressed or implied, is made by Old World Industries, LLC as to the effects of such use, the results to be obtained or the safety and toxicity of this product, nor does Old World Industries, LLC assume liability arising out of the use by others of this product referred to herein. The data in this SDS relates only to the specific material designated herein and does not relate to use in combination with any other material or in any process.

Safety Data Sheet

Issue Date: 23-Jan-2012

Revision Date: 10-Feb-2014

Version 1

1. IDENTIFICATION

Product Identifier

Product Name BLUE MONSTER – Citrus Scrubbing Towels

Other means of identification

SDS # CAR-002

Product Code 77095

Recommended use of the chemical and restrictions on use

Recommended Use Hand cleanser.

Details of the supplier of the safety data sheet

Supplier Address

The Mil-Rose Company
7310 Corporate Blvd.
Mentor, OH 44060

Emergency Telephone Number

Company Phone Number 800-321-3598
Emergency Telephone (24 hr) INFOTRAC 1-352-323-3500 (International)
1-800-535-5053 (North America)

2. HAZARDS IDENTIFICATION

Appearance Clear viscous liquid

Physical State Liquid

Odor Citrus

Classification

Serious eye damage/eye irritation	Category 2
Skin sensitization	Category 1

Signal Word

Warning

Hazard Statements

Causes serious eye irritation
May cause an allergic skin reaction



Precautionary Statements - Prevention

Avoid breathing dust/fume/gas/mist/vapors/spray
Contaminated work clothing should not be allowed out of the workplace

Precautionary Statements - Response

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing
 If eye irritation persists: Get medical advice/attention
 If skin irritation or rash occurs: Get medical advice/attention

Precautionary Statements - Disposal

Dispose of contents/container to an approved waste disposal plant

Other Hazards

Harmful to aquatic life with long lasting effects

Unknown Acute Toxicity

3.28% of the mixture consists of ingredient(s) of unknown toxicity

3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Name	CAS No	Weight-%
Proprietary fragrance	Proprietary	<2
Proprietary emulsifying agent	Proprietary	<2

If Chemical Name/CAS No is "proprietary" and/or Weight-% is listed as a range, the specific chemical identity and/or percentage of composition has been withheld as a trade secret.

4. FIRST-AID MEASURES

First Aid Measures

Eye Contact	Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. If eye irritation persists: Get medical advice/attention.
Skin Contact	If skin irritation occurs, rinse affected area with water. If skin irritation or rash occurs: Get medical advice/attention.
Inhalation	Remove to fresh air.
Ingestion	Drink plenty of water. Do not induce vomiting. Seek medical attention.

Most important symptoms and effects

Symptoms	Exposed individuals may experience eye tearing, redness and discomfort. The product contains a small amount of sensitizing substance which may provoke an allergic reaction among sensitive individuals in contact with skin.
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Indication of any immediate medical attention and special treatment needed

Notes to Physician	Treat symptomatically.
---------------------------	------------------------

5. FIRE-FIGHTING MEASURES

Suitable Extinguishing Media

Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

Unsuitable Extinguishing Media Not determined.

Specific Hazards Arising from the Chemical

Product will not burn.

Protective equipment and precautions for firefighters

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

- Personal Precautions** Use personal protective equipment as required.
- Environmental Precautions** See Section 12 for additional Ecological Information.

Methods and material for containment and cleaning up

- Methods for Containment** Prevent further leakage or spillage if safe to do so.
- Methods for Clean-Up** Wash spill area with plenty of water. Clean up in accordance with all applicable regulations.

7. HANDLING AND STORAGE

Precautions for safe handling

- Advice on Safe Handling** Avoid breathing vapors or mists. Contaminated work clothing should not be allowed out of the workplace.

Conditions for safe storage, including any incompatibilities

- Storage Conditions** Keep containers tightly closed in a dry, cool and well-ventilated place. Do not remove or deface label. Store containers upright.
- Incompatible Materials** None known based on information supplied.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Exposure Guidelines

Chemical Name	ACGIH TLV	OSHA PEL	NIOSH IDLH
Citric Acid 77-92-9	-	15 mg / m3 (Total)	-

Appropriate engineering controls

- Engineering Controls** None under normal use conditions.

Individual protection measures, such as personal protective equipment

- Eye/Face Protection** Avoid contact with eyes.
- Skin and Body Protection** No protective equipment is needed under normal use conditions.
- Respiratory Protection** Ensure adequate ventilation, especially in confined areas.
- General Hygiene Considerations** Handle in accordance with good industrial hygiene and safety practice.

9. PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

Physical State	Liquid	Odor	Citrus
Appearance	Clear viscous liquid	Odor Threshold	Not determined
Color	Not determined		

<u>Property</u>	<u>Values</u>	<u>Remarks • Method</u>
pH	6.4	
Melting Point/Freezing Point	Not available	
Boiling Point/Boiling Range	Not determined	
Flash Point	None (will not burn)	
Evaporation Rate	Not determined	
Flammability (Solid, Gas)	n/a-liquid	
Upper Flammability Limits	Not determined	
Lower Flammability Limit	Not determined	
Vapor Pressure	Not available	
Vapor Density	Not determined	
Specific Gravity	1.003	(1=Water)
Water Solubility	Dispersible	
Solubility in other solvents	Not determined	
Partition Coefficient	Not determined	
Auto-ignition Temperature	Not determined	
Decomposition Temperature	Not determined	
Kinematic Viscosity	Not determined	
Dynamic Viscosity	Not determined	
Explosive Properties	Not determined	
Oxidizing Properties	Not determined	

10. STABILITY AND REACTIVITY

Reactivity

Not reactive under normal conditions.

Chemical Stability

Stable under recommended storage conditions.

Possibility of Hazardous Reactions

None under normal processing.

Conditions to Avoid

None known.

Incompatible Materials

None known based on information supplied.

Hazardous Decomposition Products

None known based on information supplied.

11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure

Product Information

Eye Contact	Causes serious eye irritation.
Skin Contact	May cause an allergic skin reaction.
Inhalation	Avoid breathing vapors or mists.
Ingestion	Do not taste or swallow.

Component Information

Chemical Name	Oral LD50	Dermal LD50	Inhalation LC50
Dimethyl Adipate 627-93-0	= 1920 mg/kg (Rat)	-	-
Proprietary fragrance	-	> 5 g/kg (Rabbit)	-
Proprietary emulsifying agent	= 1900 mg/kg (Rat)	= 10000 mg/kg (Rabbit)	-
Alcohol Ethoxylate 68439-46-3	= 1378 mg/kg (Rat)	> 2 g/kg (Rabbit)	-
Citric Acid 77-92-9	= 3000 mg/kg (Rat)	-	-

Information on physical, chemical and toxicological effects

Symptoms Please see section 4 of this SDS for symptoms.

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Sensitization May cause an allergic skin reaction.

Carcinogenicity Not classifiable as a human carcinogen.

Chemical Name	ACGIH	IARC	NTP	OSHA
Proprietary fragrance		Group 3		X

Legend

IARC (International Agency for Research on Cancer)
Group 3 IARC components are "not classifiable as human carcinogens"

Numerical measures of toxicity

Not determined

Unknown Acute Toxicity 3.28% of the mixture consists of ingredient(s) of unknown toxicity.

12. ECOLOGICAL INFORMATION

Ecotoxicity

Harmful to aquatic life with long lasting effects.

Chemical Name	Algae/aquatic plants	Fish	Toxicity to microorganisms	Crustacea
Proprietary fragrance		0.619 - 0.796: 96 h Pimephales promelas mg/L LC50 flow-through 35: 96 h Oncorhynchus mykiss mg/L LC50		
Proprietary emulsifying agent		20 - 40: 96 h Oncorhynchus mykiss mg/L LC50 semi- static 24: 96 h Oncorhynchus mykiss mg/L LC50 static 37: 96 h Lepomis macrochirus mg/L LC50 static		36: 48 h Daphnia magna mg/L EC50
Citric Acid 77-92-9		1516: 96 h Lepomis macrochirus mg/L LC50 static		120: 72 h Daphnia magna mg/L EC50

Persistence/Degradability

Not determined.

Bioaccumulation

Not determined.

Mobility

Not determined

Other Adverse Effects

Not determined

13. DISPOSAL CONSIDERATIONS

Waste Treatment Methods

Disposal of Wastes

Disposal should be in accordance with applicable regional, national and local laws and regulations.

Contaminated Packaging

Disposal should be in accordance with applicable regional, national and local laws and regulations.

California Hazardous Waste Status

Chemical Name	California Hazardous Waste Status
Proprietary fragrance	Toxic

14. TRANSPORT INFORMATION

Note

Please see current shipping paper for most up to date shipping information, including exemptions and special circumstances.

DOT

Not regulated

IATA

Not regulated

IMDG

Marine Pollutant

This material may meet the definition of a marine pollutant

15. REGULATORY INFORMATION

International Inventories

TSCA Listed

Legend:

TSCA - United States Toxic Substances Control Act Section 8(b) Inventory

DSL/NDL - Canadian Domestic Substances List/Non-Domestic Substances List

EINECS/ELINCS - European Inventory of Existing Chemical Substances/European List of Notified Chemical Substances

ENCS - Japan Existing and New Chemical Substances

IECSC - China Inventory of Existing Chemical Substances

KECL - Korean Existing and Evaluated Chemical Substances

PICCS - Philippines Inventory of Chemicals and Chemical Substances

US Federal Regulations

SARA 313

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product does not contain any chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372

US State Regulations

U.S. State Right-to-Know Regulations

Not determined

16. OTHER INFORMATION

NFPA

Health Hazards

Flammability

Instability

Special Hazards

Not determined

Not determined

Not determined

Not determined

HMIS

Health Hazards

Flammability

Physical Hazards

Personal Protection

1

0

0

Not determined

Issue Date:

23-Jan-2012

Revision Date:

10-Feb-2014

Revision Note:

New format

Disclaimer

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

End of Safety Data Sheet



SAFETY DATA SHEET

1. Identification

Product identifier Brakleen® Brake Parts Cleaner

Other means of identification

Product code 05151

Recommended use Brake parts cleaner

Recommended restrictions None known.

Manufacturer/Importer/Supplier/Distributor information

Manufactured or sold by:

Company name CRC Industries, Inc.
Address 885 Louis Dr.
Warminster, PA 18974 US

Telephone

General Information 215-674-4300

Technical Assistance 800-521-3168

Customer Service

24-Hour Emergency (CHEMTREC) 800-272-4620

800-424-9300 (US)

703-527-3887 (International)

Website www.crcindustries.com

2. Hazard(s) identification

Physical hazards	Flammable aerosols	Category 1
	Gases under pressure	Compressed gas
Health hazards	Serious eye damage/eye irritation	Category 2
	Reproductive toxicity (the unborn child)	Category 2
	Specific target organ toxicity, single exposure	Category 3 narcotic effects
	Specific target organ toxicity, repeated exposure	Category 2
Environmental hazards	Hazardous to the aquatic environment, acute hazard	Category 3
OSHA defined hazards	Not classified.	

Label elements



Signal word Danger

Hazard statement Extremely flammable aerosol. Contains gas under pressure; may explode if heated. Causes serious eye irritation. May cause drowsiness or dizziness. Suspected of damaging the unborn child. May cause damage to organs (liver, kidneys, brain, lungs) through prolonged or repeated exposure. Harmful to aquatic life.

Precautionary statement

Prevention

Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Keep away from heat/sparks/open flames/hot surfaces. - No smoking. Do not spray on an open flame or other ignition source. Do not apply while equipment is energized. Pressurized container: Do not pierce or burn, even after use. Extinguish all flames, pilot lights and heaters. Vapors will accumulate readily and may ignite. Use only with adequate ventilation; maintain ventilation during use and until all vapors are gone. Open doors and windows or use other means to ensure a fresh air supply during use and while product is drying. If you experience any symptoms listed on this label, increase ventilation or leave the area. Do not breathe the mist or vapor. Wash thoroughly after handling. Wear protective gloves/protective clothing/eye protection/face protection. Avoid release to the environment.

Response	If inhaled: Remove person to fresh air and keep comfortable for breathing. Call a poison center/doctor if you feel unwell. If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical attention. If exposed or concerned: Get medical attention.
Storage	Store in a well-ventilated place. Store locked up. Protect from sunlight. Do not expose to temperatures exceeding 50°C/122°F. Exposure to high temperature may cause can to burst.
Disposal	Dispose of contents/container in accordance with local/regional/national regulations.
Hazard(s) not otherwise classified (HNOC)	Static accumulating flammable liquid can become electrostatically charged even in bonded and grounded equipment. Sparks may ignite liquid and vapor. May cause flash fire or explosion.
Supplemental information	11.8% of the mixture consists of component(s) of unknown acute hazards to the aquatic environment.

3. Composition/information on ingredients

Mixtures

Chemical name	Common name and synonyms	CAS number	%
Acetone		67-64-1	80 - 90
Carbon dioxide		124-38-9	10 - 20
Toluene		108-88-3	1 - 3

Specific chemical identity and/or percentage of composition has been withheld as a trade secret.

4. First-aid measures

Inhalation	Remove victim to fresh air and keep at rest in a position comfortable for breathing. Call a POISON CENTER or doctor/physician if you feel unwell.
Skin contact	Rinse skin with water/shower. Get medical attention if irritation develops and persists.
Eye contact	Immediately flush eyes with plenty of water for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Get medical attention if irritation develops and persists.
Ingestion	In the unlikely event of swallowing contact a physician or poison control center. Rinse mouth.
Most important symptoms/effects, acute and delayed	May cause drowsiness and dizziness. Headache. Nausea, vomiting. Severe eye irritation. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. Prolonged exposure may cause chronic effects.
Indication of immediate medical attention and special treatment needed	Provide general supportive measures and treat symptomatically. Keep victim under observation. Symptoms may be delayed.
General information	IF exposed or concerned: Get medical advice/attention. Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves. Show this safety data sheet to the doctor in attendance.

5. Fire-fighting measures

Suitable extinguishing media	Alcohol resistant foam. Water fog. Carbon dioxide (CO2). Dry chemical powder, carbon dioxide, sand or earth may be used for small fires only.
Unsuitable extinguishing media	Do not use water jet as an extinguisher, as this will spread the fire.
Specific hazards arising from the chemical	Contents under pressure. Pressurized container may rupture when exposed to heat or flame. This product is a poor conductor of electricity and can become electrostatically charged. If sufficient charge is accumulated, ignition of flammable mixtures can occur. Static electricity accumulation may be significantly increased by the presence of small quantities of water or other contaminants. Material will float and may ignite on surface of water. During fire, gases hazardous to health may be formed.
Special protective equipment and precautions for firefighters	Firefighters must use standard protective equipment including flame retardant coat, helmet with face shield, gloves, rubber boots, and in enclosed spaces, SCBA.
Fire-fighting equipment/instructions	In case of fire: Stop leak if safe to do so. Move containers from fire area if you can do so without risk. Containers should be cooled with water to prevent vapor pressure build up.
General fire hazards	Extremely flammable aerosol. Contents under pressure. Pressurized container may rupture when exposed to heat or flame.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

Keep unnecessary personnel away. Keep people away from and upwind of spill/leak. Keep out of low areas. Remove all possible sources of ignition in the surrounding area. Many vapors are heavier than air and will spread along ground and collect in low or confined areas (sewers, basements, tanks). Wear appropriate protective equipment and clothing during clean-up. Do not breathe mist or vapor. Emergency personnel need self-contained breathing equipment. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Ventilate closed spaces before entering them. Use appropriate containment to avoid environmental contamination. Local authorities should be advised if significant spillages cannot be contained. For personal protection, see section 8 of the SDS.

Methods and materials for containment and cleaning up

Eliminate all ignition sources (no smoking, flares, sparks, or flames in immediate area). Keep combustibles (wood, paper, oil, etc.) away from spilled material. Stop the flow of material, if this is without risk. Prevent product from entering drains. Wipe up with absorbent material (e.g. cloth, fleece). Clean surface thoroughly to remove residual contamination. For waste disposal, see section 13 of the SDS.

Environmental precautions

Avoid release to the environment. Prevent further leakage or spillage if safe to do so. Avoid discharge into drains, water courses or onto the ground. Inform appropriate managerial or supervisory personnel of all environmental releases. Use appropriate containment to avoid environmental contamination.

7. Handling and storage

Precautions for safe handling

Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Minimize fire risks from flammable and combustible materials (including combustible dust and static accumulating liquids) or dangerous reactions with incompatible materials. Pressurized container: Do not pierce or burn, even after use. Do not use if spray button is missing or defective. Do not spray on a naked flame or any other incandescent material. Do not smoke while using or until sprayed surface is thoroughly dry. Do not cut, weld, solder, drill, grind, or expose containers to heat, flame, sparks, or other sources of ignition. Use caution around energized equipment. The metal container will conduct electricity if it contacts a live source. This may result in injury to the user from electrical shock and/or flash fire. Do not breathe mist or vapor. Avoid contact with eyes. Avoid prolonged exposure. Pregnant or breastfeeding women must not handle this product. Should be handled in closed systems, if possible. Use only in well-ventilated areas. Wear appropriate personal protective equipment. Observe good industrial hygiene practices. Avoid release to the environment. For product usage instructions, please see the product label.

Conditions for safe storage, including any incompatibilities

Level 3 Aerosol.

Pressurized container. Protect from sunlight and do not expose to temperatures exceeding 50°C/122 °F. Do not puncture, incinerate or crush. Do not handle or store near an open flame, heat or other sources of ignition. This material can accumulate static charge which may cause spark and become an ignition source. Avoid spark promoters. These alone may be insufficient to remove static electricity. Store in a well-ventilated place. Store away from incompatible materials (see Section 10 of the SDS).

8. Exposure controls/personal protection

Occupational exposure limits

US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000)

Components	Type	Value
Acetone (CAS 67-64-1)	PEL	2400 mg/m3 1000 ppm
Carbon dioxide (CAS 124-38-9)	PEL	9000 mg/m3 5000 ppm

US. OSHA Table Z-2 (29 CFR 1910.1000)

Components	Type	Value
Toluene (CAS 108-88-3)	Ceiling TWA	300 ppm 200 ppm

US. ACGIH Threshold Limit Values

Components	Type	Value
Acetone (CAS 67-64-1)	STEL TWA	750 ppm 500 ppm

US. ACGIH Threshold Limit Values

Components	Type	Value
Carbon dioxide (CAS 124-38-9)	STEL	30000 ppm
Toluene (CAS 108-88-3)	TWA	5000 ppm
	TWA	20 ppm

US. NIOSH: Pocket Guide to Chemical Hazards

Components	Type	Value
Acetone (CAS 67-64-1)	TWA	590 mg/m3 250 ppm
Carbon dioxide (CAS 124-38-9)	STEL	54000 mg/m3
	TWA	30000 ppm 9000 mg/m3
Toluene (CAS 108-88-3)	STEL	5000 ppm 560 mg/m3
	TWA	150 ppm 375 mg/m3

Biological limit values**ACGIH Biological Exposure Indices**

Components	Value	Determinant	Specimen	Sampling Time
Acetone (CAS 67-64-1)	50 mg/l	Acetone	Urine	*
Toluene (CAS 108-88-3)	0.3 mg/g	o-Cresol, with hydrolysis	Creatinine in urine	*
	0.03 mg/l	Toluene	Urine	*
	0.02 mg/l	Toluene	Blood	*

* - For sampling details, please see the source document.

Exposure guidelines**US - California OELs: Skin designation**

Toluene (CAS 108-88-3)

Can be absorbed through the skin.

US - Minnesota Haz Subs: Skin designation applies

Toluene (CAS 108-88-3)

Skin designation applies.

Appropriate engineering controls

Good general ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level. Provide eyewash station.

Individual protection measures, such as personal protective equipment

Eye/face protection Wear safety glasses with side shields (or goggles).

Skin protection

Hand protection Wear protective gloves such as: Nitrile. Neoprene. Polyvinyl alcohol (PVA).

Other Wear suitable protective clothing.

Respiratory protection If engineering controls are not feasible or if exposure exceeds the applicable exposure limits, use a NIOSH-approved cartridge respirator with an organic vapor cartridge. Use a self-contained breathing apparatus in confined spaces and for emergencies. Air monitoring is needed to determine actual employee exposure levels.

Thermal hazards Wear appropriate thermal protective clothing, when necessary.

General hygiene considerations

When using do not smoke. Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants.

9. Physical and chemical properties**Appearance**

Physical state	Liquid.
Form	Aerosol.
Color	Clear. Colorless.

Odor	Sweet.
Odor threshold	Not available.
pH	Not available.
Melting point/freezing point	-138.8 °F (-94.9 °C) estimated
Initial boiling point and boiling range	132.9 °F (56.1 °C) estimated
Flash point	< 0 °F (< -17.8 °C) Tag Closed Cup
Evaporation rate	Fast.
Flammability (solid, gas)	Not available.
Upper/lower flammability or explosive limits	
Flammability limit - lower (%)	1.2 % estimated
Flammability limit - upper (%)	12.8 % estimated
Vapor pressure	6962 hPa estimated
Vapor density	2 (air = 1)
Relative density	0.88 estimated
Solubility (water)	Slightly soluble.
Partition coefficient (n-octanol/water)	Not available.
Auto-ignition temperature	869 °F (465 °C) estimated
Decomposition temperature	Not available.
Viscosity (kinematic)	Not available.
Percent volatile	88.2 % estimated

10. Stability and reactivity

Reactivity	The product is stable and non-reactive under normal conditions of use, storage and transport.
Chemical stability	Material is stable under normal conditions.
Possibility of hazardous reactions	No dangerous reaction known under conditions of normal use.
Conditions to avoid	Heat, flames and sparks. Avoid temperatures exceeding the flash point. Contact with incompatible materials.
Incompatible materials	Acids. Aluminum.
Hazardous decomposition products	Carbon oxides.

11. Toxicological information

Information on likely routes of exposure

Inhalation	May cause damage to organs through prolonged or repeated exposure by inhalation. May cause drowsiness and dizziness. Headache. Nausea, vomiting.
Skin contact	Prolonged skin contact may cause temporary irritation.
Eye contact	Causes serious eye irritation.
Ingestion	Acetone poisoning may result in liver and kidney damage.

Symptoms related to the physical, chemical and toxicological characteristics Headache. May cause drowsiness and dizziness. Nausea, vomiting. Severe eye irritation. Symptoms may include stinging, tearing, redness, swelling, and blurred vision.

Information on toxicological effects

Acute toxicity Narcotic effects.

Product	Species	Test Results
Brakleen® Brake Parts Cleaner		
<u>Acute</u>		
Dermal		
LD50	Rabbit	22231 mg/kg estimated

Product	Species	Test Results
Inhalation		
LC50	Rat	33087 ppm, 4 hours estimated 82 mg/l, 4 Hours estimated
Oral		
LD50	Rat	6560 mg/kg estimated

* Estimates for product may be based on additional component data not shown.

Skin corrosion/irritation	Prolonged skin contact may cause temporary irritation.
Serious eye damage/eye irritation	Causes serious eye irritation.
Respiratory sensitization	Not a respiratory sensitizer.
Skin sensitization	This product is not expected to cause skin sensitization.
Germ cell mutagenicity	No data available to indicate product or any components present at greater than 0.1% are mutagenic or genotoxic.
Carcinogenicity	This product is not considered to be a carcinogen by IARC, ACGIH, NTP, or OSHA.
IARC Monographs. Overall Evaluation of Carcinogenicity	
Toluene (CAS 108-88-3)	3 Not classifiable as to carcinogenicity to humans.
Reproductive toxicity	Suspected of damaging the unborn child.
Specific target organ toxicity - single exposure	May cause drowsiness and dizziness.
Specific target organ toxicity - repeated exposure	May cause damage to organs through prolonged or repeated exposure: Liver. Kidneys. Brain. Lungs.
Aspiration hazard	Based on available data, the classification criteria are not met.
Chronic effects	May cause damage to organs through prolonged or repeated exposure. Prolonged inhalation may be harmful.

12. Ecological information

Product	Species	Test Results
Ecotoxicity	Harmful to aquatic life.	
Brakleen® Brake Parts Cleaner		
Aquatic		
<i>Acute</i>		
Fish	LC50	Fish 7948.4028 mg/l, 96 hours estimated
Components		
Species		
Test Results		
Acetone (CAS 67-64-1)		
Aquatic		
Crustacea	EC50	Water flea (Daphnia magna) 10294 - 17704 mg/l, 48 hours
Fish	LC50	Rainbow trout,donaldson trout (Oncorhynchus mykiss) 4740 - 6330 mg/l, 96 hours
Toluene (CAS 108-88-3)		
Aquatic		
Crustacea	EC50	Water flea (Daphnia magna) 5.46 - 9.83 mg/l, 48 hours
Fish	LC50	Coho salmon,silver salmon (Oncorhynchus kisutch) 8.11 mg/l, 96 hours

* Estimates for product may be based on additional component data not shown.

Persistence and degradability No data is available on the degradability of this product.

Bioaccumulative potential

Partition coefficient n-octanol / water (log Kow)

Acetone	-0.24
Toluene	2.73

Mobility in soil No data available.

Other adverse effects No other adverse environmental effects (e.g. ozone depletion, photochemical ozone creation potential, endocrine disruption, global warming potential) are expected from this component.

13. Disposal considerations

Disposal of waste from residues / unused products If discarded, this product is considered a RCRA ignitable waste, D001. Collect and reclaim or dispose in sealed containers at licensed waste disposal site. Contents under pressure. Do not puncture, incinerate or crush. Do not allow this material to drain into sewers/water supplies. Do not contaminate ponds, waterways or ditches with chemical or used container. Dispose in accordance with all applicable regulations.

Hazardous waste code D001: Waste Flammable material with a flash point <140 F

Contaminated packaging Since emptied containers may retain product residue, follow label warnings even after container is emptied. Empty containers should be taken to an approved waste handling site for recycling or disposal.

14. Transport information

DOT

UN number UN1950
UN proper shipping name Aerosols, flammable, Limited Quantity
Transport hazard class(es)
Class 2.1
Subsidiary risk -
Label(s) 2.1
Packing group Not applicable.
Special precautions for user Read safety instructions, SDS and emergency procedures before handling.
Special provisions N82
Packaging exceptions 306
Packaging non bulk None
Packaging bulk None

IATA

UN number UN1950
UN proper shipping name Aerosols, flammable, Limited Quantity
Transport hazard class(es)
Class 2.1
Subsidiary risk -
Packing group Not applicable.
Environmental hazards No.
ERG Code 10L
Special precautions for user Read safety instructions, SDS and emergency procedures before handling.
Other information
Passenger and cargo aircraft Allowed.
Cargo aircraft only Allowed.

IMDG

UN number UN1950
UN proper shipping name AEROSOLS, LIMITED QUANTITY
Transport hazard class(es)
Class 2
Subsidiary risk -
Packing group Not applicable.
Environmental hazards
Marine pollutant No.
EmS F-D, S-U
Special precautions for user Read safety instructions, SDS and emergency procedures before handling.

15. Regulatory information

US federal regulations This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)

Not regulated.

US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)

Not listed.

SARA 304 Emergency release notification

Not regulated.

US EPCRA (SARA Title III) Section 313 - Toxic Chemical: Listed substance

Toluene (CAS 108-88-3)

CERCLA Hazardous Substance List (40 CFR 302.4)

Acetone (CAS 67-64-1) Listed.

Toluene (CAS 108-88-3) Listed.

CERCLA Hazardous Substances: Reportable quantity

Acetone (CAS 67-64-1) 5000 LBS

Toluene (CAS 108-88-3) 1000 LBS

Spills or releases resulting in the loss of any ingredient at or above its RQ require immediate notification to the National Response Center (800-424-8802) and to your Local Emergency Planning Committee.

Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List

Toluene (CAS 108-88-3)

Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130)

Not regulated.

Safe Drinking Water Act (SDWA) Not regulated.**Drug Enforcement Administration (DEA). List 2, Essential Chemicals (21 CFR 1310.02(b) and 1310.04(f)(2) and Chemical Code Number**

Acetone (CAS 67-64-1) 6532

Toluene (CAS 108-88-3) 6594

Drug Enforcement Administration (DEA). List 1 & 2 Exempt Chemical Mixtures (21 CFR 1310.12(c))

Acetone (CAS 67-64-1) 35 %WV

Toluene (CAS 108-88-3) 35 %WV

DEA Exempt Chemical Mixtures Code Number

Acetone (CAS 67-64-1) 6532

Toluene (CAS 108-88-3) 594

Food and Drug Administration (FDA) Not regulated.**Superfund Amendments and Reauthorization Act of 1986 (SARA)****Section 311/312** Immediate Hazard - Yes**Hazard categories** Delayed Hazard - Yes

Fire Hazard - Yes

Pressure Hazard - Yes

Reactivity Hazard - No

SARA 302 Extremely hazardous substance No**US state regulations****US. California. Candidate Chemicals List. Safer Consumer Products Regulations (Cal. Code Regs, tit. 22, 69502.3, subd. (a))**

Acetone (CAS 67-64-1)

Toluene (CAS 108-88-3)

US. California Controlled Substances. CA Department of Justice (California Health and Safety Code Section 11100)

Not listed.

US. New Jersey Worker and Community Right-to-Know Act

Acetone (CAS 67-64-1)

Carbon dioxide (CAS 124-38-9)

Toluene (CAS 108-88-3)

US. Massachusetts RTK - Substance List

Acetone (CAS 67-64-1)

Carbon dioxide (CAS 124-38-9)

Toluene (CAS 108-88-3)

US. Pennsylvania Worker and Community Right-to-Know Law

Acetone (CAS 67-64-1)

Toluene (CAS 108-88-3)

Carbon dioxide (CAS 124-38-9)

US. Rhode Island RTK

Acetone (CAS 67-64-1)

Toluene (CAS 108-88-3)

US. California Proposition 65

WARNING: This product contains a chemical known to the State of California to cause cancer and birth defects or other reproductive harm.

US - California Proposition 65 - CRT: Listed date/Carcinogenic substance

Benzene (CAS 71-43-2)	Listed: February 27, 1987
Cumene (CAS 98-82-8)	Listed: April 6, 2010
Ethanal (CAS 75-07-0)	Listed: April 1, 1988
Ethylbenzene (CAS 100-41-4)	Listed: June 11, 2004

US - California Proposition 65 - CRT: Listed date/Developmental toxin

Benzene (CAS 71-43-2)	Listed: December 26, 1997
Toluene (CAS 108-88-3)	Listed: January 1, 1991

US - California Proposition 65 - CRT: Listed date/Female reproductive toxin

Toluene (CAS 108-88-3)	Listed: August 7, 2009
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US - California Proposition 65 - CRT: Listed date/Male reproductive toxin

Benzene (CAS 71-43-2)	Listed: December 26, 1997
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Volatile organic compounds (VOC) regulations

EPA

VOC content (40 CFR 51.100(s)) 2.7 %

Consumer products (40 CFR 59, Subpt. C) Not regulated

State

Consumer products This product is regulated as a Brake Cleaner. This product is compliant for use in all 50 states. This product also complies with South Coast Air Quality Management District Rule 1171.

VOC content (CA) 2.7 %

VOC content (OTC) 2.7 %

International Inventories

Country(s) or region	Inventory name	On inventory (yes/no)*
Australia	Australian Inventory of Chemical Substances (AICS)	Yes
Canada	Domestic Substances List (DSL)	Yes
Canada	Non-Domestic Substances List (NDSL)	No
China	Inventory of Existing Chemical Substances in China (IECSC)	Yes
Europe	European Inventory of Existing Commercial Chemical Substances (EINECS)	Yes
Europe	European List of Notified Chemical Substances (ELINCS)	No
Japan	Inventory of Existing and New Chemical Substances (ENCS)	Yes
Korea	Existing Chemicals List (ECL)	Yes
New Zealand	New Zealand Inventory	Yes
Philippines	Philippine Inventory of Chemicals and Chemical Substances (PICCS)	Yes
United States & Puerto Rico	Toxic Substances Control Act (TSCA) Inventory	Yes

*A "Yes" indicates that all components of this product comply with the inventory requirements administered by the governing country(s)

A "No" indicates that one or more components of the product are not listed or exempt from listing on the inventory administered by the governing country(s).

16. Other information, including date of preparation or last revision

Issue date	05-26-2015
Prepared by	Allison Cho
Version #	01
Further information	CRC # 668A
HMIS® ratings	Health: 1* Flammability: 4 Physical hazard: 0 Personal protection: B

NFPA ratings

Health: 1
Flammability: 4
Instability: 0

NFPA ratings



Disclaimer

The information contained in this document applies to this specific material as supplied. It may not be valid for this material if it is used in combination with any other materials. This information is accurate to the best of CRC Industries' knowledge or obtained from sources believed by CRC to be accurate. Before using any product, read all warnings and directions on the label. For further clarification of any information contained on this (M)SDS consult your supervisor, a health & safety professional, or CRC Industries.

Safety Data Sheet (SDS)

Document #1009-007-01

REV: 3/12/2015

Canned Air

PRODUCT IDENTIFICATION

Product Name: Canned Air **Generic ID:** Dusting Aid **DOT Hazard Classification:** N/A

COMPONENTS

INGREDIENT	TLV	UNITS	AGENCY	TYPE
1,1,1,2-tetrafluoroethane	100%		OSHA	NIF



PHYSICAL DATA

Approx. Boiling Point	Vapor Density (air=1)	Vapor Density Air=1	Evaporation Rate H20=1	% Volatile
-27 °F	1.202	3.0	>1	100
Specific Gravity less than water	Flash Point Range none			

EMERGENCY FIRST AID

Eye Contact: If in eyes, flush with large amounts of water, lifting upper and lower lids occasionally. If irritation persists seek medical attention

Skin Contact: Remove contaminated clothing. Cleanse affected areas by washing with mild soap and water. Launder contaminated clothing before re-use. If irritation persists, seek medical attention.

Inhalation: Move victim into fresh air. If victim has stopped breathing, give artificial respiration. Call for prompt medical attention.

Ingestion: If swallowed, immediately drink two glasses of water. DO NOT induce vomiting unless directed by a physician. Never give anything by mouth to an unconscious person. Seek medical help immediately.

HEALTH HAZARDS/ROUTES OF ENTRY

Eye Contact: Vapors may cause eye irritation. Liquid can cause slight, temporary irritation with slight temporary corneal injury.

Skin Contact: Prolonged or repeated contacted with liquid can cause freezing of skin tissues, defatting and dermatitis.

Inhalation: Major potential route of exposure. Minimal effects observed below 1000ppm. Dizziness, drowsiness and throat irritation possible at levels above 1000ppm. Unconsciousness and death at levels above 10,000ppm. Blood pressure depression, cardiac sensitization and ventricular arrhythmia can result from exposure to near-anesthetic levels.

Ingestion: Single dose toxicity is low to moderate. If vomiting occurs the liquid can be aspirated into the lungs, which can cause chemical pneumonia and systemic effects. Human psychotropic, gastrointestinal, and central nervous system effects possible.

SPECIAL PROTECTION INFORMATION

Respiratory Protection: Local exhaust ventilation is acceptable.

Ventilation: Local exhaust ventilation is acceptable.

Protective Gloves: NA

Eye Protection: Safety glasses recommended.

Other Protection: NA

REACTIVITY DATA

Stability	Incompatibility (Materials to Avoid)	Hazardous Decomposition Products	Hazardous Polymerization
Stable	Contact with open flames/heat. Reactive alkali metals and strong bases.	Hydrogen fluoride, Carbon dioxide, Carbon monoxide.	NA

SPILL OR LEAK PROCEDURE

Evacuate area. Ventilate area well and avoid breathing vapors. Vapor concentration will be highest along floor and low-lying areas. Pick up liquid with suitable absorbent and store in sealed container for disposal in accordance with local regulations.

PRECAUTIONS IN CASE OF LARGER SPILL

Same as "Spill or Leak Procedure". Contact CHEMTREC 24 hours at 1-800-424-9300.

WASTE DISPOSAL METHOD

Dispose of product in accordance with local, county, state and federal regulations.

HANDLING AND STORAGE PRECAUTIONS

Keep container closed when not in use. Store in a cool, well ventilated place out of direct sunlight and away from incompatible materials. Follow all instructions and MSDS warnings even after container is empty.

FIRE AND EXPLOSION INFORMATION - HAZARD RANKING

0 = Least 1 = Slight 2 = Moderate 3 = High 4 = Extreme

HEALTH HAZARD: --

FLAMMABILITY: --

REACTIVITY: 0

OTHER: --

Extinguishing Media: Aerosol cans may erupt with force at temperatures above 120°F. Water, foam, dry chemical, carbon dioxide.

Fire Fighting Procedures: Wear self contained breathing apparatus with full face piece operated in pressure-demand or other positive pressure mode.

DISCLAIMER OF EXPRESSED AND IMPLIED WARRANTIES

This information in this document is believed to be correct as of the date issued. However, no warranty of Merchantability, fitness for any particular purpose, or any other warranty is expressed or is implied regarding the accuracy or completeness of this information, the results to be obtained from use of this information or the product, the safety of this product, or the hazards related to its use. This information and product are furnished on the condition that the person receiving them shall make his own determination as to the suitability of the product for his particular purpose and on the condition that he assumes the risk of his use thereof.

SAFETY DATA SHEET



Issuing Date: 25-Mar-2015

Revision Date: 25-Mar-2015

Version 1

1. IDENTIFICATION

Product Name Cascade Platinum Action Pacs with the Power of Clorox Dishwasher Detergent - Fresh Scent

Product ID: 96928424_RET_NG

Product Type: Finished Product - Consumer (Retail) Use Only

Recommended Use Dish Care

Restrictions on Use Use only as directed on label.

Manufacturer PROCTER & GAMBLE - Fabric and Home Care Division. Ivorydale Technical Centre. 5289 Spring Grove Avenue, Cincinnati, Ohio 45217-1087 USA

E-mail Address pgsds.im@pg.com

Emergency Telephone Transportation (24 HR)
CHEMTREC - 1-800-424-9300
(U.S./ Canada) or 1-703-527-3887
Mexico toll free in country: 800-681-9531

2. HAZARD IDENTIFICATION

"Consumer Products", as defined by the US Consumer Product Safety Act and which are used as intended (typical consumer duration and frequency), are exempt from the OSHA Hazard Communication Standard (29 CFR 1910.1200). This SDS is being provided as a courtesy to help assist in the safe handling and proper use of the product.

This product is classified under 29CFR 1910.1200(d) and the Canadian Hazardous Products Regulation as follows:.

Hazard Category

Eye Damage / Irritation Category 1

Signal Word DANGER

Hazard Statements Causes serious eye damage

Hazard pictograms



Precautionary Statements - Prevention Do not breathe mist
Wash hands thoroughly after handling

Wear eye/face protection
Use with ventilation.

Precautionary Statements - Response

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing
Immediately call a POISON CENTER or doctor/physician
IF SWALLOWED: Rinse mouth. DO NOT induce vomiting.
Drink 1 or 2 glasses of water
IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower
IF INHALED: Remove to fresh air and keep at rest in a position comfortable for breathing

Precautionary Statements - Storage

None

Precautionary Statements - Disposal

None

Hazards not otherwise classified (HNOC)

None

3. COMPOSITION/INFORMATION ON INGREDIENTS

Ingredients are listed according to 29CFR 1910.1200 Appendix D and the Canadian Hazardous Products Regulation

Chemical Name	Synonyms	Trade Secret	CAS-No	Weight %
Sodium carbonate	-	No	497-19-8	30 - 35
Carbonic acid disodium salt, compd. with hydrogen peroxide	-	No	15630-89-4	10 - 15
Poly(oxy-1,2-ethanediyl), alpha-isotridecyl-omega-hydroxy-	-	No	9043-30-5	1 - 5

4. FIRST AID MEASURES

First aid measures for different exposure routes

Eye contact

Rinse with plenty of water. Call a physician immediately.

Skin contact

Rinse with plenty of water. Get medical attention if irritation develops and persists.

Ingestion

Drink 1 or 2 glasses of water. Do NOT induce vomiting. Get medical attention immediately if symptoms occur.

Inhalation

IF INHALED: Remove to fresh air and keep at rest in a position comfortable for breathing. Call a physician or poison control center immediately.

Most important symptoms/effects, acute and delayed

None under normal use conditions.

Indication of immediate medical attention and special treatment needed, if necessary

Notes to Physician

Treat symptomatically.

5. FIRE-FIGHTING MEASURES

Suitable extinguishing media

Dry chemical, CO₂, alcohol-resistant foam or water spray.

Unsuitable Extinguishing Media	None.
Special hazard	None known.
Special protective equipment for fire-fighters	As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.
Specific hazards arising from the chemical	None.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

Personal precautions	Use personal protective equipment. Do not get in eyes, on skin, or on clothing.
Advice for emergency responders	Use personal protective equipment as required.

Methods and materials for containment and cleaning up

Methods for containment	Prevent dust cloud. Prevent further leakage or spillage if safe to do so.
Methods for cleaning up	Sweep up and shovel into suitable containers for disposal. Dispose of in accordance with local regulations.

7. HANDLING AND STORAGE

Precautions for safe handling

Advice on safe handling	Use personal protective equipment as required. Keep container closed when not in use. Never return spills in original containers for re-use. Keep out of the reach of children.
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Conditions for safe storage, including any incompatibilities

Storage Conditions	Keep containers tightly closed in a dry, cool and well-ventilated place.
Incompatible products	None known.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

Exposure Guidelines	No exposure limits noted for ingredient(s).
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Exposure controls

Engineering Measures	Distribution, Workplace and Household Settings: Ensure adequate ventilation Product Manufacturing Plant (needed at Product-Producing Plant ONLY): Where reasonably practicable this should be achieved by the use of local exhaust ventilation and good general extraction
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Personal Protective Equipment

Eye Protection	Distribution, Workplace and Household Settings: Requires Eye Protection
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Product Manufacturing Plant (needed at Product-Producing Plant ONLY):

Safety glasses with side-shields
If splashes are likely to occur, wear:
Tightly fitting safety goggles

Hand Protection

Distribution, Workplace and Household Settings:

No special protective equipment required

Product Manufacturing Plant (needed at Product-Producing Plant ONLY):

Protective gloves

Skin and Body Protection

Distribution, Workplace and Household Settings:

No special protective equipment required

Product Manufacturing Plant (needed at Product-Producing Plant ONLY):

Wear suitable protective clothing

Respiratory Protection

Distribution, Workplace and Household Settings:

No special protective equipment required

Product Manufacturing Plant (needed at Product-Producing Plant ONLY):

In case of insufficient ventilation wear suitable respiratory equipment

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical State @20°C

solid

Appearance

Dual-phase white blue purple

Odor

Scented

Odor threshold

No information available

Property

Values

Note

pH value

10.7 - 11

(as 1% solution)

Melting/freezing point

No information available

Boiling point/boiling range

No information available

Flash point

No information available

Evaporation rate

No information available

Flammability (solid, gas)

No information available

Flammability Limits in Air

Upper flammability limit

No information available

Lower Flammability Limit

No information available

Vapor pressure

No information available

Vapor density

No information available

Relative density

0.93 - 1

Water solubility

100%

Solubility in other solvents

No information available

Partition coefficient: n-octanol/water No information available

Autoignition temperature

No information available

Decomposition temperature

No information available

Viscosity of Product

No information available

VOC Content (%)

Products comply with US state and federal regulations for VOC content in consumer products.

10. STABILITY AND REACTIVITY

Reactivity

None under normal use conditions.

Stability	Stable under normal conditions.
Hazardous polymerization	Hazardous polymerization does not occur.
Hazardous Reactions	None under normal processing.
Conditions to Avoid	None under normal processing.
Materials to avoid	None in particular.
Hazardous Decomposition Products	None under normal use.

11. TOXICOLOGICAL INFORMATION

Product Information

Information on likely routes of exposure

Inhalation	No known effect.
Skin contact	No known effect.
Ingestion	No known effect.
Eye contact	Risk of serious damage to eyes.

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Acute toxicity	No known effect.
Skin corrosion/irritation	No known effect.
Serious eye damage/eye irritation	Risk of serious damage to eyes.
Skin sensitization	No known effect.
Respiratory sensitization	No known effect.
Germ cell mutagenicity	No known effect.
Neurological Effects	No known effect.
Reproductive toxicity	No known effect.
Developmental toxicity	No known effect.
Teratogenicity	No known effect.
STOT - single exposure	No known effect.
STOT - repeated exposure	No known effect.
Target Organ Effects	No known effect.
Aspiration hazard	No known effect.
Carcinogenicity	No known effect.

Component Information

Chemical Name	CAS-No	LD50 Oral	LD50 Dermal	LC50 Inhalation
Sodium carbonate	497-19-8	2800 mg/kg bw (Guideline not indicated; rat)	> 2000 mg/kg bw (EPA 16 CFR 1500.40; rabbit)	-
Carbonic acid disodium salt, compd. with hydrogen peroxide	15630-89-4	893 mg/kg bw (U.S. EPA Office of Pesticides and Toxic Substances (1984) "Acute Exposure Oral Toxicity"; standard acute method; rat)	> 2000 mg/kg bw (EPA Guideline; standard acute method; rabbit)	-

12. ECOLOGICAL INFORMATION

Ecotoxicity

The product is not expected to be hazardous to the environment.

Persistence and degradability	No information available.
Bioaccumulative potential	No information available.
Mobility	No information available.

Other adverse effects No information available.

13. DISPOSAL CONSIDERATIONS

Waste treatment

Waste from Residues / Unused Products Disposal should be in accordance with applicable regional, national and local laws and regulations.

Contaminated packaging Disposal should be in accordance with applicable regional, national and local laws and regulations.

California Hazardous Waste Codes (non-household setting) 331

14. TRANSPORT INFORMATION

DOT Not regulated

IMDG Not regulated

IATA Not regulated

15. REGULATORY INFORMATION

U.S. Federal Regulations

SARA 313

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product does not contain any chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372

CERCLA

This material, as supplied, does not contain any substances regulated as hazardous substances under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302) or the Superfund Amendments and Reauthorization Act (SARA) (40 CFR 355). There may be specific reporting requirements at the local, regional, or state level pertaining to releases of this material

Clean Air Act, Section 112 Hazardous Air Pollutants (HAPs) (see 40 CFR 61)

This product does not contain any substances regulated as hazardous air pollutants (HAPS) under Section 112 of the Clean Air Act Amendments of 1990.

Clean Water Act

This product contains the following substances which are regulated pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42):

Chemical Name	CAS-No	CWA - Reportable Quantities	CWA - Toxic Pollutants	CWA - Priority Pollutants	CWA - Hazardous Substances
Hydrozincite (Zn5(CO3)2(OH)6)	12122-17-7	-	X	-	-

California Proposition 65

This product is not subject to warning labeling under California Proposition 65.

U.S. State Regulations (RTK)

Chemical Name	CAS-No	New Jersey
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Cellulose	9004-34-6	X
Chemical Name	CAS-No	Massachusetts
Sulfuric acid sodium salt (1:2)	7757-82-6	X
Chemical Name	CAS-No	Pennsylvania
Sulfuric acid sodium salt (1:2)	7757-82-6	X
Dipropylene glycol	25265-71-8	X
Titanium oxide (TiO ₂)	13463-67-7	X
Hydrozincite (Zn ₅ (CO ₃) ₂ (OH) ₆)	12122-17-7	X
Cellulose	9004-34-6	X
Carbonic acid calcium salt (1:1)	471-34-1	X
Glycerin	56-81-5	X

International Inventories

United States

All intentionally-added components of this product(s) are listed on the US TSCA Inventory.

Canada

This product is in compliance with CEPA for import by P&G.

Legend

TSCA - United States Toxic Substances Control Act Section 8(b) Inventory

CEPA - Canadian Environmental Protection Act

16. OTHER INFORMATION

Issuing Date: 25-Mar-2015

Revision Date: 25-Mar-2015

Disclaimer

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text

End of SDS

SAFETY DATA SHEET

SECTION 1 PRODUCT and COMPANY INFORMATION

TRADE NAME: **Castle® Endura™**

PRODUCT TYPE: Heavy Duty Penetrating Grease
PRODUCT CODE: C1630

MANUFACTURED FOR: Castle Products, Inc.
424 St. Paul Street
Rochester, NY 14605
(800) 876-0222
EMERGENCY (585) 275-3232

SECTION 2 HAZARDS IDENTIFICATION

Physical hazards	Flammable aerosols	Category 1
Health hazards	Acute toxicity, inhalation	Category 4
	Serious eye damage/eye irritation	Category 2A
OSHA defined hazards	Not classified.	

Label elements



Signal word: Danger

Hazard statement: Extremely flammable aerosol. Causes serious eye irritation. Harmful if inhaled.

Precautionary statement

Prevention

Keep away from heat/sparks/open flames/hot surfaces. - No smoking. Do not spray on an open flame or other ignition source. Pressurized container: Do not pierce or burn, even after use. Avoid breathing gas. Wash thoroughly after handling. Use only outdoors or in a well-ventilated area. Wear eye protection/face protection.

Response

If inhaled: Remove person to fresh air and keep comfortable for breathing. If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If exposed or concerned: Get medical advice/attention. Call a poison center/doctor if you feel unwell. If eye irritation persists: Get medical advice/attention.

Storage

Protect from sunlight. Do not expose to temperatures exceeding 50°C/122°F.

Disposal

Dispose of contents/container in accordance with local/regional/national/international regulations.

Environmental hazards	Hazardous to the aquatic environment, acute hazard	Category 3
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	Hazardous to the aquatic environment, long-term hazard	Category 3
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Hazard(s) not otherwise classified (HNOC): None known.

Supplemental information: None.

SECTION 3 COMPOSITION INFORMATION ON INGREDIENTS

Mixtures

Chemical name	Common name and synonyms	CAS number	%
Acetone		67-64-1	10 - 20
Lubricating Oils (petroleum), C15-30, Hydrotreated Neutral Oil-based		72623-86-0	10 - 20

Chemical name	Common name and synonyms	CAS number	%
Lubricating Oils (petroleum), C20-50, Hydrotreated Neutral Oil-based		72623-87-1	10 - 20
Petrolatum		8009-03-8	10 - 20
Propane		74-98-6	10 - 20
Isobutane		75-28-5	2.5 - 10
Heptane, branched, cyclic and linear		426260-76-6	1 - 2.5
Naphtha (petroleum), Hydrotreated Light		64742-49-0	1 - 2.5
Cyclohexane		110-82-7	0.1 - 1
Other components below reportable levels			20 - 40

*Designates that a specific chemical identity and/or percentage of composition has been withheld as a trade secret.

SECTION 4 FIRST AID MEASURES

Inhalation	Remove victim to fresh air and keep at rest in a position comfortable for breathing. Oxygen or artificial respiration if needed. Call a POISON CENTER or doctor/physician if you feel unwell.
Skin contact	Wash off with soap and water. Get medical attention if irritation develops and persists.
Eye contact	Immediately flush eyes with plenty of water for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention.
Ingestion	In the unlikely event of swallowing contact a physician or poison control center. Rinse mouth.
Most important symptoms/effects, acute and delayed	Severe eye irritation. Symptoms may include stinging, tearing, redness, swelling, and blurred vision.
Indication of immediate medical attention and special treatment needed	Provide general supportive measures and treat symptomatically. Keep victim warm. Keep victim under observation. Symptoms may be delayed.
General information	Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves.

SECTION 5 FIRE FIGHTING MEASURES

Suitable extinguishing media	Alcohol resistant foam. Dry powder. Carbon dioxide (CO2).
Unsuitable extinguishing media	Do not use water jet as an extinguisher, as this will spread the fire.
Specific hazards arising from the chemical	Contents under pressure. Pressurized container may explode when exposed to heat or flame. During fire, gases hazardous to health may be formed.
Special protective equipment and precautions for firefighters	Firefighters must use standard protective equipment including flame retardant coat, helmet with face shield, gloves, rubber boots, and in enclosed spaces, SCBA.
Fire fighting equipment/instructions	Move containers from fire area if you can do so without risk. Containers should be cooled with water to prevent vapor pressure build up. For massive fire in cargo area, use unmanned hose holder or monitor nozzles, if possible. If not, withdraw and let fire burn out.
Specific methods	Use standard firefighting procedures and consider the hazards of other involved materials. Move containers from fire area if you can do so without risk. In the event of fire and/or explosion do not breathe fumes.
General fire hazards	Extremely flammable aerosol.

SECTION 6 ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures	Keep unnecessary personnel away. Keep people away from and upwind of spill/leak. Wear appropriate protective equipment and clothing during clean-up. Avoid breathing gas. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Ventilate closed spaces before entering them. Local authorities should be advised if significant spillages cannot be contained. For personal protection, see section 8 of the SDS.
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Methods and materials for containment and cleaning up

Refer to attached safety data sheets and/or instructions for use. Stop leak if you can do so without risk. Move the cylinder to a safe and open area if the leak is irreparable. Use water spray to reduce vapors or divert vapor cloud drift. Isolate area until gas has dispersed. Eliminate all ignition sources (no smoking, flares, sparks, or flames in immediate area). Keep combustibles (wood, paper, oil, etc.) away from spilled material. Prevent product from entering drains. Cover with plastic sheet to prevent spreading. Absorb in vermiculite, dry sand or earth and place into containers. Following product recovery, flush area with water.

Small Spills: Wipe up with absorbent material (e.g. cloth, fleece). Clean surface thoroughly to remove residual contamination. For waste disposal, see section 13 of the SDS.

Environmental precautions

Avoid release to the environment. Inform appropriate managerial or supervisory personnel of all environmental releases. Prevent further leakage or spillage if safe to do so. Avoid discharge into drains, water courses or onto the ground.

SECTION 7 HANDLING AND STORAGE

Precautions for safe handling

Pressurized container: Do not pierce or burn, even after use. Do not use if spray button is missing or defective. Do not spray on a naked flame or any other incandescent material. Do not smoke while using or until sprayed surface is thoroughly dry. Do not cut, weld, solder, drill, grind, or expose containers to heat, flame, sparks, or other sources of ignition. All equipment used when handling the product must be grounded. Do not re-use empty containers. Avoid breathing gas. Avoid contact with eyes. Use only outdoors or in a well-ventilated area. Wear appropriate personal protective equipment. Avoid release to the environment. Observe good industrial hygiene practices.

Conditions for safe storage, including any incompatibilities

Level 2 Aerosol.

Pressurized container. Protect from sunlight and do not expose to temperatures exceeding 50°C/122 °F. Do not puncture, incinerate or crush. Do not handle or store near an open flame, heat or other sources of ignition. This material can accumulate static charge which may cause spark and become an ignition source. Store in a well-ventilated place. Store away from incompatible materials (see Section 10 of the SDS).

SECTION 8 EXPOSURE CONTROLS / PERSONAL PROTECTION

Occupational exposure limits

US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000)

Components	Type	Value
Acetone (CAS 67-64-1)	PEL	2400 mg/m3 1000 ppm
Cyclohexane (CAS 110-82-7)	PEL	1050 mg/m3 300 ppm
Propane (CAS 74-98-6)	PEL	1800 mg/m3 1000 ppm

US. ACGIH Threshold Limit Values

Components	Type	Value
Acetone (CAS 67-64-1)	STEL	500 ppm
	TWA	250 ppm
Cyclohexane (CAS 110-82-7)	TWA	100 ppm
Isobutane (CAS 75-28-5)	STEL	1000 ppm

US. NIOSH: Pocket Guide to Chemical Hazards

Components	Type	Value
Acetone (CAS 67-64-1)	TWA	590 mg/m3 250 ppm
Cyclohexane (CAS 110-82-7)	TWA	1050 mg/m3 300 ppm
Isobutane (CAS 75-28-5)	TWA	1900 mg/m3 800 ppm
Propane (CAS 74-98-6)	TWA	1800 mg/m3 1000 ppm

Biological limit values

ACGIH Biological Exposure Indices

Components	Value	Determinant	Specimen	Sampling Time
Acetone (CAS 67-64-1)	25 mg/l	Acetone	Urine	*

* - For sampling details, please see the source document.

Appropriate engineering controls Good general ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level. Provide eyewash station.

Individual protection measures, such as personal protective equipment

Eye/face protection	Wear safety glasses with side shields (or goggles).
Skin protection	
Hand protection	Wear appropriate chemical resistant gloves. Suitable gloves can be recommended by the glove supplier.
Other	Wear suitable protective clothing.
Respiratory protection	If permissible levels are exceeded use NIOSH mechanical filter / organic vapor cartridge or an air-supplied respirator.
Thermal hazards	Wear appropriate thermal protective clothing, when necessary.

General hygiene considerations When using do not smoke. Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants.

SECTION 9 PHYSICAL and CHEMICAL PROPERTIES

Appearance

Physical state	Gas.
Form	Aerosol.
Color	Not available.
Odor	Not available.
Odor threshold	Not available.
pH	Not available.
Melting point/freezing point	Not available.
Initial boiling point and boiling range	166.18 °F (74.55 °C) estimated
Flash point	-156.0 °F (-104.4 °C) propellant estimated
Evaporation rate	Not available.
Flammability (solid, gas)	Not available.
Upper/lower flammability or explosive limits	
Flammability limit - lower (%)	0.8 % estimated
Flammability limit - upper (%)	5.8 % estimated
Explosive limit - lower (%)	Not available.
Explosive limit - upper (%)	Not available.
Vapor pressure	Not available.
Vapor density	Not available.
Relative density	Not available.
Solubility(ies)	
Solubility (water)	Not available.
Partition coefficient (n-octanol/water)	Not available.
Auto-ignition temperature	488 °F (253.33 °C) estimated
Decomposition temperature	Not available.

Viscosity	Not available.
Other information	
Explosive properties	Not explosive.
Oxidizing properties	Not oxidizing.
Specific gravity	0.313 estimated

SECTION 10 STABILITY and REACTIVITY DATA

Reactivity	The product is stable and non-reactive under normal conditions of use, storage and transport.
Chemical stability	Material is stable under normal conditions.
Possibility of hazardous reactions	Hazardous polymerization does not occur.
Conditions to avoid	Avoid temperatures exceeding the flash point. Contact with incompatible materials.
Incompatible materials	Acids. Strong oxidizing agents. Nitrates. Fluorine. Chlorine.
Hazardous decomposition products	No hazardous decomposition products are known.

SECTION 11 TOXICOLOGICAL INFORMATION

Information on likely routes of exposure

Inhalation	Harmful if inhaled.
Skin contact	No adverse effects due to skin contact are expected.
Eye contact	Causes serious eye irritation.
Ingestion	Expected to be a low ingestion hazard.

Symptoms related to the physical, chemical and toxicological characteristics: Severe eye irritation. Symptoms may include stinging, tearing, redness, swelling, and blurred vision.

Information on toxicological effects

Acute toxicity: Harmful if inhaled.

Components	Species	Test Results
Acetone (CAS 67-64-1)		
<u>Acute</u>		
Dermal		
LD50	Guinea pig	> 7426 mg/kg, 24 Hours > 9.4 ml/kg, 24 Hours
	Rabbit	> 7426 mg/kg, 24 Hours > 9.4 ml/kg, 24 Hours
Inhalation		
LC50	Rat	55700 ppm, 3 Hours 132 mg/l, 3 Hours 50.1 mg/l
Oral		
LD50	Rat	5800 mg/kg 2.2 ml/kg
Cyclohexane (CAS 110-82-7)		
<u>Acute</u>		
Dermal		
LD50	Rabbit	> 2000 mg/kg
Inhalation		
LC50	Rat	> 32880 mg/m ³ , 4 Hours > 5540 ppm, 4 Hours
Oral		
LD50	Rabbit	> 5000 mg/kg

Components	Species	Test Results
	Rat	> 5000 mg/kg
Isobutane (CAS 75-28-5)		
<u>Acute</u>		
Inhalation		
LC50	Mouse	1237 mg/l, 120 Minutes
		52 %, 120 Minutes
	Rat	1355 mg/l
Lubricating Oils (petroleum), C15-30, Hydrotreated Neutral Oil-based (CAS 72623-86-0)		
<u>Acute</u>		
Dermal		
LD50	Rabbit	> 2000 mg/kg
		> 2000 mg/kg, 24 Hours
Inhalation		
LC50	Rat	2.18 mg/l, 4 Hours
Oral		
LD50	Rat	> 2000 mg/kg
Lubricating Oils (petroleum), C20-50, Hydrotreated Neutral Oil-based (CAS 72623-87-1)		
<u>Acute</u>		
Dermal		
LD50	Rabbit	> 2000 mg/kg
		> 2000 mg/kg, 24 Hours
Inhalation		
LC50	Rat	2.18 mg/l, 4 Hours
Oral		
LD50	Rat	> 2000 mg/kg
Naphtha (petroleum), Hydrotreated Light (CAS 64742-49-0)		
<u>Acute</u>		
Dermal		
LD50	Guinea pig; Rabbit	> 9.4 ml/kg, 24 Hours
	Rabbit	> 1900 mg/kg, 24 Hours
Inhalation		
LC50	Rat	> 5000 mg/m3, 4 Hours
		> 4980 mg/m3
		> 4980 mg/m3, 4 Hours
		> 4.96 mg/l, 4 Hours
		13700 ppm, 4 Hours
Oral		
LD50	Rat	4820 mg/kg
Petrolatum (CAS 8009-03-8)		
<u>Acute</u>		
Dermal		
LD50	Rabbit	> 2000 mg/kg, 24 Hours
	Rat	> 2000 mg/kg, 24 Hours
Oral		
LD50	Rat	> 5000 mg/kg
Propane (CAS 74-98-6)		
<u>Acute</u>		
Inhalation		
LC50	Mouse	1237 mg/l, 120 Minutes

Components	Species	Test Results
		52 %, 120 Minutes
	Rat	1355 mg/l 658 mg/l/4h
* Estimates for product may be based on additional component data not shown.		
Skin corrosion/irritation	Prolonged skin contact may cause temporary irritation.	
Serious eye damage/eye irritation	Causes serious eye irritation.	
Respiratory or skin sensitization		
Respiratory sensitization	Not a respiratory sensitizer.	
Skin sensitization	This product is not expected to cause skin sensitization.	
Germ cell mutagenicity	No data available to indicate product or any components present at greater than 0.1% are mutagenic or genotoxic.	
Carcinogenicity	This product is not considered to be a carcinogen by IARC, ACGIH, NTP, or OSHA.	
IARC Monographs. Overall Evaluation of Carcinogenicity		
Not listed.		
OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)		
Not regulated.		
US. National Toxicology Program (NTP) Report on Carcinogens		
Not listed.		
Reproductive toxicity	This product is not expected to cause reproductive or developmental effects.	
Specific target organ toxicity - single exposure	Not classified.	
Specific target organ toxicity - repeated exposure	Not classified.	
Aspiration hazard	Not likely, due to the form of the product.	

SECTION 12 ECOLOGICAL INFORMATION

Ecotoxicity		Harmful to aquatic life with long lasting effects.	
Components	Species	Test Results	
Acetone (CAS 67-64-1)			
Aquatic			
Crustacea	EC50	Water flea (<i>Daphnia magna</i>)	21.6 - 23.9 mg/l, 48 hours
Fish	LC50	Rainbow trout, donaldson trout (<i>Oncorhynchus mykiss</i>)	4740 - 6330 mg/l, 96 hours
Cyclohexane (CAS 110-82-7)			
Aquatic			
Fish	LC50	Fathead minnow (<i>Pimephales promelas</i>)	23.03 - 42.07 mg/l, 96 hours

* Estimates for product may be based on additional component data not shown.

Persistence and degradability	No data is available on the degradability of this product.		
Bioaccumulative potential			
Partition coefficient n-octanol / water (log Kow)			
Acetone		-0.24	
Cyclohexane		3.44	
Isobutane		2.76	
Propane		2.36	
Mobility in soil	No data available.		
Other adverse effects	No other adverse environmental effects (e.g. ozone depletion, photochemical ozone creation potential, endocrine disruption, global warming potential) are expected from this component.		

SECTION 13 DISPOSAL CONSIDERATIONS

Disposal instructions	Collect and reclaim or dispose in sealed containers at licensed waste disposal site. Contents under pressure. Do not puncture, incinerate or crush. Do not allow this material to drain into sewers/water supplies. Do not contaminate ponds, waterways or ditches with chemical or used container. Dispose of contents/container in accordance with local/regional/national/international regulations.
Local disposal regulations	Dispose in accordance with all applicable regulations.
Hazardous waste code	The waste code should be assigned in discussion between the user, the producer and the waste disposal company.
Waste from residues / unused products	Dispose of in accordance with local regulations. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe manner (see: Disposal instructions).
Contaminated packaging	Since emptied containers may retain product residue, follow label warnings even after container is emptied. Empty containers should be taken to an approved waste handling site for recycling or disposal. Do not re-use empty containers.

SECTION 14 TRANSPORT INFORMATION

DOT	
UN number	UN1950
UN proper shipping name	Aerosols, flammable, (each not exceeding 1 L capacity)
Transport hazard class(es)	
Class	2.1
Subsidiary risk	-
Label(s)	2.1
Packing group	Not applicable.
Special precautions for user	Read safety instructions, SDS and emergency procedures before handling. Read safety instructions, SDS and emergency procedures before handling.
Special provisions	N82
Packaging exceptions	306
Packaging non bulk	None
Packaging bulk	None
This product meets the exception requirements of section 173.306 as a limited quantity and may be shipped as a limited quantity. Until 12/31/2020, the "Consumer Commodity - ORM-D" marking may still be used in place of the new limited quantity diamond mark for packages of UN 1950 Aerosols. Limited quantities require the limited quantity diamond mark on cartons after 12/31/20 and may be used now in place of the "Consumer Commodity ORM-D" marking and both may be displayed concurrently.	

IATA

UN number	UN1950
UN proper shipping name	Aerosols, flammable
Transport hazard class(es)	
Class	2.1
Subsidiary risk	-
Label(s)	2.1
Packing group	Not applicable.
Environmental hazards	No.
ERG Code	10L
Special precautions for user	Read safety instructions, SDS and emergency procedures before handling. Read safety instructions, SDS and emergency procedures before handling.
Other information	
Passenger and cargo aircraft	Allowed with restrictions.
Cargo aircraft only	Allowed with restrictions.
Packaging Exceptions	LTD QTY

IMDG

UN number	UN1950
UN proper shipping name	AEROSOLS
Transport hazard class(es)	
Class	2.1
Subsidiary risk	-
Label(s)	2.1
Packing group	Not applicable.

Environmental hazards

Marine pollutant

EmS

Special precautions for user

Packaging Exceptions

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

DOT

No.

F-D, S-U

Read safety instructions, SDS and emergency procedures before handling. Read safety instructions, SDS and emergency procedures before handling.

LTD QTY

Not applicable.



IATA; IMDG



SECTION 15 REGULATORY INFORMATION
--

US federal regulations

This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)

Not regulated.

CERCLA Hazardous Substance List (40 CFR 302.4)

Acetone (CAS 67-64-1)

Listed.

Cyclohexane (CAS 110-82-7)

Listed.

SARA 304 Emergency release notification

Not regulated.

OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)

Not regulated.

Superfund Amendments and Reauthorization Act of 1986 (SARA)

Hazard categories

Immediate Hazard - Yes
 Delayed Hazard - No
 Fire Hazard - Yes
 Pressure Hazard - No
 Reactivity Hazard - No

SARA 302 Extremely hazardous substance

Not listed.

SARA 311/312 Hazardous chemical

No

SARA 313 (TRI reporting)

Chemical name	CAS number	% by wt.
Cyclohexane	110-82-7	0.1 - 1

Other federal regulations

Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List

Not regulated.

Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130)

Isobutane (CAS 75-28-5)

Propane (CAS 74-98-6)

Safe Drinking Water Act (SDWA) Not regulated.

Drug Enforcement Administration (DEA). List 2, Essential Chemicals (21 CFR 1310.02(b) and 1310.04(f)(2) and Chemical Code Number

Acetone (CAS 67-64-1) 6532

Drug Enforcement Administration (DEA). List 1 & 2 Exempt Chemical Mixtures (21 CFR 1310.12(c))

Acetone (CAS 67-64-1) 35 %WV

DEA Exempt Chemical Mixtures Code Number

Acetone (CAS 67-64-1) 6532

US state regulations

US. California Controlled Substances. CA Department of Justice (California Health and Safety Code Section 11100)

Not listed.

US. California. Candidate Chemicals List. Safer Consumer Products Regulations (Cal. Code Regs, tit. 22, 69502.3, subd. (a))

Acetone (CAS 67-64-1)

Isobutane (CAS 75-28-5)

Lubricating Oils (petroleum), C15-30, Hydrotreated Neutral Oil-based (CAS 72623-86-0)

Lubricating Oils (petroleum), C20-50, Hydrotreated Neutral Oil-based (CAS 72623-87-1)

Naphtha (petroleum), Hydrotreated Light (CAS 64742-49-0)

Petrolatum (CAS 8009-03-8)

US. Massachusetts RTK - Substance List

Acetone (CAS 67-64-1)

Cyclohexane (CAS 110-82-7)

Isobutane (CAS 75-28-5)

Propane (CAS 74-98-6)

US. New Jersey Worker and Community Right-to-Know Act

Acetone (CAS 67-64-1)

Cyclohexane (CAS 110-82-7)

Isobutane (CAS 75-28-5)

Propane (CAS 74-98-6)

US. Pennsylvania Worker and Community Right-to-Know Law

Acetone (CAS 67-64-1)

Cyclohexane (CAS 110-82-7)

Isobutane (CAS 75-28-5)

Propane (CAS 74-98-6)

US. Rhode Island RTK

Acetone (CAS 67-64-1)

Cyclohexane (CAS 110-82-7)

Isobutane (CAS 75-28-5)

Propane (CAS 74-98-6)

US. California Proposition 65

California Safe Drinking Water and Toxic Enforcement Act of 1986 (Proposition 65): This material is not known to contain any chemicals currently listed as carcinogens or reproductive toxins.

International Inventories

Country(s) or region	Inventory name	On inventory (yes/no)*
Australia	Australian Inventory of Chemical Substances (AICS)	No
Canada	Domestic Substances List (DSL)	No
Canada	Non-Domestic Substances List (NDSL)	No
China	Inventory of Existing Chemical Substances in China (IECSC)	No
Europe	European Inventory of Existing Commercial Chemical Substances (EINECS)	No
Europe	European List of Notified Chemical Substances (ELINCS)	No

Country(s) or region	Inventory name	On inventory (yes/no)*
Japan	Inventory of Existing and New Chemical Substances (ENCS)	No
Korea	Existing Chemicals List (ECL)	No
New Zealand	New Zealand Inventory	No
Philippines	Philippine Inventory of Chemicals and Chemical Substances (PICCS)	No
United States & Puerto Rico	Toxic Substances Control Act (TSCA) Inventory	Yes

*A "Yes" indicates that all components of this product comply with the inventory requirements administered by the governing country(s)
A "No" indicates that one or more components of the product are not listed or exempt from listing on the inventory administered by the governing country(s).

SECTION 16 OTHER INFORMATION

Other: NA-Not Applicable, ND-Not Determined, NE-Not Established.

Disclaimer Terms and Conditions. This SDS is designed only as guidance for the products to which it applies. To the greatest extent permitted by applicable law, nothing contained herein creates any legal obligation including contractual obligations, expressed or implied warranties, including any warranties of merchantability or fitness for particular purpose; or confers any intellectual property rights, including rights to use trademarks or a license to use patents, issued or pending. The information contained herein is based on the manufacturer's own study and the work of others, and is subject to change at any time without further notice. There is no warranty, expressed or implied, as to the accuracy, completeness or adequacy of the information contained herein, and neither the provider nor the manufacturer (nor the agents, directors, officers, contractors or employees of either) are liable to any party for any damages of any nature, including direct, special or consequential damages arising out of or in connection with the accuracy, completeness, adequacy or furnishing of any information in this SDS, or in any other way related (directly or indirectly) to this SDS. The receipt and use of this information constitutes consent to these terms and conditions.

PREPARED: 6/21/93

UPDATED: 9/4/20

PRODUCT #: C1630

According to OSHA Hazard Communication Standard 29CFR 1910.1200 (HCS 2012)

1436337	R	1	06/04/2020
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containment and cleaning up Clean contaminated floors and objects thoroughly while observing environmental regulations.

D **D** **R**

Advice on safe handling : For personal protection see section 8. Smoking, eating and drinking should be prohibited in the application area.

R **R** **R** **R**

r **r** **r**

Components	CAS-No.	Value type (Form of exposure)	Control parameters / Permissible concentration	Basis
ethanol	64-17-5	TWA	1,000 ppm	ACGIH
		TWA	1,000 ppm 1,900 mg/m3	NIOSH REL
		TWA	1,000 ppm 1,900 mg/m3	OSHA Z-1
		TWA	1,000 ppm 1,900 mg/m3	OSHA P0
		STEL	1,000 ppm	ACGIH
butane	106-97-8	TWA	800 ppm 1,900 mg/m3	NIOSH REL
		TWA	800 ppm 1,900 mg/m3	OSHA P0
		TWA	1,000 ppm	ACGIH
		STEL	1,000 ppm	ACGIH
Isobutane	75-28-5	TWA	800 ppm 1,900 mg/m3	NIOSH REL
		STEL	1,000 ppm	ACGIH
		TWA	5 mg/m3 (Molybdenum)	OSHA Z-1
Molybdenum(VI) oxide	1313-27-5	TWA (Respirable fraction)	0.5 mg/m3 (Molybdenum)	ACGIH
		TWA	5 mg/m3 (Molybdenum)	OSHA P0
		TWA	1,000 ppm 1,800 mg/m3	NIOSH REL
propane	74-98-6	TWA	1,000 ppm 1,800 mg/m3	OSHA Z-1
		TWA	1,000 ppm 1,800 mg/m3	OSHA P0
		TWA	3 mg/m3	ACGIH
mica	12001-26-2	TWA	3 mg/m3	ACGIH

According to OSHA Hazard Communication Standard 29CFR 1910.1200 (HCS 2012)

1436337	<input type="checkbox"/> rM <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> R <input type="checkbox"/> 1 <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
Product specification	R <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> 606 <input type="checkbox"/> <input type="checkbox"/>
Version	1.0
Material number	1 <input type="checkbox"/> 3633 <input type="checkbox"/>
Revision Date	0 <input type="checkbox"/> 06 <input type="checkbox"/> <input type="checkbox"/> 0 <input type="checkbox"/> 0
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		(Respirable fraction)		
		TWA (Dust)	20 Million particles per cubic foot	OSHA Z-3
		TWA (Respirable)	3 mg/m3	NIOSH REL
		TWA (respirable dust fraction)	3 mg/m3	OSHA P0
silicon	7440-21-3	TWA (Respirable)	5 mg/m3	NIOSH REL
		TWA (total)	10 mg/m3	NIOSH REL
		TWA (total dust)	15 mg/m3	OSHA Z-1
		TWA (respirable fraction)	5 mg/m3	OSHA Z-1
		TWA (Total dust)	10 mg/m3	OSHA P0
		TWA (respirable dust fraction)	5 mg/m3	OSHA P0
manganese	7439-96-5	C (Fumes)	5 mg/m3	OSHA Z-1
		TWA (Fumes)	1 mg/m3 (Manganese)	NIOSH REL
		ST (Fumes)	3 mg/m3 (Manganese)	NIOSH REL
		TWA (Fumes)	1 mg/m3 (Manganese)	OSHA P0
		STEL (Fumes)	3 mg/m3 (Manganese)	OSHA P0
		TWA (Inhalable fraction)	0.1 mg/m3 (Manganese)	ACGIH
		TWA (Respirable fraction)	0.02 mg/m3 (Manganese)	ACGIH
2-butoxyethanol	111-76-2	TWA	20 ppm	ACGIH
		TWA	5 ppm	NIOSH REL
		TWA	24 mg/m3	
		TWA	50 ppm	OSHA Z-1
		TWA	240 mg/m3	
		TWA	25 ppm	OSHA P0
		TWA	120 mg/m3	
ethyl acetate	141-78-6	TWA	400 ppm	ACGIH
		TWA	400 ppm	NIOSH REL
		TWA	1,400 mg/m3	
		TWA	400 ppm	OSHA Z-1
		TWA	1,400 mg/m3	

According to OSHA Hazard Communication Standard 29CFR 1910.1200 (HCS 2012)

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		TWA	400 ppm 1,400 mg/m3	OSHA P0
4-methylpentan-2-one	108-10-1	TWA	20 ppm	ACGIH
		STEL	75 ppm	ACGIH
		TWA	50 ppm 205 mg/m3	NIOSH REL
		ST	75 ppm 300 mg/m3	NIOSH REL
		TWA	100 ppm 410 mg/m3	OSHA Z-1
		TWA	50 ppm 205 mg/m3	OSHA P0
		STEL	75 ppm 300 mg/m3	OSHA P0

Control parameters

Components	CAS-No.	Control parameters	Biological specimen	Sampling time	Permissible concentration	Basis
2-butoxyethanol	111-76-2	Butoxyacetic acid (BAA)	Urine	End of shift (As soon as possible after exposure ceases)	200 mg/g Creatinine	ACGIH BEI
4-methylpentan-2-one	108-10-1	methyl isobutyl ketone	Urine	End of shift (As soon as possible after exposure ceases)	1 mg/l	ACGIH BEI

Control parameters : No data available

Control parameters

Eye protection : Safety glasses
Ensure that eyewash stations and safety showers are close to the workstation location.

Protective measures : Wear suitable protective equipment.
When using do not eat, drink or smoke.

Hygiene measures : Wash hands before breaks and immediately after handling the product.
Remove contaminated clothing and protective equipment before entering eating areas.

According to OSHA Hazard Communication Standard 29CFR 1910.1200 (HCS 2012)

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Product specification	R00000606030	Revision Date 0006000
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Appearance	:	aerosol
Colour	:	dark grey
Odour	:	alcohol-like
Flash point	:	-104.44 °C Method: calculated
Upper explosion limit	:	19 %(V)
Lower explosion limit	:	1.1 %(V)
Relative vapour density	:	No data available
Density	:	0.831 g/cm3
Solubility(ies) Water solubility	:	soluble
Oxidizing properties	:	No data available
Heat of combustion	:	9,713.72 Btu/lb
Volatile organic compounds (VOC) content	:	4.67 lb/gal The following chemical(s) are listed under the U.S. Clean Air Act Section 111 SOCM I Intermediate or Final VOC's (40 CFR 60.489): This product does not contain any VOC exemptions listed under the U.S. Clean Air Act Section 450.

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Reactivity	:	Stable under recommended storage conditions.
Chemical stability	:	No decomposition if stored and applied as directed.

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Not classified based on available information.

0r d000:

Acute oral toxicity	:	Acute toxicity estimate: > 5,000 mg/kg Method: Calculation method
Acute inhalation toxicity	:	Acute toxicity estimate: > 10 mg/l Exposure time: 4 h Test atmosphere: dust/mist

According to OSHA Hazard Communication Standard 29CFR 1910.1200 (HCS 2012)

1436337		<input type="checkbox"/> rM <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> R <input type="checkbox"/> 1 <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	
Product specification	R <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> 606 <input type="checkbox"/> 3 <input type="checkbox"/>	Revision Date	0 <input type="checkbox"/> 06 <input type="checkbox"/> 0 <input type="checkbox"/> 0 <input type="checkbox"/>
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Method: Calculation method

Acute dermal toxicity : Acute toxicity estimate: > 5,000 mg/kg
Method: Calculation method

Components:

ethanol:

Acute oral toxicity : LD50 Oral (Rat): 10,470 mg/kg

Acute dermal toxicity : LD50 (Rabbit): 15,800 mg/kg

butane:

Acute inhalation toxicity : LC50 (Rat): 658,000 mg/m3
Exposure time: 4 h
Test atmosphere: gas
Test substance: No data available

Molybdenum(VI) oxide:

Acute oral toxicity : LD50 (Rat, male and female): 4,461 mg/kg
Method: OECD Test Guideline 401
GLP: yes

Acute inhalation toxicity : LC50 (Rat, male and female): > 5,840 mg/m3
Exposure time: 4 h
Test atmosphere: dust/mist
Method: OECD Test Guideline 403
Target Organs: Mucous membranes
GLP: yes
Assessment: The substance or mixture has no acute inhalation toxicity
Remarks: No adverse effect has been observed in acute toxicity tests.

Acute dermal toxicity : LD50 (Rat, male and female): > 2,000 mg/kg
Method: OECD Test Guideline 402
GLP: yes
Assessment: The substance or mixture has no acute dermal toxicity

propane:

Acute inhalation toxicity : LC50 (Rat): 658 mg/l
Exposure time: 4 h
Test atmosphere: gas

silicon:

Acute oral toxicity : LD50 Oral (Rat): 3,160 mg/kg

manganese:

Acute oral toxicity : LD50 Oral (Rat): 9 g/kg

2-butoxyethanol:

According to OSHA Hazard Communication Standard 29CFR 1910.1200 (HCS 2012)

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Product specification	R000060603	Revision Date 0006000
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- Acute oral toxicity : LD50 Oral (Rat, male and female): 1,200 mg/kg
Method: OECD Test Guideline 401
GLP: no
- Acute dermal toxicity : LD50 Dermal (Rabbit, male and female): > 2,000 mg/kg
Method: OECD Test Guideline 402
GLP: yes
- ethyl acetate:**
- Acute oral toxicity : LD50 Oral (Rat): 6,100 mg/kg
- Acute inhalation toxicity : LC50 (Rat): > 22.5 mg/l
Exposure time: 4 h
Test atmosphere: vapour
- Acute dermal toxicity : LD50 Dermal (Rabbit): > 18,000 mg/kg
- 4-methylpentan-2-one:**
- Acute oral toxicity : LD50 Oral (Rat): 2,080 mg/kg
- Acute dermal toxicity : LD50 Dermal (Rabbit): 3,000 mg/kg

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Not classified based on available information.

Components:

ethanol:

Species: Rabbit
Exposure time: 24 h
Method: OECD Test Guideline 404
Result: No skin irritation

Molybdenum(VI) oxide:

Species: Rabbit
Exposure time: 4 h
Assessment: No skin irritation
Method: OECD Test Guideline 404
Result: No skin irritation
GLP: yes

2-butoxyethanol:

Species: Rabbit
Exposure time: 72 h
Method: OECD Test Guideline 404
Result: Irritating to skin.
GLP: yes

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Causes serious eye irritation.

Components:

According to OSHA Hazard Communication Standard 29CFR 1910.1200 (HCS 2012)

1436337		RM	1
Product specification	R6063	Revision Date	0600
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Assessment: May cause respiratory irritation.

Not classified based on available information.

Not classified based on available information.

Not classified based on available information.

1

ethanol:

Toxicity to daphnia and other aquatic invertebrates : LC50 (Daphnia (water flea)): 9,268 mg/l
Exposure time: 48 h

Molybdenum(VI) oxide:

Toxicity to fish : (Oncorhynchus mykiss (rainbow trout)): 100 mg/l
Method: OECD Test Guideline 203
Remarks: No toxicity at the limit of solubility

(Pimephales promelas (fathead minnow)): 370 mg/l
Exposure time: 96 h
Remarks: No toxicity at the limit of solubility

Toxicity to daphnia and other aquatic invertebrates : (Daphnia magna (Water flea)): 100 mg/l
Exposure time: 24 h
Method: OECD Test Guideline 202
Remarks: No toxicity at the limit of solubility

(Daphnia magna (Water flea)): 100 mg/l
Exposure time: 48 h
Method: OECD Test Guideline 202
Remarks: No toxicity at the limit of solubility

2-butoxyethanol:

Toxicity to fish : LC50 (Lepomis macrochirus (Bluegill sunfish)): 1,490 mg/l
Exposure time: 96 h
Test Type: static test
Method: OECD Test Guideline 203
GLP: no

Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna (Water flea)): 1,800 mg/l
Exposure time: 48 h

ethyl acetate:

Toxicity to fish : LC50 (Pimephales promelas (fathead minnow)): 220 mg/l
Exposure time: 96 h
Test Type: flow-through test

According to OSHA Hazard Communication Standard 29CFR 1910.1200 (HCS 2012)

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butane:

Distribution among environmental compartments : Remarks: No data available

Molybdenum(VI) oxide:

Distribution among environmental compartments : Remarks: No data available

propane:

Distribution among environmental compartments : Remarks: No data available

mica:

Distribution among environmental compartments : Remarks: No data available

silicon:

Distribution among environmental compartments : Remarks: No data available

manganese:

Distribution among environmental compartments : Remarks: No data available

2-butoxyethanol:

Distribution among environmental compartments : Remarks: No data available

ethyl acetate:

Distribution among environmental compartments : Remarks: No data available

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0r0d0000

Ozone-Depletion Potential : Regulation: 40 CFR Protection of Environment; Part 82 Protection of Stratospheric Ozone - CAA Section 602 Class I Substances
Remarks: This product neither contains, nor was manufactured with a Class I or Class II ODS as defined by the U.S. Clean Air Act Section 602 (40 CFR 82, Subpt. A, App.A + B).

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D000000000000**d**0

Waste from residues : Dispose of wastes in an approved waste disposal facility.

According to OSHA Hazard Communication Standard 29CFR 1910.1200 (HCS 2012)

1436337		RM R 1	
Product specification	R6063	Revision Date	0600
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1 R R RM

D R

UN number : UN 1950
 Proper shipping name : Aerosols, non-flammable
 Class : 2.2
 Packing group : Not assigned by regulation
 Labels : 2.2
 Packing instruction (cargo aircraft) : 203
 Packing instruction (passenger aircraft) : 203
 Packing instruction (LQ) : Y203

MD d

UN number : UN 1950
 Proper shipping name : AEROSOLS
 Class : 2.2
 Packing group : Not assigned by regulation
 Labels : 2.2
 EmS Code : F-D, S-U
 Marine pollutant : no

r rd M R 3 d d

Not applicable for product as supplied.

R

R

UN number : UN 1950
 Proper shipping name : AEROSOLS
 Class : 2.2
 Packing group : Not assigned by regulation
 Labels : 2.2
 ERG Code : 126
 Marine pollutant : no

1 R R RM

: TSCA_12b - Not relevant

: TSCA 5a - Not relevant

R r d R

R R r

According to OSHA Hazard Communication Standard 29CFR 1910.1200 (HCS 2012)

1436337 00rM0r000R010000r0000
 Product specification **R00000606030** Revision Date **0006000**
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Components	CAS-No.	Component RQ (lbs)	Calculated product RQ (lbs)
ethyl acetate	141-78-6	5000	*

*: Calculated RQ exceeds reasonably attainable upper limit.

00R03000r000000rd0000000000R000r000000000000

This material does not contain any components with a section 304 EHS RQ.

00R0311031000rd0 : Chronic Health Hazard
Acute Health Hazard

00R0300 : No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.

00R0313 : This product contains components that are reportable under the regulation.

Chromium III CompoundsCobalt, inorganic compounds

Molybdenum trioxide

Manganese

Certain Glycol Ethers

0000000r0000

This product neither contains, nor was manufactured with a Class I or Class II ODS as defined by the U.S. Clean Air Act Section 602 (40 CFR 82, Subpt. A, App.A + B).

This product contains components that are reportable under the regulation.

This product contains components that are reportable under the regulation.

This product contains components that are reportable under the regulation.

0000000r0000

This product does not contain any Hazardous Substances listed under the U.S. CleanWater Act, Section 311, Table 116.4A.

This product does not contain any Hazardous Chemicals listed under the U.S. CleanWater Act, Section 311, Table 117.3.

This product contains components that are reportable under the regulation.

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This product contains components that are reportable under the regulation.

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This product contains components that are reportable under the regulation.

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This product contains components that are reportable under the regulation.

According to OSHA Hazard Communication Standard 29CFR 1910.1200 (HCS 2012)

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WARNING! This product contains a chemical known to the State of California to cause cancer.
WARNING: This product contains a chemical known to the State of California to cause birth defects or other reproductive harm.

rd r d

- EINECS (European Union)** : On the inventory, or in compliance with the inventory
- SWISS (Switzerland)** : On the inventory, or in compliance with the inventory
- TSCA (United States)** : On TSCA Inventory
- DSL/NDSL (Canada)** : This product contains one or several components listed in the Canadian NDSL.
- AICS (Australia)** : Not in compliance with the inventory
- NZioC (New Zealand)** : Not in compliance with the inventory
- ENCS (Japan)** : On the inventory, or in compliance with the inventory
- ISHL (Japan)** : Not in compliance with the inventory
- KECI (Korea)** : Not in compliance with the inventory
- PICCS (Philippines)** : Not in compliance with the inventory
- IECSC (China)** : On the inventory, or in compliance with the inventory
- TCSI (Taiwan)** : Not in compliance with the inventory
- CICR (Turkey)** : Not in compliance with the inventory
- INSQ (Mexico)** : Not in compliance with the inventory

16 R RM

Revision Date : 05/06/2020

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

According to OSHA Hazard Communication Standard 29CFR 1910.1200
(HCS 2012)

1436337			
Product specification	R□□□□□606□3□	Revision Date	0□06□0□0
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- □□□□rd□□□□□□ □□ Chico X Fiber/Chico X4/Chico X6/Chico X7
- rd□□□□**D**□□□□□□□□□□ Vitreous fiber from slag and/or basalt (mixture)
- □□□ □□r□ Mixture
- □□ NA
- R**□□□□ □ □□d□d □□□□□□□□ Mineral wool used to create a dam or plug for sealing compound
- □□□□ □□□rd□ □□□□□□□□ Cooper Industries/Crouse-Hinds LLC
P.O. Box 4999
Syracuse, NY 13221-4999
USA
- (315) 477-7000
- □rd□□□□□ □□□□□□ CHEMTREC (800) 424-9300

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Signal Word: Warning

Symbol(s): Health Hazard; Exclamation Mark

Hazard Statements:

- Suspected of causing cancer from repeated inhalation (Category 2)
- May cause respiratory irritation (Category 3)
- Mild skin irritant (Category 3)
- Causes eye irritation (Category 2B)

Precautionary Statements:

- Obtain special instructions before use.
- Do not handle until all safety precautions have been read and understood.
- Use personal protective equipment as required.
- IF exposed or concerned: Get medical attention/advice.
- Use only outdoors or in well-ventilated area. Avoid breathing dust/fume/gas/mist/vapours/spray.
- Call a POISON CENTER or doctor/physician if you feel unwell.

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- CAS Chemical Abstracts Service
- CERCLA Comprehensive Environmental Response Compensation and Liability Act
- CFR US Code of Federal Regulations
- HSIS Australia Hazardous Substance Information System
- IARC International Agency for Research on Cancer
- LD50 Lethal dose to 50% of exposed laboratory animals
- NA Not available
- NIOSH US National Institute of Occupational Safety and Health
- NOEC No observed effect concentration
- NTP US National Toxicology Program
- OSHA US Occupational Safety Health Administration
- PEL Permissible exposure limit
- RQ Reportable quantity
- SARA Superfund Amendments and Reauthorization Act
- STEL Short term exposure limit
- TSCA Toxic Substances Control Act
- TWA Time weighted average
- UN United Nations
- WHMIS Canada Workplace Hazardous Material Information System

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The information in this MATERIAL SAFETY DATA SHEET should be provided to all who will use, handle, store, transport, or otherwise be exposed to this material. This information has been prepared for the guidance of plant engineering, operations, and management, and for persons working with or handling this material. Cooper Crouse-Hinds believes this information to be reliable and up-to-date as of the date of publication, but makes no warranty that it is.



SAFETY DATA SHEET

266 Citrol® (Spray)

Section 1. Identification

GHS product identifier : 266 Citrol® (Spray)
Other means of identification : Not available.
Product type : Liquid.

Relevant identified uses of the substance or mixture and uses advised against

Identified uses : Citrus based water soluble degreaser, aerosol form.

Supplier's details : Schaeffer Mfg. Company
 102 Barton Street
 Saint Louis, Missouri 63104
 Tel: 314-865-4100
 Fax: 314-865-4107
 Toll Free: 1-800-325-9962
 E-Mail: safety@schaefferoil.com
 Web: <http://www.schaefferoil.com>

Emergency telephone number (with hours of operation) : +1 314 865-4105 (24-hour response number)

Section 2. Hazards identification

OSHA/HCS status : This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).

Classification of the substance or mixture : FLAMMABLE AEROSOLS - Category 1
 GASES UNDER PRESSURE - Compressed gas
 SKIN CORROSION/IRRITATION - Category 2
 SERIOUS EYE DAMAGE/ EYE IRRITATION - Category 1
 SKIN SENSITIZATION - Category 1
 CARCINOGENICITY - Category 2
 SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) - Category 2
 AQUATIC HAZARD (ACUTE) - Category 1
 AQUATIC HAZARD (LONG-TERM) - Category 1

GHS label elements

Hazard pictograms :



Signal word : Danger

Hazard statements : H222 - Extremely flammable aerosol.
 H280 - Contains gas under pressure; may explode if heated.
 H318 - Causes serious eye damage.
 H315 - Causes skin irritation.
 H317 - May cause an allergic skin reaction.
 H351 - Suspected of causing cancer.
 H373 - May cause damage to organs through prolonged or repeated exposure.
 H410 - Very toxic to aquatic life with long lasting effects.

Section 2. Hazards identification

Precautionary statements

Prevention	: P201 - Obtain special instructions before use. P202 - Do not handle until all safety precautions have been read and understood. P280 - Wear protective gloves. Wear eye or face protection. Wear protective clothing. P210 - Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. P211 - Do not spray on an open flame or other ignition source. P273 - Avoid release to the environment. P260 - Do not breathe vapor. P264 - Wash hands thoroughly after handling. P272 (OSHA) - Contaminated work clothing must not be allowed out of the workplace. P251 - Pressurized container: Do not pierce or burn, even after use.
Response	: P391 - Collect spillage. P314 - Get medical attention if you feel unwell. P308 + P313 - IF exposed or concerned: Get medical attention. P302 + P352 + P363 - IF ON SKIN: Wash with plenty of soap and water. Wash contaminated clothing before reuse. P333 + P313 - If skin irritation or rash occurs: Get medical attention. P305 + P351 + P338 + P310 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER or physician.
Storage	: P410 - Protect from sunlight. P412 - Do not expose to temperatures exceeding 50°C/122°F. P403 - Store in a well-ventilated place.
Disposal	: P501 - Dispose of contents and container in accordance with all local, regional, national and international regulations.
Hazards not otherwise classified	: None known.

Section 3. Composition/information on ingredients

Substance/mixture	: Mixture
Other means of identification	: Not available.

Ingredient name	%	CAS number
(R)-p-mentha-1,8-diene	30 - 60	5989-27-5
2-Butoxyethanol	10 - 30	111-76-2
Amides, coco, N,N-bis(hydroxyethyl)	5 - 10	68603-42-9
4-Nonylphenol, branched, ethoxylated	1 - 5	127087-87-0
Diethanolamine	1 - 5	111-42-2
Fatty acids, coco, compds. with diethanolamine	1 - 5	61790-63-4

United States: The exact percentage (concentration) in the composition has been withheld as a trade secret in accordance with paragraph (i) of §1910.1200.

Canada: The exact percentage (concentration) in the composition has been withheld as a trade secret in accordance with the amended HPR as of April 2018.

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment and hence require reporting in this section.

Occupational exposure limits, if available, are listed in Section 8.

Section 4. First aid measures

Description of necessary first aid measures

- Eye contact** : Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for at least 20 minutes. Get medical attention if symptoms persist.
- Inhalation** : Remove victim to fresh air and keep at rest in a position comfortable for breathing. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband. Get medical attention if symptoms persist. In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.
- Skin contact** : Wash with plenty of soap and water. Wash contaminated clothing thoroughly with water before removing it, or wear gloves. Continue to rinse for at least 20 minutes. In the event of any complaints or symptoms, avoid further exposure. Wash clothing before reuse. Clean shoes thoroughly before reuse. Get medical attention if symptoms persist.
- Ingestion** : Get medical attention immediately. Call a poison center or physician. Wash out mouth with water. Remove dentures if any. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Stop if the exposed person feels sick as vomiting may be dangerous. Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Chemical burns must be treated promptly by a physician. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.

Most important symptoms/effects, acute and delayed

Potential acute health effects

- Eye contact** : Causes serious eye damage.
- Inhalation** : No known significant effects or critical hazards.
- Skin contact** : Causes skin irritation. May cause an allergic skin reaction.
- Ingestion** : No known significant effects or critical hazards.

Over-exposure signs/symptoms

- Eye contact** : Adverse symptoms may include the following:
pain
watering
redness
- Inhalation** : No known significant effects or critical hazards.
- Skin contact** : Adverse symptoms may include the following:
pain or irritation
redness
blistering may occur
- Ingestion** : Adverse symptoms may include the following:
stomach pains

Indication of immediate medical attention and special treatment needed, if necessary

- Notes to physician** : In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.
- Specific treatments** : No specific treatment.

Section 4. First aid measures

- Protection of first-aiders** : No action shall be taken involving any personal risk or without suitable training. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Wash contaminated clothing thoroughly with water before removing it, or wear gloves.

See toxicological information (Section 11)

Section 5. Fire-fighting measures

Extinguishing media

- Suitable extinguishing media** : Use an extinguishing agent suitable for the surrounding fire.
- Unsuitable extinguishing media** : None known.

- Specific hazards arising from the chemical** : Extremely flammable aerosol. Runoff to sewer may create fire or explosion hazard. In a fire or if heated, a pressure increase will occur and the container may burst, with the risk of a subsequent explosion. The vapor/gas is heavier than air and will spread along the ground. Vapors may accumulate in low or confined areas or travel a considerable distance to a source of ignition and flash back. Gas may accumulate in low or confined areas or travel a considerable distance to a source of ignition and flash back, causing fire or explosion. Bursting aerosol containers may be propelled from a fire at high speed. This material is very toxic to aquatic life with long lasting effects. Fire water contaminated with this material must be contained and prevented from being discharged to any waterway, sewer or drain.

- Hazardous thermal decomposition products** : Decomposition products may include the following materials:
carbon dioxide
carbon monoxide
nitrogen oxides

- Special protective actions for fire-fighters** : Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training. Move containers from fire area if this can be done without risk. Use water spray to keep fire-exposed containers cool.

- Special protective equipment for fire-fighters** : Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

Section 6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

- For non-emergency personnel** : No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. In the case of aerosols being ruptured, care should be taken due to the rapid escape of the pressurized contents and propellant. If a large number of containers are ruptured, treat as a bulk material spillage according to the instructions in the clean-up section. Do not touch or walk through spilled material. Shut off all ignition sources. No flares, smoking or flames in hazard area. Do not breathe vapor or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.
- For emergency responders** : If specialized clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".

Section 6. Accidental release measures

Environmental precautions : U.S.A. regulations may require reporting spills of this material that could reach any surface waters. Report spills to all applicable Federal, State, Provincial and local authorities and/or the United States National Response Center at (800) 424-8802 as appropriate or required.

Methods and materials for containment and cleaning up

- Small spill** : Stop leak if without risk. Move containers from spill area. Use spark-proof tools and explosion-proof equipment. Absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.
- Large spill** : Stop leak if without risk. Move containers from spill area. Use spark-proof tools and explosion-proof equipment. Approach release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations (see Section 13). Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spilled product. Note: see Section 1 for emergency contact information and Section 13 for waste disposal.

Section 7. Handling and storage

Precautions for safe handling

Protective measures : Put on appropriate personal protective equipment (see Section 8). Persons with a history of skin sensitization problems should not be employed in any process in which this product is used. Pressurized container: protect from sunlight and do not expose to temperatures exceeding 50°C. Do not pierce or burn, even after use. Avoid exposure - obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Do not get in eyes or on skin or clothing. Do not breathe vapor or mist. Do not ingest. Avoid release to the environment. Use only with adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Store and use away from heat, sparks, open flame or any other ignition source. Use explosion-proof electrical (ventilating, lighting and material handling) equipment. Use only non-sparking tools. Empty containers retain product residue and can be hazardous. Do not reuse container.

Advice on general occupational hygiene : Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. See also Section 8 for additional information on hygiene measures.

Conditions for safe storage, including any incompatibilities : Store in accordance with local regulations. Store in a segregated and approved area. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Eliminate all ignition sources. Separate from oxidizing materials. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination.

Section 8. Exposure controls/personal protection

Control parameters

United States

Occupational exposure limits

Section 8. Exposure controls/personal protection

- Hygiene measures** : Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Contaminated work clothing should not be allowed out of the workplace. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.
- Eye/face protection** : Wear eye protection such as safety glasses, chemical goggles, or face shields if engineering controls or work practices are not adequate to prevent eye contact.
- Skin protection**
- Hand protection** : Use nitrile or oil resistant gloves.
- Body protection** : Personal protective clothing such as gloves, aprons, boots and complete facial protection should be selected based on the task being performed and the risks involved. Users should determine acceptable performance characteristics of protective clothing. Consider physical requirements and other substances present when selecting protective clothing.
- Other skin protection** : Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved.
- Respiratory protection** : If a risk assessment indicates that respiratory protection is required, use a properly fitted, air-purifying or supplied air respirator that complies with an approved standard. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator.

Section 9. Physical and chemical properties

Appearance

- Physical state** : Liquid. [Clear.]
- Color** : Light yellow to orange.
- Odor** : Citrus.
- Odor threshold** : Not available.
- pH** : 9 to 10
- Melting point** : Not available.
- Boiling point/boiling range** : 97.222°C (207°F)
- Flash point** : Closed cup: 53.333°C (128°F)
- Evaporation rate** : Not available.
- Flammability (solid, gas)** : Not available.
- Lower and upper explosive (flammable) limits** : Not available.
- Vapor pressure** : 2.3 kPa (17.5 mm Hg) [@ 20°C (68°F)]
- Vapor density** : >1 [Air = 1]
- Relative density** : 0.9366
- Solubility** : Emulsifiable.
- Partition coefficient: n-octanol/water** : Not available.
- Auto-ignition temperature** : Not available.
- Decomposition temperature** : Not available.
- Viscosity** : Not applicable.
- Flow time (ISO 2431)** : Not available.
- VOC content** : 60 to 65 % (w/w)

Section 10. Stability and reactivity

- Reactivity** : No specific test data related to reactivity available for this product or its ingredients.
- Chemical stability** : Stable under normal ambient and anticipated storage and handling conditions of temperature and pressure.
- Possibility of hazardous reactions** : Can form explosive mixtures with air if heated above flash point and/or when sprayed or atomized. Aerosol cans may explode if heated.
- Conditions to avoid** : Avoid all possible sources of ignition (spark or flame). Do not allow vapor to accumulate in low or confined areas.
- Incompatible materials** : Strong acids, reducing agents and oxidizers.
- Hazardous decomposition products** : Carbon monoxide, carbon dioxide, aldehydes, ketones.

Section 11. Toxicological information

Information on toxicological effects

Acute toxicity

Product/ingredient name	Result	Species	Dose	Exposure
(R)-p-mentha-1,8-diene	LD50 Dermal	Rabbit	>5000 mg/kg	-
	LD50 Oral	Rat	4400 mg/kg	-
2-Butoxyethanol	LD50 Oral	Rat	917 mg/kg	-

Irritation/Corrosion

Product/ingredient name	Result	Species	Score	Exposure	Observation
(R)-p-mentha-1,8-diene	Skin - Mild irritant	Rabbit	-	24 hours 10%	-
	Eyes - Moderate irritant	Rabbit	-	24 hours 100 mg	-
	Eyes - Severe irritant	Rabbit	-	100 mg	-
2-Butoxyethanol	Skin - Mild irritant	Rabbit	-	500 mg	-
	Eyes - Severe irritant	Rabbit	-	100 µl	-
	Skin - Moderate irritant	Rabbit	-	300 µl	-
Amides, coco, N,N-bis(hydroxyethyl)	Eyes - Severe irritant	Rabbit	-	24 hours 750 µg	-
	Eyes - Severe irritant	Rabbit	-	5500 mg	-
	Skin - Mild irritant	Rabbit	-	24 hours 500 mg	-
Diethanolamine	Skin - Mild irritant	Rabbit	-	50 mg	-

Sensitization

There is no data available.

Mutagenicity

There is no data available.

Carcinogenicity

Classification

Product/ingredient name	OSHA	IARC	NTP
(R)-p-mentha-1,8-diene	-	3	-
2-Butoxyethanol	-	3	-
Amides, coco, N,N-bis(hydroxyethyl)	-	2B	-
Diethanolamine	-	2B	-

Reproductive toxicity

There is no data available.

Teratogenicity

There is no data available.

Specific target organ toxicity (single exposure)

Section 11. Toxicological information

There is no data available.

Specific target organ toxicity (repeated exposure)

Name	Category	Target organs
Diethanolamine	Category 2	Not determined

Aspiration hazard

There is no data available.

Information on the likely routes of exposure : Dermal contact. Eye contact. Inhalation. Ingestion.

Potential acute health effects

Eye contact : Causes serious eye damage.
Inhalation : No known significant effects or critical hazards.
Skin contact : Causes skin irritation. May cause an allergic skin reaction.
Ingestion : No known significant effects or critical hazards.

Symptoms related to the physical, chemical and toxicological characteristics

Eye contact : Adverse symptoms may include the following:
 pain
 watering
 redness

Inhalation : No known significant effects or critical hazards.

Skin contact : Adverse symptoms may include the following:
 pain or irritation
 redness
 blistering may occur

Ingestion : Adverse symptoms may include the following:
 stomach pains

Delayed and immediate effects and also chronic effects from short and long term exposure

Short term exposure

Potential immediate effects : No known significant effects or critical hazards.
Potential delayed effects : No known significant effects or critical hazards.

Long term exposure

Potential immediate effects : No known significant effects or critical hazards.
Potential delayed effects : No known significant effects or critical hazards.

Potential chronic health effects

General : May cause damage to organs through prolonged or repeated exposure. Once sensitized, a severe allergic reaction may occur when subsequently exposed to very low levels.

Carcinogenicity : Suspected of causing cancer. Risk of cancer depends on duration and level of exposure.

Mutagenicity : No known significant effects or critical hazards.

Teratogenicity : No known significant effects or critical hazards.

Developmental effects : No known significant effects or critical hazards.

Fertility effects : No known significant effects or critical hazards.

Section 11. Toxicological information

Numerical measures of toxicity

Acute toxicity estimates

Route	ATE value
Oral	5249.03 mg/kg
Dermal	10545.72 mg/kg
Inhalation (vapors)	105.46 mg/L

Section 12. Ecological information

Toxicity

Product/ingredient name	Result	Species	Exposure
(R)-p-mentha-1,8-diene	Acute EC50 421 µg/L Fresh water	Daphnia - Daphnia magna	48 hours
	Acute EC50 688 µg/L Fresh water	Fish - Pimephales promelas - Juvenile (Fledgling, Hatchling, Weanling)	96 hours
2-Butoxyethanol	Acute EC50 >1000 mg/L Fresh water	Daphnia - Daphnia magna	48 hours
	Acute LC50 800000 µg/L Marine water	Crustaceans - Crangon crangon	48 hours
Diethanolamine	Acute LC50 1250000 µg/L Marine water	Fish - Menidia beryllina	96 hours
	Acute EC50 12 mg/L Fresh water	Algae - Pseudokirchneriella subcapitata	96 hours
	Acute LC50 28800 µg/L Fresh water	Crustaceans - Ceriodaphnia dubia - Neonate	48 hours
	Acute LC50 55000 µg/L Fresh water	Daphnia - Daphnia magna	48 hours
	Acute LC50 775 mg/L Fresh water	Fish - Lepomis macrochirus	96 hours

Persistence and degradability

There is no data available.

Bioaccumulative potential

Product/ingredient name	LogP _{ow}	BCF	Potential
(R)-p-mentha-1,8-diene	4.38	-	high
2-Butoxyethanol	0.81	-	low
Diethanolamine	-1.43	-	low

Mobility in soil







Soil/water partition coefficient (K_{oc}) : Not available.

Other adverse effects : No known significant effects or critical hazards.

Section 13. Disposal considerations

Disposal methods : The generation of waste should be avoided or minimized wherever possible. Disposal of this product, solutions and any by-products should comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. This material and its container must be disposed of in a safe way. Care should be taken when handling empty containers that have not been cleaned or rinsed out. Empty containers or liners may retain some product residues. Vapor from product residues may create a highly flammable or explosive atmosphere inside the container. Do not cut, weld or grind used containers unless they have been cleaned thoroughly internally. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

Section 14. Transport information

	DOT Classification	TDG Classification	IMDG	IATA
UN number	UN1950	UN1950	UN1950	UN1950
UN proper shipping name	AEROSOLS	AEROSOLS	AEROSOLS. Marine pollutant (R)-p-mentha-1,8-diene	AEROSOLS
Transport hazard class(es)	2.1 	2.1  	2.1  	2.1 
Packing group	-	-	-	-
Environmental hazards	No.	Yes.	Yes.	Yes. The environmentally hazardous substance mark is not required.

AERG : 126

DOT-RQ Details : Diethanolamine 100 lbs / 45.4 kg [11.003 gal / 41.651 L]

Additional information

DOT Classification : **Reportable quantity** 4273.5 lbs / 1940.2 kg [547.23 gal / 2071.5 L]. Package sizes shipped in quantities less than the product reportable quantity are not subject to the RQ (reportable quantity) transportation requirements.

TDG Classification : Product classified as per the following sections of the Transportation of Dangerous Goods Regulations: 2.13-2.17 (Class 2), 2.7 (Marine pollutant mark). The marine pollutant mark is not required when transported by road or rail.

IMDG : The marine pollutant mark is not required when transported in sizes of ≤5 L or ≤5 kg.

IATA : The environmentally hazardous substance mark may appear if required by other transportation regulations.

Special precautions for user : **Transport within user's premises:** always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage.

Section 15. Regulatory information

U.S. Federal regulations : **United States inventory (TSCA 8b):** All components are listed or exempted.
Clean Water Act (CWA) 311: Acetic acid

Clean Air Act Section 112 (b) Hazardous Air Pollutants (HAPs) : Listed

Clean Air Act Section 602 Class I Substances : Not listed

Clean Air Act Section 602 Class II Substances : Not listed

DEA List I Chemicals (Precursor Chemicals) : Not listed

DEA List II Chemicals (Essential Chemicals) : Not listed

SARA 302/304

Section 15. Regulatory information

Composition/information on ingredients

Name	EHS	SARA 302 TPQ		SARA 304 RQ	
		(lbs)	(gallons)	(lbs)	(gallons)
Ethylene oxide	Yes.	1000	-	10	-

SARA 304 RQ : 24390243.9 lbs / 11073170.7 kg [3123235.4 gal / 11822731.9 L]

SARA 311/312

Classification : FLAMMABLE AEROSOLS - Category 1
 GASES UNDER PRESSURE - Compressed gas
 SKIN CORROSION/IRRITATION - Category 2
 SERIOUS EYE DAMAGE/ EYE IRRITATION - Category 1
 SKIN SENSITIZATION - Category 1
 CARCINOGENICITY - Category 2
 SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) - Category 2

Composition/information on ingredients

Name	Classification
(R)-p-mentha-1,8-diene	FLAMMABLE LIQUIDS - Category 3 SKIN CORROSION/IRRITATION - Category 2 SKIN SENSITIZATION - Category 1
2-Butoxyethanol	FLAMMABLE LIQUIDS - Category 4 ACUTE TOXICITY (oral) - Category 4 ACUTE TOXICITY (dermal) - Category 4 ACUTE TOXICITY (inhalation) - Category 4 SKIN CORROSION/IRRITATION - Category 2 SERIOUS EYE DAMAGE/ EYE IRRITATION - Category 2A
Amides, coco, N,N-bis(hydroxyethyl)	SKIN CORROSION/IRRITATION - Category 2 SERIOUS EYE DAMAGE/ EYE IRRITATION - Category 2A CARCINOGENICITY - Category 2
4-Nonylphenol, branched, ethoxylated	SKIN CORROSION/IRRITATION - Category 2 SERIOUS EYE DAMAGE/ EYE IRRITATION - Category 1
Diethanolamine	ACUTE TOXICITY (oral) - Category 4 SKIN CORROSION/IRRITATION - Category 2 SERIOUS EYE DAMAGE/ EYE IRRITATION - Category 1 CARCINOGENICITY - Category 2
Fatty acids, coco, compds. with diethanolamine	SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) - Category 2 ACUTE TOXICITY (oral) - Category 4 SKIN CORROSION/IRRITATION - Category 2 SERIOUS EYE DAMAGE/ EYE IRRITATION - Category 2A

SARA 313

	Product name	CAS number
Form R - Reporting requirements	2-Butoxyethanol 4-Nonylphenol, branched, ethoxylated Diethanolamine	111-76-2 127087-87-0 111-42-2
Supplier notification	2-Butoxyethanol 4-Nonylphenol, branched, ethoxylated Diethanolamine	111-76-2 127087-87-0 111-42-2

SARA 313 notifications must not be detached from the SDS and any copying and redistribution of the SDS shall include copying and redistribution of the notice attached to copies of the SDS subsequently redistributed.

State regulations

Massachusetts : The following components are listed: 2-Butoxyethanol; Diethanolamine
New York : The following components are listed: Diethanolamine
New Jersey : The following components are listed: 2-Butoxyethanol; Diethanolamine
Pennsylvania : The following components are listed: 2-Butoxyethanol; Diethanolamine
California Prop. 65

Section 15. Regulatory information

WARNING: This product can expose you to chemicals including Ethylene oxide, which is known to the State of California to cause cancer and birth defects or other reproductive harm. This product can expose you to chemicals including Amides, coco, N,N-bis(hydroxyethyl), Diethanolamine and 1,4-Dioxane, which are known to the State of California to cause cancer, and Methanol, which is known to the State of California to cause birth defects or other reproductive harm. For more information go to www.P65Warnings.ca.gov.

Canadian lists

- Canada inventory (DSL NDSL)** : All components are listed or exempted.
- Canadian NPRI** : The following components are listed: (R)-p-mentha-1,8-diene; 2-Butoxyethanol; Diethanolamine; 4-Nonylphenol, branched, ethoxylated
- CEPA Toxic substances** : The following components are listed: Petroleum gases, liquefied, sweetened; 2-Butoxyethanol; 4-Nonylphenol, branched, ethoxylated

Section 16. Other information

Health : 3 * **Flammability :** 4 **Physical hazards :** 3

Caution: HMIS® ratings are based on a 0-4 rating scale, with 0 representing minimal hazards or risks, and 4 representing significant hazards or risks. Although HMIS® ratings and the associated label are not required on SDSs or products leaving a facility under 29 CFR 1910.1200, the preparer may choose to provide them. HMIS® ratings are to be used with a fully implemented HMIS® program. HMIS® is a registered trademark and service mark of the American Coatings Association, Inc.

The customer is responsible for determining the PPE code for this material. For more information on HMIS® Personal Protective Equipment (PPE) codes, consult the HMIS® Implementation Manual.

Health : 3 **Flammability :** 4 **Instability :** 3

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Copyright ©2001, National Fire Protection Association, Quincy, MA 02269. This warning system is intended to be interpreted and applied only by properly trained individuals to identify fire, health and reactivity hazards of chemicals. The user is referred to certain limited number of chemicals with recommended classifications in NFPA 49 and NFPA 325, which would be used as a guideline only. Whether the chemicals are classified by NFPA or not, anyone using the 704 systems to classify chemicals does so at their own risk.

Procedure used to derive the classification

Classification	Justification
FLAMMABLE AEROSOLS - Category 1	Expert judgment
GASES UNDER PRESSURE - Compressed gas	On basis of test data
SKIN CORROSION/IRRITATION - Category 2	Calculation method
SERIOUS EYE DAMAGE/ EYE IRRITATION - Category 1	Calculation method
SKIN SENSITIZATION - Category 1	Calculation method
CARCINOGENICITY - Category 2	Calculation method
SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) - Category 2	Calculation method
AQUATIC HAZARD (ACUTE) - Category 1	Calculation method
AQUATIC HAZARD (LONG-TERM) - Category 1	Calculation method

US Tariff Heading Number : 3402.90.5030

Schedule B Code : 3402.90.5030

History

Date of issue mm/dd/yyyy : 07/30/2019

Date of previous issue : 02/15/2018

Version : 2

Prepared by : KMK Regulatory Services Inc.

Section 16. Other information

Key to abbreviations

- : ATE = Acute Toxicity Estimate
- BCF = Bioconcentration Factor
- GHS = Globally Harmonized System of Classification and Labelling of Chemicals
- IATA = International Air Transport Association
- IBC = Intermediate Bulk Container
- IMDG = International Maritime Dangerous Goods
- LogPow = logarithm of the octanol/water partition coefficient
- MARPOL = International Convention for the Prevention of Pollution From Ships, 1973 as modified by the Protocol of 1978. ("Marpol" = marine pollution)
- UN = United Nations

Notice to reader

To the best of our knowledge, the information contained herein is accurate. However, neither the above-named supplier, nor any of its subsidiaries, assumes any liability whatsoever for the accuracy or completeness of the information contained herein. Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.



KMK Regulatory Services

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www.kmkregservices.com www.askdrluc.com www.ghssmart.com

14/14



SAFETY DATA SHEET

Issuing Date 05-Jan-2015

Revision Date 02-Jun-2020

Revision Number 2

NGHS - English

1. IDENTIFICATION

Product identifier

Product Name Clorox Commercial Solutions® Clorox® Disinfecting Wipes - Fresh Scent

Other means of identification

EPA Pesticide registration number 67619-31

Recommended use of the chemical and restrictions on use

Recommended Use Wipes, Disinfecting
Uses advised against No information available

Details of the supplier of the safety data sheet

Supplier Identification Clorox Professional Products Company

Address 1221 Broadway
Oakland, CA 94612
USA

Telephone 1-510-271-7000

Emergency telephone number

Emergency Telephone Number For Medical Emergencies call: 1-800-446-1014. Transportation Emergencies, call Chemtrec: 1-800-424-9300

2. HAZARDS IDENTIFICATION

Classification

Not a dangerous substance or mixture according to the Globally Harmonized System (GHS).

Appearance Clear White

Physical state Pre-Moistened Tow elette
(no free liquids)

Odor Fruity Apple Floral

GHS Label elements, including precautionary statements

Hazard statements

Not a dangerous substance or mixture according to the Globally Harmonized System (GHS).

Precautionary Statements - Prevention

Not applicable

Precautionary Statements - Response

Not applicable

Precautionary Statements - Storage

Not applicable

Precautionary Statements - Disposal

Not applicable

Other information

Not applicable.

3. COMPOSITION/INFORMATION ON INGREDIENTS

The product contains no substances which at their given concentration, are considered to be hazardous to health.

4. FIRST AID MEASURES

First aid measures

Inhalation	Remove to fresh air.
Eye contact	Rinse thoroughly with plenty of water for at least 15 minutes, lifting lower and upper eyelids. Consult a physician.
Skin contact	Wash skin with soap and water.
Ingestion	Clean mouth with water and drink afterwards plenty of water.

Most important symptoms and effects, both acute and delayed

Symptoms No information available.

Indication of any immediate medical attention and special treatment needed

Note to physicians Treat symptomatically.

5. FIRE-FIGHTING MEASURES

Suitable Extinguishing Media	Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
Large Fire	CAUTION: Use of water spray when fighting fire may be inefficient.
Unsuitable extinguishing media	Do not scatter spilled material with high pressure water streams.
Specific hazards arising from the chemical	No information available.
Hazardous Combustion Products	Carbon oxides.
Explosion Data	
Sensitivity to Mechanical Impact	None.
Sensitivity to Static Discharge	None.
Special protective equipment for fire-fighters	Firefighters should wear self-contained breathing apparatus and full firefighting turnout gear. Use personal protection equipment.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

Personal precautions Ensure adequate ventilation.

Environmental precautions

Environmental precautions See Section 12 for additional Ecological Information.

Methods and material for containment and cleaning up

Methods for containment Prevent further leakage or spillage if safe to do so.

Prevention of secondary hazards Clean contaminated objects and areas thoroughly observing environmental regulations.

7. HANDLING AND STORAGE

Precautions for safe handling

Advice on safe handling Handle in accordance with good industrial hygiene and safety practice.

Conditions for safe storage, including any incompatibilities

Storage Conditions Keep containers tightly closed in a dry, cool and well-ventilated place.

Incompatible products None known based on information supplied.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

Exposure Limits This product, as supplied, does not contain any hazardous materials with occupational exposure limits established by the region specific regulatory bodies.

Appropriate engineering controls

Engineering controls None under normal use conditions.

Individual protection measures, such as personal protective equipment

Eye/face protection No special protective equipment required.

Skin and body protection No special protective equipment required.

Respiratory protection No protective equipment is needed under normal use conditions. If exposure limits are exceeded or irritation is experienced, ventilation and evacuation may be required.

General hygiene considerations Handle in accordance with good industrial hygiene and safety practice.

9. PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

Physical state	Pre-Moistened Tow elette (no free liquids)
Appearance	Clear White
Odor	Fruity Apple Floral
Color	No information available
Odor Threshold	No information available

<u>Property</u>	<u>Values</u>	<u>Remarks</u>	<u>Method</u>
pH	6 - 7.5 (liquid)	None	know n
Melting / freezing point	No data available	None	know n
Boiling point / boiling range	No data available	None	know n
Flash Point	No data available	None	know n
Evaporation Rate	No data available	None	know n
Flam mability (solid, gas)	No data available	None	know n
Flam mability Lim it in Air			
Upper flam mability lim it	No data available		
Low er flam mability lim it	No data available		
Vapor pressure	No data available	None	know n
Vapor density	No data available	None	know n
Relative density	~1.0 (liquid)	None	know n
Water Solubility	Completely soluble	None	know n
Solubility(ies)	No data available	None	know n
Partition coefficient: n-octanol/w ater	0	None	know n
Autoignition tem perature	No data available	None	know n
Decomposition tem perature	No data available	None	know n
Kinematic viscosity	No data available	None	know n
Dynamic viscosity	No data available	None	know n

Other Information

Explosive properties	No information available
Oxidizing properties	No information available
Softening Point	No information available
Molecular Weight	No information available
VOC Content (%)	No information available
Liquid Density	No information available
Bulk Density	No information available
Particle Size	No information available
Particle Size Distribution	No data available

10. STABILITY AND REACTIVITY

Reactivity	No information available.
Chemical stability	Stable under normal conditions.
Possibility of Hazardous Reactions	None under normal processing.
Conditions to avoid	None know n based on information supplied.
Incom patible materials	None know n based on information supplied.
Hazardous Decomposition Products	None know n.

11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure

Product Information

Inhalation	Inhalation of vapors in high concentration may cause irritation of respiratory system.
Eye contact	May cause slight irritation.
Skin contact	None known.
Ingestion	Ingestion may cause irritation to mucous membranes.

Information on toxicological effects

Symptoms No information available.

Numerical measures of toxicity

Acute Toxicity No information available

Unknown acute toxicity No information available

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Skin corrosion/irritation No information available.

Serious eye damage/eye irritation No information available.

Respiratory or skin sensitization No information available.

Germ cell mutagenicity No information available.

Carcinogenicity No information available.

Reproductive toxicity No information available.

STOT - single exposure No information available.

STOT - repeated exposure No information available.

Aspiration hazard No information available.

12. ECOLOGICAL INFORMATION

Ecotoxicity The environmental impact of this product has not been fully investigated.

Persistence and Degradability No information available.

Bioaccumulation No information available.

Mobility No information available.

Other adverse effects No information available.

13. DISPOSAL CONSIDERATIONS

Waste treatment methods

Waste from residues/unused products	Dispose of in accordance with local regulations. Dispose of waste in accordance with environmental legislation.
Contaminated packaging	Do not reuse empty containers.

14. TRANSPORT INFORMATION

<u>DOT</u>	Not regulated
<u>TDG</u>	Not regulated
<u>ICAO</u>	Not regulated
<u>IATA</u>	Not regulated
<u>IMDG</u>	Not regulated

15. REGULATORY INFORMATION

Safety, health and environmental regulations/legislation specific for the substance or mixture

International Regulations

Ozone-depleting substances (ODS)	Not applicable
Persistent Organic Pollutants	Not applicable
Export Notification requirements	Not applicable

International Inventories

TSCA	Contact supplier for inventory compliance status
DSL/NDSL	Contact supplier for inventory compliance status
ENECS/ELINCS	Contact supplier for inventory compliance status.
ENCS	Contact supplier for inventory compliance status.
KECL	Contact supplier for inventory compliance status.
PICCS	Contact supplier for inventory compliance status.
AICS	Contact supplier for inventory compliance status.

Legend

TSCA	- United States Toxic Substances Control Act Section 8(b) Inventory
DSL/NDSL	- Canadian Domestic Substances List/Non-Domestic Substances List
ENECS/ELINCS	- European Inventory of Existing Chemical Substances/European List of Notified Chemical Substances
ENCS	- Japan Existing and New Chemical Substances
KECL	- Korean Existing and Evaluated Chemical Substances
PICCS	- Philippines Inventory of Chemicals and Chemical Substances
AICS	- Australian Inventory of Chemical Substances

US Federal Regulations

SARA 313

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product may contain a chemical or chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372

Acute Health Hazard	No
Chronic Health Hazard	No
Fire Hazard	No
Sudden release of pressure hazard	No
Reactive Hazard	No

CWA (Clean Water Act)

This product does not contain any substances regulated as pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42)

CERCLA

This material, as supplied, does not contain any substances regulated as hazardous substances under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302) or the Superfund Amendments and Reauthorization Act (SARA) (40 CFR 355). There may be specific reporting requirements at the local, regional, or state level pertaining to releases of this material

US State Regulations

California Proposition 65

This product does not contain any Proposition 65 chemicals.

U.S. State Right-to-Know Regulations

This product does not contain any substances above threshold limits that are regulated by state right-to-know.

US EPA Label Information

EPA Pesticide Registration No. 67619-31

EPA Statement

This chemical is a pesticide product registered by the Environmental Protection Agency and is subject to certain labeling requirements under federal pesticide law. These requirements differ from the classification criteria and hazard information required for safety data sheets, and for workplace labels of non-pesticide chemicals. Following is the hazard information as required on the pesticide label:

EPA Pesticide label

CAUTION: Causes moderate eye irritation. Avoid contact with eyes or clothing. Wash thoroughly with soap and water after handling. Wear gloves for prolonged or frequent use.

16. OTHER INFORMATION

NFPA	Health hazards 0	Flammability 0	Instability 0	Physical and Chemical Properties -
HMIS	Health hazards 0	Flammability 0	Physical hazards 0	Personal Protection X

Prepared By Product Stewardship
23 British American Blvd.
Latham, NY 12110
1-800-572-6501

Issuing Date 05-Jan-2015

Revision Date 02-Jun-2020

Revision Note No information available

Disclaimer

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text

End of Safety Data Sheet



□□□□□□ **D**□□□□ □□□□□□

1 □□**R**□**D**□□□□ □□**D** □□**M**□□□□ □□**D**□□□□□□□□□□□□

□**r**□**d**□□□□□□ □□ □□**R**□ □□□□□□**M**, □□**M**□ □□**R**□□□□**R**□**M**□□□□**R**

R□□□□□□□□□□ □□ □□□ Incompatible with strong oxidizing agents, metals (except stainless steel, chrome), acids, bases, and bleach.

□**r**□**d**□□□□□□□□ Aqueous Acidic Cleaner for Removal of Calcium, Lime, and Rust from Hard Surfaces
Retail Package: (28 fl. oz., 128 fl. oz.)

M□□□□□□□□□□**r**□□□□ □□□□ □**r**, □□□□
□**ddr**□□□□□□ 5550 W. Touhy Ave.
Skokie, IL 60077 USA
1(847) 675-8400

□□ □**r**□□□□□□□□□□□□□□ □□□□ □**r**□ 1(800) 323-5497 (USA) 8:30 A.M. – 4:30 P.M. CST Monday – Friday
□□ □**r**□□□□□□□□□□□□□□ □□□□□□□□□□ Chemtrec 1(800) 424-9300

□ – □□□□**RD**□ □**D**□□□□□□□□□□□□

□□**M**□□□□□□ □□□□ □□□□**R** 1□**00**1□**00** □□□□**D** □□□□**D** □□□□ □**01**□



□ □**R**□□□□□

ACUTE EYE IRRITATION (Category 2A)
ACUTE DERMAL IRRITATION (Category 4)

□□□□**RD** □□□□ □□□□**R**□ □□□□ □□□□□□□□□□**D** □□□□□□□□
Not applicable

□□□□**R** □□□□**RM**□□□□□□□□
No information available

DO NOT get in eyes, on skin or clothing.
DO NOT mix with bleach or other household chemicals harmful; fumes may result.
DO NOT ingest.
DO NOT breathe vapor or mist. Use in well ventilated areas. Keep container closed when not in use.

□□□□ □□□□ □□□□**R**□□□□□□ □□□□□□**DR**□□□□

□□□□**rd** □□□□□□□□□□□□□□
Causes eye irritation
May cause mild skin irritation.



SECTION 8 DANGER INFORMATION

Prevention of Accidents

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice.

Wash skin thorough after handling.

If skin irritation or rash occurs: Get medical advice/attention.

Do not eat, drink or smoke when handling this product.

Wear protective gloves.

IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell.

IF ON SKIN: Wash with plenty of soap and water.

Avoid breathing fumes.

Section 3 Material Safety Data Sheet (MSDS) Information

Ingredient	Product Code	Health Hazard	Flammability
1. Lactic Acid	79-33-4	YES	5.00-18.00
2. Lauramine Oxide	1643-20-5	YES	1.50-7.50

The exact percentages (concentration) of mixture has been withheld as a trade secret in accordance to paragraph (i) of §1910.1200.

Section 4 - First Aid Measures

In case of eye contact, immediately rinse eye thoroughly with plenty of water. Remove contact lenses, and continue rinsing for at least 15 minutes. If irritation persists, get medical attention.

Can be irritating to skin, prolonged contact can be more severe, no adverse effects during normal usage. In case of skin contact, rinse area for at least 15 minutes. Remove contaminated clothing and shoes, wash thoroughly before reuse. If irritation persists get medical attention.

Not a significant route of exposure. Remove to fresh air. If breathing is difficult, GET MEDICAL ATTENTION IMMEDIATELY.

DO NOT induce vomiting. If fully conscious, drink 16 ounces of water. CALL A PHYSICIAN OR POISON CONTROL CENTER IMMEDIATELY. NEVER give an unconscious person anything to ingest.

Section 5 - Fire and Explosion Data

Not flammable. Use appropriate media for area. Use water spray, dry chemical, alcohol-resistant foam or carbon dioxide.

Carbon Monoxide. Thermal decomposition can lead to irritating gases and vapors.

Evacuate area of personnel. Wear protective NIOSH-approved self-contained breathing apparatus. Remain upwind of fire to avoid hazardous vapors and decomposition products. Use water spray to cool fire-exposed containers. Run-off of large quantities of product from fire control may cause pollution. Contact appropriate agencies.

None known.

Section 6 - Spill and Leak Procedures

Avoid contact with skin and eyes

No special clean-up procedure is necessary for small (less than 1 gallon) spills. Flush spill area with water. Wear rubber gloves.

Use personal protection recommended in Section 8. Isolate area, and deny entry to unnecessary and unprotected personnel. Dam spill, and absorb with earth, sand or similar material. Place in non-leaking containers. Dispose of collected material according to local, state, and federal regulations. Flush residue with large amount of water. Avoid direct discharge to sewers and surface waters.



XXXXXXXXX DXXXX XXXXXX

XXXXXXXXX XXXXXXDXXXX XXD XXXRXXX

XXXXDXXXX d XXXRXXXX Avoid contact with eyes, skin or clothing. May be harmful or if swallowed. Use with adequate ventilation. Avoid breathing vapors or mist. Do not eat, drink, or smoke in work area. Wash hand thoroughly after use. Consumer size containers (28, 42 fluid ounces and gallon containers) should be rinsed and recycled. Store in cool well-ventilated area, away from heat. Keep containers tightly closed. Avoid contact with combustible materials, wood, and organic materials. Store in original containers in a secure area away from children and pets.

D XXX M XXX XXXXXX, R XXX XXXR R DXXXX XXX XXX M M RXXXXXXXXXXXX
 XXX RXXXX XXX DRXXX

XXXXXXXXX - XXXXXXR XXXR XXXR XXXR XXXRXXXXXXXXX

XXXXXXXXR XXXDXXXXXXXX

OSHA

ACGIH

MMXXXXXXXX

XXX

XXXXXXXX

XX

XXXXXXXX

1. Lactic Acid

N.E.

N.E.

N.E.

N.E.

2. Lauramine Oxide

N.E.

N.E.

N.E.

N.E.

XXXXXXXXXXXX R R M XXXX Avoid prolonged breathing mists or dusts of this product. Use with adequate ventilation. Do not use in closed or confined spaces.

R R R R R None required during normal household use. Emergency responders should wear self-contained breathing apparatus (SCBA) to avoid inhalation of product.

R R R R R Not required during normal household usage. Do not wear contact lenses. Emergency responders should wear full eye and face protection.

R R R R R Rubber gloves with protective cuff. Emergency responders should wear impermeable gloves.

R R R R R Emergency responders should wear chemical type (impermeable) protective clothing and footwear where direct contact with chemicals in this product is possible.

R R R R R Wash thoroughly with soap and water after use or handling.

XXXXXXXXX - XXXXXX XXXD XXXM XXXR XXXRXXXX

XXXXrXXXX Crystal clear, lime green liquid

XXX XXXXXXX

Not Flammable

d r Slightly acidic

XXXXrXXXX r XXX XXXXXXX

N.A.

d r r r r r r r

N.D.

XXXXr r r r r r r r

N.D.

XXXX 0

2.10-2.30

XXXXr D XXXXXXX XXX XXX

N.D.

M XXXXXXX XXXXXXX

N.D.

R XXXXXXX D XXXXXXX 0 XXX

1.040 – 1.060

r r r r r r r r

N.D.

XXXXXXXXXXXX XXX r:

100%

XXXXXXXXXXXX XXXXXXX

99°C / 210°F

r r r r r r r r r r r r r r

N.D.

XXXXXXXXXXXX R XXXXXXX

N.A.

XXXXXXXXXXXX r

XXXXXXXXXXXX

None

XXXXXXXXXXXX XXX r r r r r r r r

N.A.

XXXXr r r r r R:

N.D.

D XXXXXXX XXXXXXX XXX r r r r r r r r

N.A.

XXXXXXXXXXXX

N.D.

XXXXXXXXX 10 - XXXXXXXXXX D R XXXXXXXXXX

RXXXXXXXXXXXXN.A.

M XXX XXXXXXXXXX Stable under normal storage conditions.

XXXXXXXXXXXX R D R XXXXXXXXXX N. D.

D XXX XXX D Avoid elevated temperatures.

M XXXXXXX M R XXXXXXX Strong oxidizing agents, metals (except stainless steel and chrome), bleach, acids, and bases.



SECTION D

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations (CPR) and the SDS contains all the information required by CPR.

1 - R RM

D R R

TSCA INVENTORY STATUS: All components of this product are listed on the TSCA Inventory or are exempt from TSCA Inventory requirements.

R 311/313 R

- IMMEDIATE (ACUTE) HEALTH HAZARD: YES
- DELAYED (CHRONIC) HEALTH HAZARD: NO
- FIRE HAZARD: NO
- SUDDEN RELEASE OF PRESSURE: NO
- REACTIVE HAZARD: NO

R 303/313 NO

R M R

- EUROPEAN UNION (EINECS) YES
- JAPAN (METI) YES
- AUSTRALIA (ACIS) YES
- KOREA (KECL) YES
- CANADA (DSL) YES
- CANADA (NDSL) NO
- PHILIPPINES YES

R California, New Jersey, Pennsylvania, Minnesota, Massachusetts, and Wisconsin. Complies with listed States Right to Know Acts.

The following statement is made in order to comply with the California State Drinking Water Act. California Proposition 65: This product does not contain any chemicals known to the State of California to cause cancer and/or to cause birth defects and other reproductive harm.

16 - R RM

r Avoid exposure to excess heat, and prevent from freezing.

1, 0, 0. None

0% - does not include any CARB applicable exemptions (Volatile Organic Compounds)/California Air Resources board

R M R: 28-day biodegradation. The matter is readily biodegradable. OECD 301D

r None required.



□□□□□□ **D**□□□□ □□□□□□

□**D**□ □□□**R**□□□□□□□□□□

- N. A.: Not Applicable
- N. D.: Not Determined
- N.E.: Not Established
- C: Ceiling Limit
- HAP: Hazardous Air Pollutant
- VOC: Volatile Organic Compound

NEW LOGO

R□□□□ □□**dr**□□□□□□

Although the information and recommendations set forth herein are presented in good faith and believed to be correct as of the date hereof, JELMAR offers no representations as to the completeness or accuracy thereof. Information is provided upon the condition that the persons receiving same will make their own determination as to its suitability for their purposes prior to use. In no event will JELMAR be responsible for damages of any nature whatsoever resulting from use of or reliance upon said information.

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SAFETY DATA SHEET

Issuing Date: 01-30-2015

Revision Date: 01-30-2015

Version 1

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1.

Product identifier

Product Code(s): 41008802-M
Product Name CUT-MAX SE 100
Product Registration number
Denmark -
Norway -
Sweden -
EC # See Section 15 for additional information on base oils. Not Applicable
Pure substance/preparation Contains Highly refined, low viscosity base oil (Viscosity <7 cSt @40°C)

1.2. Relevant identified uses of the substance or mixture and uses advised against

Recommended use Metalworking fluid: Spark erosion, solvent based

Uses advised against Any other purpose.

1.3. Details of the supplier of the safety data sheet

Manufacturer, Importer, Supplier

Houghton plc
Beacon Road
Trafford Park
Manchester
M17 1AF
Tel: +44 (0)161 874 5000
E-mail: MSDS@uk.houghtonglobal.com

Houghton S.A.S.
604 Bd Albert Camus,
BP 60041
69652 Villefranche sur saone
France
Tel: (0) 4 74 65 65 00
Fax: (0) 4 74 60 08 44

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1.4. Emergency telephone number

3E Company: (+)1 760 476 3961 (Code 333938)

Austria	Notfall-Telefonnummer +43 (0) 1 406 4343
Bulgaria	Телефон за спешни случаи +359 2 9154 409
Switzerland	145; +41 (0) 44 254 51 51
Czech Republic	Telefonní číslo pro naléhavé situace +420 224 919 293
Denmark	Ring til Giftlinjen på +45 82 12 12 12
Finland	Hätäpuhelinnumero +358 09 471 977
France	Numéro d'appel d'urgence +33 (0)1 45 42 5959
Hungary	Díjmentesen hívható zöld szám +36 80 20 11 99
Ireland	Emergency telephone number +353 01 809 2166
Netherlands	Telefoonnummer voor +31 30 274 88 88
Norway	Nødnummer +47 22 59 13 00
Poland	112
Portugal	Número de telefone de emergência +351 808 250 143
Romania	Număr de telefon care poate fi apelat în caz de urgență +021 318 36 06 (08:00-15:00)
Spain	Número de teléfono de emergencia +34 91 562 0420
Sweden	Telefonnummer för nödsituationer +46 08 33 12 31 (09:00-17:00)
Turkey	(+)1 760 476 3959 (Code 333938)

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Regulation (EC) No 1272/2008

Aspiration toxicity	Category 1 - (H304)
----------------------------	---------------------

2.2. Label Elements

Contains Highly refined, low viscosity base oil (Viscosity <7 cSt @40°C)

**Signal Word**

DANGER

Hazard Statements

H304 - May be fatal if swallowed and enters airways

EUH066 - Repeated exposure may cause skin dryness or cracking

Precautionary Statements - EU (§28, 1272/2008)

P301 + P310 - IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician

P331 - Do NOT induce vomiting

P405 - Store locked up

P501 - Dispose of contents/ container to an approved waste disposal plant

2.3. Other hazards

No information available.

SECTION 3: Composition/information on ingredients

3.1. Substances / 3.2. Mixtures

This product is a mixture. Health hazard information is based on its ingredients

Chemical Name	EC-No	CAS-No	Weight %	Classification (Reg. 1272/2008)	REACH Registration Number
Highly refined, low viscosity base oil (Viscosity <7 cSt @40°C)	-	-	50% - 100%	Asp. Tox. 1 (H304) (EUH066)	-

Additional information

Product containing mineral oil with less than 3% DMSO extract as measured by IP 346

See Section 15 for additional information on base oils.

Full text of H- and EUH-phrases: see section 16

SECTION 4: First aid measures

4.1. Description of first-aid measures

General advice	Immediate medical attention is required. Do not get in eyes, on skin, or on clothing.
Inhalation	Move to fresh air. Potential for aspiration if swallowed. Get medical attention immediately if symptoms occur.
Skin contact	Wash off immediately with soap and plenty of water. Remove and wash contaminated clothing before re-use.
Eye contact	Rinse thoroughly with plenty of water, also under the eyelids. Keep eye wide open while rinsing.
Ingestion	Do not induce vomiting without medical advice. Clean mouth with water and afterwards drink plenty of water. Aspiration hazard if swallowed - can enter lungs and cause damage. If

symptoms persist, call a physician.

Protection of First-aiders Use personal protective equipment. Avoid contact with skin, eyes and clothing.

4.2. Most important symptoms and effects, both acute and delayed

Main Symptoms May be fatal if swallowed and enters airways

4.3. Indication of immediate medical attention and special treatment needed

Notes to physician Treat symptomatically.

SECTION 5: FIRE FIGHTING MEASURES

5.1. Extinguishing media

Suitable Extinguishing Media

Use extinguishing measures that are appropriate to local circumstances and the surrounding environment:, Use CO2, dry chemical, or foam, Water spray or fog, Cool containers / tanks with water spray

Extinguishing media which shall not be used for safety reasons

Do not use a solid water stream as it may scatter and spread fire.

5.2. Special hazards arising from the substance or mixture

Special Hazard

In the event of fire and/or explosion do not breathe fumes. Carbon monoxide, carbon dioxide and unburned hydrocarbons (smoke). Cool containers / tanks with water spray. Thermal decomposition can lead to release of irritating gases and vapors.

Hazardous Decomposition Products

Incomplete combustion and thermolysis produces potentially toxic gases such as carbon monoxide and carbon dioxide

5.3. Advice for firefighters

Special protective equipment for fire-fighters

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Remove all sources of ignition. Ensure adequate ventilation. Use personal protective equipment. Avoid contact with skin, eyes and clothing.

Advice for non-emergency personnel Material can create slippery conditions.

Advice for emergency responders For personal protection see section 8.

6.2. Environmental precautions

Prevent further leakage or spillage if safe to do so. Do not flush into surface water or sanitary sewer system.

6.3. Methods and materials for containment and cleaning up

Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust). Dike to collect large liquid spills. After cleaning, flush away traces with water.

6.4. Reference to other sections

See Section 8/12/13 for additional information.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Ensure adequate ventilation. Do not eat, drink or smoke when using this product. Handle in accordance with good industrial hygiene and safety practice. Keep away from open flames, hot surfaces and sources of ignition.

7.2. Conditions for safe storage, including any incompatibilities

Technical measures/Storage conditions

Keep containers tightly closed in a dry, cool and well-ventilated place. Keep away from open flames, hot surfaces and sources of ignition. Keep container tightly closed in a dry and well-ventilated place.

Recommended Shelf Life

No information available.

Incompatible Materials

Strong oxidizing agents, Strong acids, Strong bases

7.3. Specific end uses

Specific use(s)

Metalworking fluid: Spark erosion, solvent based

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Chemical Name	European Union	United Kingdom	France	Spain
Highly refined, low viscosity base oil (Viscosity <7 cSt @40°C)				VLA-EC: 10 mg/m ³ VLA-ED: 5 mg/m ³

Chemical Name	Austria	Switzerland	Poland	Ireland
Highly refined, low viscosity base oil (Viscosity <7 cSt @40°C)				STEL: 10 mg/m ³ TWA: 5 mg/m ³ (Mist)

Chemical Name	Finland	Denmark	Norway	Sweden
Highly refined, low viscosity base oil (Viscosity <7 cSt @40°C)	TWA: 5mg/m ³ (Öljysumu)	TWA: 1 mg/m ³ (Olietåge)	TWA: 1 mg/m ³ (Oljetåke)	LLV: 1 mg/m ³ STV: 3 mg/m ³ (Oljedimma)

Hydrocarbon solvent vapor mixtures which do not have substance specific occupational exposure limits may be evaluated by the Reciprocal Calculation Procedure (RCP) which assigns a recommended occupational exposure limit based on the mass composition and hydrocarbon group guidance values (GGVs). Applicable recommended occupational exposure limits are shown in the table below.

Chemical Name	RCP OEL	Manufacturer
Distillates (petroleum), hydrotreated middle 64742-46-7	RCP: TWA 1200 mg/m ³ 143ppm	
Distillates (petroleum), hydrotreated light 64742-47-8	RCP: TWA 1200 mg/m ³ 182ppm	

Naphtha (petroleum), hydrotreated heavy 64742-48-9	RCP: TWA 1000 mg/m ³	
C12-C14 isoalkanes 68551-19-9	RCP: TWA 1200 mg/m ³	
Hydrocarbons, C11-C14, n-alkanes, isoalkanes, cyclics, <2% aromatics NOT AVAILABLE	RCP C9-C15 aliphatics: 600mg/m ³	
Hydrocarbons, C10-C13, n-alkanes, isoalkanes, cyclics, <2% aromatics NOT AVAILABLE	TWA: 600 mg/m ³	
Hydrocarbons, C13-C16, n-alkanes, isoalkanes, cyclics, <0.03% aromatics NOT AVAILABLE	RCP C9-C15 aliphatics: 600mg/m ³	
Hydrocarbons, C12-C15, n-alkanes, isoalkanes, cyclics, <2% aromatics NOT AVAILABLE	TWA: 150ppm TWA: 1200 mg/m ³	
Hydrocarbons, C11-C13, isoalkanes, <2% aromatics NOT AVAILABLE	TWA: 171 ppm TWA: 1200 mg/m ³	
Hydrocarbons, C11-C12, isoalkanes, <2% aromatics NOT AVAILABLE	RCP C9-C15 aliphatics: 600mg/m ³	
Hydrocarbons, C11-C14, isoalkanes, cyclics, <2% aromatics NOT AVAILABLE	TWA: 165 ppm TWA: 1200 mg/m ³	
Hydrocarbons, C12-C16, isoalkanes, cyclics, <2% aromatics NOT AVAILABLE	RCP: TWA 1200 mg/m ³ 182ppm	
Hydrocarbons, C15-C20, n-alkanes, isoalkanes, cyclics, <0.03% aromatics NOT AVAILABLE	RCP: TWA 600 mg/m ³	
Hydrocarbons, C14-C18, n-alkanes, isoalkanes, cyclics, <2% aromatics NOT AVAILABLE	RCP: TWA 600 mg/m ³	

Workers Systemic toxicity**Workers Local effects****Consumers Systemic toxicity****Consumers Local effects****Predicted No Effect Concentration (PNEC)****8.2. Exposure controls****Engineering Measures**

Ensure adequate ventilation, especially in confined areas.

Personal protective equipment**Eye Protection**

Safety glasses with side-shields.

Hand Protection

Protective gloves. Please observe the instructions regarding permeability and breakthrough time which are provided by the supplier of the gloves. Also take into consideration the specific local conditions under which the product is used, such as the danger of cuts, abrasion. Barrier creams may help to protect the exposed areas of skin, they should however not be applied once exposure has occurred.

Skin and body protection

Long sleeved clothing.

Respiratory protection

No special protective equipment required. In case of mist, spray or aerosol exposure wear suitable personal respiratory protection and protective suit.

Hygiene measures

Do not eat, drink or smoke when using this product. Handle in accordance with good industrial hygiene and safety practice.

Environmental Exposure Controls No special environmental precautions required.
Thermal hazards None under normal use conditions

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state @20°C	liquid	Appearance	light red, Light pink
Odor	Mild	Odor Threshold	Not Applicable
<u>Property</u>	<u>Values</u>		<u>Note</u>
pH	Not applicable		
Melting Point / Freezing Point	< 0 °C / < 32 °F		
Boiling point/boiling range	> 200 °C / > 392 °F		
Flash point	108 °C / 226 °F		PMCC
Evaporation rate	No information available		
Flammability (solid, gas)	No information available		
Flammability Limits in Air			
upper flammability limit	No information available.		
Lower flammability limit	No information available.		
Vapor pressure	No information available.		< Water
Vapor density	No information available.		
Relative density	0.80		@ 15.5°C
Solubility(ies)	Immiscible in water		
Partition coefficient: n-octanol/water	Not Applicable		
Autoignition temperature	No information available		
Decomposition temperature	No information available		
Viscosity, kinematic	~ 2.5 cSt @ 40 °C		ISO 3104
Explosive properties	Not Applicable		
Oxidizing Properties	Not Applicable		

9.2 Other information

Viscosity, kinematic (100°C)	No information available
Pour point	No information available
VOC Content	No information available

SECTION 10: Stability and reactivity

10.1. Reactivity

None under normal use conditions.

10.2. Chemical stability

Stable under normal conditions.

10.3. Possibility of hazardous reactions

None under normal use conditions

10.4. Conditions to avoid

Heat, flames and sparks, Keep away from open flames, hot surfaces and sources of ignition

10.5. Incompatible Materials

Strong oxidizing agents, Strong acids, Strong bases

10.6. Hazardous decomposition products

Incomplete combustion and thermolysis produces potentially toxic gases such as carbon monoxide and carbon dioxide.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Product Information - Principle Routes of Exposure

Inhalation	Risk of serious damage to the lungs (by aspiration)
Eye contact	None known
Skin contact	None known
Ingestion	Risk of product entering the lungs on vomiting after ingestion

Acute toxicity - Product Information

May be harmful if swallowed and enters airways.

Acute toxicity - Component Information

Chemical Name	LD50 Oral (Rat)	LD50 Dermal (Rat/Rabbit)	LC50 Inhalation
Highly refined, low viscosity base oil (Viscosity <7 cSt @40°C)	>2000 mg/kg	>2000 mg/kg	

Skin corrosion/irritation	None known.
Serious eye damage/eye irritation	None known.
Sensitization	
Respiratory Sensitization	None known.
Skin sensitization	None known.
Germ Cell Mutagenicity	None known.
Carcinogenicity	None known.
Reproductive toxicity	None known.
Specific target organ systemic toxicity (single exposure)	None known
Specific target organ systemic toxicity (repeated exposure)	None known.
Aspiration hazard	Risk of serious damage to the lungs (by aspiration).
Symptoms	Prolonged skin contact may defat the skin and produce dermatitis.

SECTION 12: Ecological information

12.1. Toxicity

No special environmental measures are necessary.

12.2. Persistence and degradability

The product is not readily biodegradable, but it can be degraded by micro-organisms, it is regarded as being inherently biodegradable.

12.3. Bioaccumulative potential

No information available

12.4. Mobility in soil

The product is insoluble and floats on water.

12.5. Results of PBT and vPvB assessment

This preparation contains no substance considered to be persistent, bioaccumulating nor toxic (PBT). This preparation contains no substance considered to be very persistent nor very bioaccumulating (vPvB).

12.6. Other adverse effects

None known

SECTION 13: Disposal considerations**13.1. Waste treatment methods****Waste from Residues / Unused Products**

Dispose of as hazardous waste in compliance with local and national regulations

Contaminated packaging

Empty containers should be taken to an approved waste handling site for recycling or disposal. Observe all label precautions until container is cleaned, reconditioned or destroyed.

Other Data

According to the European Waste Catalogue, Waste Codes are not product specific, but application specific. Waste codes should be assigned by the user based on the application for which the product was used.

SECTION 14: Transport information**14.1. UN-Number**

Not regulated

14.2. UN proper shipping name

Not regulated

14.3. Transport hazard class

Not regulated

14.4. Packing group

Not regulated

14.5. Environmental Hazards

None.

14.6. Special precautions for users

None.

14.7. Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Not applicable

IMDG/IMO Not regulated**ADR/RID** Not regulated**ICAO/IATA** Not regulated**SECTION 15: Regulatory information****15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture**

The Classification, Labeling and Packaging of Substances and Mixtures (CLP) Regulation (EC 1272/2008)
Registration, Evaluation, Authorization, and Restriction of Chemicals (REACH) Regulation (EC 1907/2006)

Statutory Instruments: Control of Substances Hazardous to Health Regulations 2002. Chemicals (Hazard Information and Packaging) Regulations 2009.

Acts of Parliament: The Health and Safety at Work etc. Act 1974. Environment Protection Act 1990.

Regulation on classification, labeling, of hazardous chemicals (2002 changing 2005). Appendix VI to Regulation on classification, labeling etc. of hazardous chemicals (2002 changing 2010), list of hazardous substances (as amended). Guidelines for submission and declaration of hazardous waste (2009). Transport of dangerous goods: ADR, RID, IMDG and IATA. Administrative norms for pollution of the atmosphere, 2009.

Workplace exposure limits (EH40)

WGK Classification

Low hazard to water/Class 1

The highly refined, low viscosity base oil (Viscosity <7 cSt @40°C) contains one or more substance with the following CAS/EC numbers/REACH registration numbers:

Chemical Name	CAS-No	EC-No	REACH Registration Number
Distillates (petroleum), hydrotreated middle	64742-46-7	934-956-3	01-2119827000-58-xxxx
Hydrocarbons, C13-C23, n-alkanes, isoalkanes, cyclics, < 0.03% aromatics	64742-46-7	932-078-5	01-2119552497-29-xxxx
Distillates (petroleum), hydrotreated light	64742-47-8	265-149-8	01-2119456620-43-xxxx
Naphtha (petroleum), hydrotreated heavy	64742-48-9	265-150-3	01-2119457273-39-xxxx
Distillates (petroleum), hydrotreated light naphthenic	64742-53-6	265-156-6	01-2119480375-34-xxxx
Distillates (petroleum), hydrotreated light paraffinic	64742-55-8	265-158-7	01-2119487077-29-xxxx
Distillates (petroleum), solvent-dewaxed light paraffinic	64742-56-9	265-159-2	01-2119480132-48-xxxx
C12-C14 isoalkanes	68551-19-9	271-369-5	
White mineral oil (petroleum)	8042-47-5	232-455-8	01-2119487078-27-xxxx
Alkanes, C14-16	90622-46-1	292-448-0	
Alkanes, C12-26-branched and linear	90622-53-0	292-454-3	
Alkanes, C11-15-iso-	90622-58-5	292-460-6	
Hydrocarbons, C11-C14, n-alkanes, isoalkanes, cyclics, <2% aromatics	NOT AVAILABLE	926-141-6	01-2119456620-43-xxxx
Hydrocarbons, C10-C13, n-alkanes, isoalkanes, cyclics, <2% aromatics	NOT AVAILABLE	918-481-9	01-2119457273-39-xxxx
Hydrocarbons, C13-C16, n-alkanes, isoalkanes, cyclics, <0.03% aromatics	NOT AVAILABLE	934-954-2	01-2119826592-36-xxxx
Hydrocarbons, C12-C15, n-alkanes, isoalkanes, cyclics, <2% aromatics	NOT AVAILABLE	920-107-4	01-2119453414-43-xxxx
Hydrocarbons, C11-C14, n-alkanes, <2% aromatics	NOT AVAILABLE	924-803-9	01-2119485647-22-xxxx
Hydrocarbons, C11-C13, isoalkanes, <2% aromatics	NOT AVAILABLE	920-901-0	01-2119456810-40-xxxx

Hydrocarbons, C14-C18, n-alkanes, cyclics, aromatics (2-30%)	NOT AVAILABLE	920-360-0	01-2119448343-41-xxxx
Hydrocarbons, C11-C12, isoalkanes, <2% aromatics	NOT AVAILABLE	918-167-1	01-2119472146-39-xxxx
Hydrocarbons, C11-C14, isoalkanes, cyclics, <2% aromatics	NOT AVAILABLE	927-285-2	01-2119480162-45-xxxx
Hydrocarbons, C12-C16, isoalkanes, cyclics, <2% aromatics	NOT AVAILABLE	927-676-8	01-2119456377-30-xxxx
Hydrocarbons, C13-C16, isoalkanes, cyclics, <2% aromatics	NOT AVAILABLE	918-973-3	01-2119458871-30-xxxx
Hydrocarbons, C15-C20, n-alkanes, isoalkanes, cyclics, <0.03% aromatics	NOT AVAILABLE	934-956-3	01-2119827000-58-xxxx
Hydrocarbons, C14-C18, n-alkanes, isoalkanes, cyclics, <2% aromatics	NOT AVAILABLE	927-632-8	01-2119457736-27-xxxx

15.2. Chemical Safety Assessment

No information available.

SECTION 16: Other information**Key or legend to abbreviations and acronyms used in the safety data sheet**

Repr.-Reproduction toxicity

Asp. Tox. - Aspiration Toxicity

Acute Tox. - Acute Toxicity

Aquatic Acute - Acute Aquatic Toxicity

Aquatic Chronic - Chronic Aquatic Toxicity

Eye Dam. - Eye Damage

Eye Irrit. - Eye Irritation

Skin Corr. - Skin Corrosion

Skin Irrit. - Skin Irritation

Skin Sens. - Skin Sensitizer

Resp. Sens. - Respiratory Sensitizer

STOT SE - Specific target organ systemic toxicity (Single exposure)

STOT RE - Specific target organ systemic toxicity (repeated exposure)

VOC - Volatile organic compounds

Full text of H-Statements referred to under sections 2 and 3

<ul style="list-style-type: none"> • H224 - Extremely flammable liquid and vapor • H225 - Highly flammable liquid and vapor • H226 - Flammable liquid and vapor • H270 - May cause or intensify fire; oxidizer • H271 - May cause fire or explosion; strong oxidizer • H272 - May intensify fire; oxidizer • H290 - May be corrosive to metals • H300 - Fatal if swallowed • H301 - Toxic if swallowed • H302 - Harmful if swallowed • H304 - May be fatal if swallowed and enters airways • H310 - Fatal in contact with skin • H311 - Toxic in contact with skin • H312 - Harmful in contact with skin • H314 - Causes severe skin burns and eye damage • H315 - Causes skin irritation • H317 - May cause an allergic skin reaction • H318 - Causes serious eye damage • H319 - Causes serious eye irritation • H330 - Fatal if inhaled • H331 - Toxic if inhaled • H332 - Harmful if inhaled • H334 - May cause allergy or asthma symptoms or breathing difficulties if inhaled • H335 - May cause respiratory irritation • H336 - May cause drowsiness or dizziness • H340 - May cause genetic defects 	<ul style="list-style-type: none"> • H341 - Suspected of causing genetic defects • H350 - May cause cancer • H351 - Suspected of causing cancer • H360 - May damage fertility or the unborn child • H361 - Suspected of damaging fertility or the unborn child • H362 - May cause harm to breast-fed children • H370 - Causes damage to organs • H371 - May cause damage to organs • H372 - Causes damage to organs through prolonged or repeated exposure • H373 - May cause damage to organs through prolonged or repeated exposure • H400 - Very toxic to aquatic life • H410 - Very toxic to aquatic life with long lasting effects • H411 - Toxic to aquatic life with long lasting effects • H412 - Harmful to aquatic life with long lasting effects • H413 - May cause long lasting harmful effects to aquatic life. • H360Df - May damage the unborn child. Suspected of damaging fertility • H360D - May damage the unborn child • H360FD - May damage fertility. May damage the unborn child • H360F - May damage fertility • H361d - Suspected of damaging the unborn child • H361fd - Suspected of damaging fertility. Suspected of damaging the unborn child • H361f - Suspected of damaging fertility • EUH066 - Repeated exposure may cause skin dryness or cracking • EUH210 - Safety data sheet available on request. • EUH208 - May produce an allergic reaction
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Exposure scenario

No information available.

Issuing Date: 01-30-2015**Revision Date:** 01-30-2015**Revision Note****Disclaimer**

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

SAFETY DATA SHEET



Issuing Date: 05-Oct-2015

Revision Date: 05-Oct-2015

Version 1

1. IDENTIFICATION

Product Name	Dawn Ultra Dishwashing Liquid, Original Scent
Product ID:	97591965_RET_NG
Product Type:	Finished Product - Consumer (Retail) Use Only
Recommended use	Dish Care
Restrictions on Use	Use only as directed on label.
Synonyms	Dawn Ultra Dishwashing Liquid, Pomegranate Awakening (97591967_RET_NG) Dawn Ultra Dishwashing Liquid, Apple Orchard Harvest (97591968_RET_NG)
Manufacturer	PROCTER & GAMBLE - Fabric and Home Care Division Ivorydale Technical Centre 5289 Spring Grove Avenue Cincinnati, Ohio 45217-1087 USA Procter & Gamble Inc. P.O. Box 355, Station A Toronto, ON M5W 1C5 1-800-331-3774
E-mail Address	pgsds.im@pg.com
Emergency Telephone	Transportation (24 HR) CHEMTREC - 1-800-424-9300 (U.S./ Canada) or 1-703-527-3887 Mexico toll free in country: 800-681-9531

2. HAZARD IDENTIFICATION

"Consumer Products", as defined by the US Consumer Product Safety Act and which are used as intended (typical consumer duration and frequency), are exempt from the OSHA Hazard Communication Standard (29 CFR 1910.1200). This SDS is being provided as a courtesy to help assist in the safe handling and proper use of the product.

This product is classified under 29CFR 1910.1200(d) and the Canadian Hazardous Products Regulation as follows:.

Hazard Category	
Eye Damage / Irritation	Category 2B
Signal Word	WARNING
Hazard Statements	Causes eye irritation
Hazard pictograms	None

Precautionary Statements - Prevention	Wash hands thoroughly after handling
Precautionary Statements - Response	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing If eye irritation persists: Get medical advice/attention IF SWALLOWED: Drink 1 or 2 glasses of water
Precautionary Statements - Storage	None
Precautionary Statements - Disposal	None
Hazards not otherwise classified (HNOC)	None

3. COMPOSITION/INFORMATION ON INGREDIENTS

Ingredients are listed according to 29CFR 1910.1200 Appendix D and the Canadian Hazardous Products Regulation

Chemical Name	Synonyms	Trade Secret	CAS-No	Weight %
Sulfuric acid, mono-C10-16-alkyl esters, sodium salts	Sulfuric acid, mono-C10-16-alkyl esters, sodium salts	No	68585-47-7	15 - 20
Poly(oxy-1,2-ethanediyl), alpha-sulfo-omega-hydroxy-, C10-16-alkyl ethers, sodium salts	Poly(oxy-1,2-ethanediyl), alpha-sulfo-omega-hydroxy-, C10-16-alkyl ethers, sodium salts	No	68585-34-2	5 - 10
Amine oxides, C10-16-alkyldimethyl	Amine oxides, C10-16-alkyldimethyl	No	70592-80-2	5 - 10
Ethanol	Ethanol	No	64-17-5	1 - 5

4. FIRST AID MEASURES

First aid measures for different exposure routes

Eye contact	Rinse with plenty of water. Get medical attention immediately if irritation persists.
Skin contact	Rinse with plenty of water. Get medical attention if irritation develops and persists.
Ingestion	Drink 1 or 2 glasses of water. Do NOT induce vomiting. Get medical attention immediately if symptoms occur.
Inhalation	Move to fresh air. If symptoms persist, call a physician.
Most important symptoms/effects, acute and delayed	None under normal use conditions.

Indication of immediate medical attention and special treatment needed, if necessary

Notes to Physician	Treat symptomatically.
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5. FIRE-FIGHTING MEASURES

Suitable extinguishing media	Dry chemical, CO ₂ , alcohol-resistant foam or water spray.
Unsuitable Extinguishing Media	None.
Special hazard	None known.
Special protective equipment for fire-fighters	As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.
Specific hazards arising from the chemical	None.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

Personal precautions	Use personal protective equipment. Do not get in eyes, on skin, or on clothing.
Advice for emergency responders	Use personal protective equipment as required.

Methods and materials for containment and cleaning up

Methods for containment	Absorb with earth, sand or other non-combustible material and transfer to containers for later disposal.
Methods for cleaning up	Contain spillage, and then collect with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and place in container for disposal according to local / national regulations (see section 13).

7. HANDLING AND STORAGE

Precautions for safe handling

Advice on safe handling	Use personal protective equipment as required. Keep container closed when not in use. Never return spills in original containers for re-use. Keep out of the reach of children.
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Conditions for safe storage, including any incompatibilities

Storage Conditions	Keep containers tightly closed in a dry, cool and well-ventilated place.
Incompatible products	None known.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

Exposure Guidelines

Chemical Name	CAS-No	ACGIH TLV	OSHA PEL	Mexico PEL
Ethanol	64-17-5	STEL: 1000 ppm	TWA: 1000 ppm TWA: 1900 mg/m ³ (vacated) TWA: 1000 ppm (vacated) TWA: 1900 mg/m ³	Mexico: TWA 1000 ppm Mexico: TWA 1900 mg/m ³

Chemical Name	CAS-No	Alberta	Quebec	Ontario TWAEV	British Columbia
Ethanol	64-17-5	TWA: 1000 ppm TWA: 1880 mg/m ³	TWA: 1000 ppm TWA: 1880 mg/m ³	STEL: 1000 ppm	STEL: 1000 ppm

No relevant exposure guidelines for other ingredients

Exposure controls

Engineering Measures

Distribution, Workplace and Household Settings:
Ensure adequate ventilation

Product Manufacturing Plant (needed at Product-Producing Plant ONLY):
Where reasonably practicable this should be achieved by the use of local exhaust ventilation and good general extraction

Personal Protective Equipment

Eye Protection

Distribution, Workplace and Household Settings:
No special protective equipment required

Product Manufacturing Plant (needed at Product-Producing Plant ONLY):
Use appropriate eye protection

Hand Protection

Distribution, Workplace and Household Settings:
No special protective equipment required

Product Manufacturing Plant (needed at Product-Producing Plant ONLY):
Protective gloves

Skin and Body Protection

Distribution, Workplace and Household Settings:
No special protective equipment required

Product Manufacturing Plant (needed at Product-Producing Plant ONLY):
Wear suitable protective clothing

Respiratory Protection

Distribution, Workplace and Household Settings:
No special protective equipment required

Product Manufacturing Plant (needed at Product-Producing Plant ONLY):
In case of insufficient ventilation wear suitable respiratory equipment

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical State @20°C	liquid
Appearance	Various color by product
Odor	Scented
Odor threshold	No information available

<u>Property</u>	<u>Values</u>	<u>Note</u>
pH value	9.0 - 9.2	10% aqueous solution
Melting/freezing point	No information available	
Boiling point/boiling range	100 - 104 °C / 212 - 219 °F	
Flash point	No Flash to Boiling (NFTB)	
Evaporation rate	No information available	
Flammability (solid, gas)	No information available	
Flammability Limits in Air		
Upper flammability limit	No information available	
Lower Flammability Limit	No information available	
Vapor pressure	No information available	
Vapor density	No information available	
Relative density	1.04	
Water solubility	100%	
Solubility in other solvents	No information available	
Partition coefficient: n-octanol/water	No information available	
Autoignition temperature	No information available	.
Decomposition temperature	No information available	.

Viscosity of Product No information available
VOC Content (%) Products comply with US state and federal regulations for VOC content in consumer products.

10. STABILITY AND REACTIVITY

Reactivity None under normal use conditions.
Stability Stable under normal conditions.
Hazardous polymerization Hazardous polymerization does not occur.
Hazardous Reactions None under normal processing.
Conditions to Avoid None under normal processing.
Materials to avoid None in particular.
Hazardous Decomposition Products None under normal use.

11. TOXICOLOGICAL INFORMATION

Product Information

Information on likely routes of exposure

Inhalation No known effect.
Skin contact No known effect.
Ingestion No known effect.
Eye contact Irritating to eyes.

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Acute toxicity No known effect.
Skin corrosion/irritation No known effect.
Serious eye damage/eye irritation Irritating to eyes.
Skin sensitization No known effect.
Respiratory sensitization No known effect.
Germ cell mutagenicity No known effect.
Neurological Effects No known effect.
Reproductive toxicity No known effect.
Developmental toxicity No known effect.
Teratogenicity No known effect.
STOT - single exposure No known effect.
STOT - repeated exposure No known effect.
Target Organ Effects No known effect.
Aspiration hazard No known effect.
Carcinogenicity No known effect.

Component Information

Chemical Name	CAS-No	LD50 Oral	LD50 Dermal	LC50 Inhalation
Poly(oxy-1,2-ethanediyl), alpha-sulfo-omega-hydroxy-, C10-16-alkyl ethers, sodium salts	68585-34-2	>2001 mg/kg	-	-

12. ECOLOGICAL INFORMATION

Ecotoxicity

The product is not expected to be hazardous to the environment.

Persistence and degradability No information available.

Bioaccumulative potential	No information available.
Mobility	No information available.
Other adverse effects	No information available.

13. DISPOSAL CONSIDERATIONS

Waste treatment

Waste from Residues / Unused Products Disposal should be in accordance with applicable regional, national and local laws and regulations.

Contaminated packaging Disposal should be in accordance with applicable regional, national and local laws and regulations.

California Hazardous Waste Codes (non-household setting) 331

14. TRANSPORT INFORMATION

DOT Not regulated

IMDG Not regulated

IATA Not regulated

15. REGULATORY INFORMATION

U.S. Federal Regulations

SARA 313

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product does not contain any chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372

CERCLA

This material, as supplied, contains one or more substances regulated as a hazardous substance under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302):

Chemical Name	CAS-No	Hazardous Substances RQs	Extremely Hazardous Substances RQs	CERCLA/SARA 302 TPQ
Sodium hydroxide	1310-73-2	1000 lb	-	

Clean Air Act, Section 112 Hazardous Air Pollutants (HAPs) (see 40 CFR 61)

This product contains the following substance(s) which are either listed as hazardous air pollutants (HAPS) or VOC's per the Clean Air Act:

Chemical Name	CAS-No	CAA (Clean Air Act) - 1990 Hazardous Air Pollutants
Phenoxyethanol	122-99-6	X

Clean Water Act

This product contains the following substances which are regulated pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42):

Chemical Name	CAS-No	CWA - Reportable Quantities	CWA - Toxic Pollutants	CWA - Priority Pollutants	CWA - Hazardous Substances
Sodium hydroxide	1310-73-2	1000 lb	-	-	X

California Proposition 65

This product is not subject to warning labeling under California Proposition 65.

U.S. State Regulations (RTK)

Chemical Name	CAS-No	New Jersey
Ethanol	64-17-5	X

Chemical Name	CAS-No	Massachusetts
Ethanol	64-17-5	X

Chemical Name	CAS-No	Pennsylvania
Ethanol	64-17-5	X
Sodium hydroxide	1310-73-2	X
Phenoxyethanol	122-99-6	X

International Inventories

United States

All intentionally-added components of this product(s) are listed on the US TSCA Inventory.

Canada

This product is in compliance with CEPA for import by P&G.

Legend

TSCA - United States Toxic Substances Control Act Section 8(b) Inventory

CEPA - Canadian Environmental Protection Act

16. OTHER INFORMATION

Issuing Date: 05-Oct-2015

Revision Date: 05-Oct-2015

Disclaimer

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text

End of SDS



SAFETY DATA SHEET

THE DOW CHEMICAL COMPANY

Product name: DOWSIL™ 732 Multi-Purpose Sealant, White

Issue Date: 04/27/2020

Print Date: 04/30/2020

THE DOW CHEMICAL COMPANY encourages and expects you to read and understand the entire (M)SDS, as there is important information throughout the document. We expect you to follow the precautions identified in this document unless your use conditions would necessitate other appropriate methods or actions.

1. IDENTIFICATION

Product name: DOWSIL™ 732 Multi-Purpose Sealant, White

Recommended use of the chemical and restrictions on use

Identified uses: Adhesive, binding agents

COMPANY IDENTIFICATION

THE DOW CHEMICAL COMPANY
2211 H.H. DOW WAY
MIDLAND MI 48674
UNITED STATES

Customer Information Number:

800-258-2436

SDSQuestion@dow.com

EMERGENCY TELEPHONE NUMBER

24-Hour Emergency Contact: CHEMTREC +1 800-424-9300

Local Emergency Contact: 800-424-9300

2. HAZARDS IDENTIFICATION

Hazard classification

GHS classification in accordance with 29 CFR 1910.1200

Not a hazardous substance or mixture.

Label elements

Precautionary statements

Prevention

Use only outdoors or in a well-ventilated area.

Other hazards

No data available

3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical nature: Silicone elastomer

This product is a mixture.
Contains no hazardous ingredients according to GHS

4. FIRST AID MEASURES

Description of first aid measures

General advice:

If potential for exposure exists refer to Section 8 for specific personal protective equipment.

Inhalation: Move person to fresh air and keep comfortable for breathing; consult a physician.

Skin contact: Wash off with plenty of water.

Eye contact: Flush eyes thoroughly with water for several minutes. Remove contact lenses after the initial 1-2 minutes and continue flushing for several additional minutes. If effects occur, consult a physician, preferably an ophthalmologist.

Ingestion: Rinse mouth with water. No emergency medical treatment necessary.

Most important symptoms and effects, both acute and delayed:

Aside from the information found under Description of first aid measures (above) and Indication of immediate medical attention and special treatment needed (below), any additional important symptoms and effects are described in Section 11: Toxicology Information.

Indication of any immediate medical attention and special treatment needed

Notes to physician: No specific antidote. Treatment of exposure should be directed at the control of symptoms and the clinical condition of the patient. Skin contact may aggravate preexisting dermatitis.

5. FIREFIGHTING MEASURES

Extinguishing media

Suitable extinguishing media: Water spray. Alcohol-resistant foam. Carbon dioxide (CO₂).
Dry chemical.

Unsuitable extinguishing media: None known..

Special hazards arising from the substance or mixture

Hazardous combustion products: Carbon oxides. Silicon oxides.

Unusual Fire and Explosion Hazards: Exposure to combustion products may be a hazard to health..

Advice for firefighters

Fire Fighting Procedures: Use water spray to cool unopened containers.. Evacuate area..
Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations..

Use extinguishing measures that are appropriate to local circumstances and the surrounding environment. Remove undamaged containers from fire area if it is safe to do so.

Special protective equipment for firefighters: Wear self-contained breathing apparatus for firefighting if necessary.. Use personal protective equipment..

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures: Follow safe handling advice and personal protective equipment recommendations.

Environmental precautions: Discharge into the environment must be avoided. Prevent further leakage or spillage if safe to do so. Retain and dispose of contaminated wash water. Local authorities should be advised if significant spillages cannot be contained.

Methods and materials for containment and cleaning up: Wipe up or scrape up and contain for salvage or disposal. Local or national regulations may apply to releases and disposal of this material, as well as those materials and items employed in the cleanup of releases. You will need to determine which regulations are applicable. For large spills, provide dyking or other appropriate containment to keep material from spreading. If dyked material can be pumped, store recovered material in appropriate container.

See sections: 7, 8, 11, 12 and 13.

7. HANDLING AND STORAGE

Precautions for safe handling: Take care to prevent spills, waste and minimize release to the environment. Handle in accordance with good industrial hygiene and safety practice. CONTAINERS MAY BE HAZARDOUS WHEN EMPTY. Since emptied containers retain product residue follow all (M)SDS and label warnings even after container is emptied.

Use only with adequate ventilation. See Engineering measures under EXPOSURE CONTROLS/PERSONAL PROTECTION section.

Conditions for safe storage: Keep in properly labelled containers. Store in accordance with the particular national regulations.

Do not store with the following product types: Strong oxidizing agents.
Unsuitable materials for containers: None known.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

If exposure limits exist, they are listed below. If no exposure limits are displayed, then no values are applicable.

Exposure controls

Engineering controls: Use local exhaust ventilation, or other engineering controls to maintain airborne levels below exposure limit requirements or guidelines. If there are no applicable exposure limit requirements or guidelines, general ventilation should be sufficient for most operations. Local exhaust ventilation may be necessary for some operations.

Individual protection measures

Eye/face protection: Use safety glasses (with side shields).

Skin protection

Hand protection: Use gloves chemically resistant to this material when prolonged or frequently repeated contact could occur. Examples of preferred glove barrier materials include: Butyl rubber. Neoprene. Nitrile/butadiene rubber ("nitrile" or "NBR"). Ethyl vinyl alcohol laminate ("EVAL"). Polyvinyl alcohol ("PVA"). Polyvinyl chloride ("PVC" or "vinyl"). Viton. Examples of acceptable glove barrier materials include: Natural rubber ("latex"). NOTICE: The selection of a specific glove for a particular application and duration of use in a workplace should also take into account all relevant workplace factors such as, but not limited to: Other chemicals which may be handled, physical requirements (cut/puncture protection, dexterity, thermal protection), potential body reactions to glove materials, as well as the instructions/specifications provided by the glove supplier.

Other protection: Wear clean, body-covering clothing.

Respiratory protection: Respiratory protection should be worn when there is a potential to exceed the exposure limit requirements or guidelines. If there are no applicable exposure limit requirements or guidelines, wear respiratory protection when adverse effects, such as respiratory irritation or discomfort have been experienced, or where indicated by your risk assessment process. For most conditions, no respiratory protection should be needed; however, if handling at elevated temperatures without sufficient ventilation, use an approved air-purifying respirator.

The following should be effective types of air-purifying respirators: Organic vapor cartridge.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance

Physical state	paste
Color	white
Odor	acetic acid
Odor Threshold	No data available
pH	Not applicable
Melting point/range	No data available
Freezing point	No data available
Boiling point (760 mmHg)	Not applicable
Flash point	Not applicable
Evaporation Rate (Butyl Acetate = 1)	Not applicable
Flammability (solid, gas)	Not classified as a flammability hazard
Lower explosion limit	No data available
Upper explosion limit	No data available
Vapor Pressure	Not applicable
Relative Vapor Density (air = 1)	No data available
Relative Density (water = 1)	1.04
Water solubility	No data available
Partition coefficient: n-octanol/water	No data available
Auto-ignition temperature	No data available
Decomposition temperature	No data available

Dynamic Viscosity	Not applicable
Kinematic Viscosity	Not applicable
Explosive properties	Not explosive
Oxidizing properties	The substance or mixture is not classified as oxidizing.
Liquid Density	1.04 g/cm ³
Molecular weight	No data available
Particle size	No data available

NOTE: The physical data presented above are typical values and should not be construed as a specification.

10. STABILITY AND REACTIVITY

Reactivity: Not classified as a reactivity hazard.

Chemical stability: Stable under normal conditions.

Possibility of hazardous reactions: Can react with strong oxidizing agents.

Conditions to avoid: None known.

Incompatible materials: Oxidizing agents

Hazardous decomposition products:

Decomposition products can include and are not limited to: Formaldehyde.

11. TOXICOLOGICAL INFORMATION

Toxicological information appears in this section when such data is available.

Information on likely routes of exposure

Eye contact, Skin contact, Ingestion.

Acute toxicity (represents short term exposures with immediate effects - no chronic/delayed effects known unless otherwise noted)

Acute oral toxicity

Very low toxicity if swallowed. Harmful effects not anticipated from swallowing small amounts.

As product: Single dose oral LD50 has not been determined.

Based on information for component(s):
LD50, Rat, > 5,000 mg/kg Estimated.

Acute dermal toxicity

Prolonged skin contact is unlikely to result in absorption of harmful amounts.

As product: The dermal LD50 has not been determined.

Based on information for component(s):

LD50, > 2,000 mg/kg Estimated.

Acute inhalation toxicity

Brief exposure (minutes) is not likely to cause adverse effects. Vapor from heated material may cause respiratory irritation.

As product: The LC50 has not been determined.

Skin corrosion/irritation

Based on information for component(s):
Prolonged contact is essentially nonirritating to skin.
May cause drying and flaking of the skin.

Serious eye damage/eye irritation

Based on information for component(s):
May cause slight temporary eye irritation.
Corneal injury is unlikely.
May cause mild eye discomfort.

Sensitization

For skin sensitization:
Contains component(s) which did not cause allergic skin sensitization in guinea pigs.

For respiratory sensitization:
No relevant information found.

Specific Target Organ Systemic Toxicity (Single Exposure)

Evaluation of available data suggests that this material is not an STOT-SE toxicant.

Aspiration Hazard

Based on physical properties, not likely to be an aspiration hazard.

Chronic toxicity (represents longer term exposures with repeated dose resulting in chronic/delayed effects - no immediate effects known unless otherwise noted)

Specific Target Organ Systemic Toxicity (Repeated Exposure)

Based on available data for the component(s), repeated exposures are not anticipated to cause significant adverse effects.

Carcinogenicity

No relevant data found.

Teratogenicity

Contains component(s) which did not cause birth defects or any other fetal effects in lab animals.

Reproductive toxicity

Contains component(s) which did not interfere with reproduction in animal studies.

Mutagenicity

In vitro genetic toxicity studies were negative for component(s) tested. Genetic toxicity studies in animals were negative for component(s) tested.

12. ECOLOGICAL INFORMATION

Ecotoxicological information appears in this section when such data is available.

Toxicity

No data available.

Persistence and degradability

No data available.

Bioaccumulative potential

No data available.

Mobility in soil

No data available.

13. DISPOSAL CONSIDERATIONS

Disposal methods: DO NOT DUMP INTO ANY SEWERS, ON THE GROUND, OR INTO ANY BODY OF WATER. All disposal practices must be in compliance with all Federal, State/Provincial and local laws and regulations. Regulations may vary in different locations. Waste characterizations and compliance with applicable laws are the responsibility solely of the waste generator. AS YOUR SUPPLIER, WE HAVE NO CONTROL OVER THE MANAGEMENT PRACTICES OR MANUFACTURING PROCESSES OF PARTIES HANDLING OR USING THIS MATERIAL. THE INFORMATION PRESENTED HERE PERTAINS ONLY TO THE PRODUCT AS SHIPPED IN ITS INTENDED CONDITION AS DESCRIBED IN MSDS SECTION: Composition Information. FOR UNUSED & UNCONTAMINATED PRODUCT, the preferred options include sending to a licensed, permitted: Incinerator or other thermal destruction device. For additional information, refer to: Handling & Storage Information, MSDS Section 7 Stability & Reactivity Information, MSDS Section 10 Regulatory Information, MSDS Section 15

Treatment and disposal methods of used packaging: Empty containers should be recycled or otherwise disposed of by an approved waste management facility. Waste characterizations and compliance with applicable laws are the responsibility solely of the waste generator. Do not re-use containers for any purpose.

14. TRANSPORT INFORMATION

DOT

Not regulated for transport

Classification for SEA transport (IMO-IMDG):

Not regulated for transport

**Transport in bulk
according to Annex I or II
of MARPOL 73/78 and the
IBC or IGC Code**

Consult IMO regulations before transporting ocean bulk

Classification for AIR transport (IATA/ICAO):

Not regulated for transport

This information is not intended to convey all specific regulatory or operational requirements/information relating to this product. Transportation classifications may vary by container volume and may be influenced by regional or country variations in regulations. Additional transportation system information can be obtained through an authorized sales or customer service representative. It is the responsibility of the transporting organization to follow all applicable laws, regulations and rules relating to the transportation of the material.

15. REGULATORY INFORMATION

Superfund Amendments and Reauthorization Act of 1986 Title III (Emergency Planning and Community Right-to-Know Act of 1986) Sections 311 and 312
 No SARA Hazards

Superfund Amendments and Reauthorization Act of 1986 Title III (Emergency Planning and Community Right-to-Know Act of 1986) Section 313
 This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

Pennsylvania Right To Know

The following chemicals are listed because of the additional requirements of Pennsylvania law:

Components	CASRN
Polydimethylsiloxane hydroxy-terminated	70131-67-8
Silicon dioxide	7631-86-9

California Prop. 65

This product contains a chemical that is at or below California Propositions 65's "safe harbor level" as determined via a risk assessment. Therefore, the chemical is not required to be listed as a Prop 65 chemical on the SDS or label.

United States TSCA Inventory (TSCA)

All components of this product are in compliance with the inventory listing requirements of the U.S. Toxic Substances Control Act (TSCA) Chemical Substance Inventory.

16. OTHER INFORMATION

Hazard Rating System

NFPA

Health	Flammability	Instability
0	1	0

HMIS

Health	Flammability	Physical Hazard

0/	1	0
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Revision

Identification Number: 3251331 / A001 / Issue Date: 04/27/2020 / Version: 6.0

Most recent revision(s) are noted by the bold, double bars in left-hand margin throughout this document.

Full text of other abbreviations

AICS - Australian Inventory of Chemical Substances; ASTM - American Society for the Testing of Materials; bw - Body weight; CERCLA - Comprehensive Environmental Response, Compensation, and Liability Act; CMR - Carcinogen, Mutagen or Reproductive Toxicant; DIN - Standard of the German Institute for Standardisation; DOT - Department of Transportation; DSL - Domestic Substances List (Canada); ECx - Concentration associated with x% response; EHS - Extremely Hazardous Substance; ELx - Loading rate associated with x% response; EmS - Emergency Schedule; ENCS - Existing and New Chemical Substances (Japan); ErCx - Concentration associated with x% growth rate response; ERG - Emergency Response Guide; GHS - Globally Harmonized System; GLP - Good Laboratory Practice; HMIS - Hazardous Materials Identification System; IARC - International Agency for Research on Cancer; IATA - International Air Transport Association; IBC - International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk; IC50 - Half maximal inhibitory concentration; ICAO - International Civil Aviation Organization; IECSC - Inventory of Existing Chemical Substances in China; IMDG - International Maritime Dangerous Goods; IMO - International Maritime Organization; ISHL - Industrial Safety and Health Law (Japan); ISO - International Organisation for Standardization; KECI - Korea Existing Chemicals Inventory; LC50 - Lethal Concentration to 50 % of a test population; LD50 - Lethal Dose to 50% of a test population (Median Lethal Dose); MARPOL - International Convention for the Prevention of Pollution from Ships; MSHA - Mine Safety and Health Administration; n.o.s. - Not Otherwise Specified; NFPA - National Fire Protection Association; NO(A)EC - No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NOELR - No Observable Effect Loading Rate; NTP - National Toxicology Program; NZIoC - New Zealand Inventory of Chemicals; OECD - Organization for Economic Co-operation and Development; OPPTS - Office of Chemical Safety and Pollution Prevention; PBT - Persistent, Bioaccumulative and Toxic substance; PICCS - Philippines Inventory of Chemicals and Chemical Substances; (Q)SAR - (Quantitative) Structure Activity Relationship; RCRA - Resource Conservation and Recovery Act; REACH - Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals; RQ - Reportable Quantity; SADT - Self-Accelerating Decomposition Temperature; SARA - Superfund Amendments and Reauthorization Act; SDS - Safety Data Sheet; TCSI - Taiwan Chemical Substance Inventory; TSCA - Toxic Substances Control Act (United States); UN - United Nations; UNRTDG - United Nations Recommendations on the Transport of Dangerous Goods; vPvB - Very Persistent and Very Bioaccumulative

Information Source and References

This SDS is prepared by Product Regulatory Services and Hazard Communications Groups from information supplied by internal references within our company.

THE DOW CHEMICAL COMPANY urges each customer or recipient of this (M)SDS to study it carefully and consult appropriate expertise, as necessary or appropriate, to become aware of and understand the data contained in this (M)SDS and any hazards associated with the product. The information herein is provided in good faith and believed to be accurate as of the effective date shown above. However, no warranty, express or implied, is given. Regulatory requirements are subject to change and may differ between various locations. It is the buyer's/user's responsibility to ensure that his activities comply with all federal, state, provincial or local laws. The information presented here pertains only to the product as shipped. Since conditions for use of the product are not under the control of the manufacturer, it is the buyer's/user's duty to determine the conditions necessary for the

safe use of this product. Due to the proliferation of sources for information such as manufacturer-specific (M)SDSs, we are not and cannot be responsible for (M)SDSs obtained from any source other than ourselves. If you have obtained an (M)SDS from another source or if you are not sure that the (M)SDS you have is current, please contact us for the most current version.
US



1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70 71 72 73 74 75 76 77 78 79 80 81 82 83 84 85 86 87 88 89 90 91 92 93 94 95 96 97 98 99 100

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70 71 72 73 74 75 76 77 78 79 80 81 82 83 84 85 86 87 88 89 90 91 92 93 94 95 96 97 98 99 100

D 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70 71 72 73 74 75 76 77 78 79 80 81 82 83 84 85 86 87 88 89 90 91 92 93 94 95 96 97 98 99 100

Gear Oil

Petroleum Lubricant

Product Code: D3420

Universal Lubricants, A PetroChoice Company

2824 N Ohio Street

Wichita, Kansas 67219

Website: www.petrochoice.com

1-800-444-6457 Telephone

1-316-832-3627 Product Information telephone

1-800-633-8253 US, Canada, Puerto Rico, Virgin Island - Emergency telephone (PERS)

+1-801-629-0667 International / Maritime Emergency telephone (PERS)

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70 71 72 73 74 75 76 77 78 79 80 81 82 83 84 85 86 87 88 89 90 91 92 93 94 95 96 97 98 99 100

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70 71 72 73 74 75 76 77 78 79 80 81 82 83 84 85 86 87 88 89 90 91 92 93 94 95 96 97 98 99 100

While this material is not considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200), this SDS contains valuable information critical to the safe handling and proper use of this product.

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70 71 72 73 74 75 76 77 78 79 80 81 82 83 84 85 86 87 88 89 90 91 92 93 94 95 96 97 98 99 100

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70 71 72 73 74 75 76 77 78 79 80 81 82 83 84 85 86 87 88 89 90 91 92 93 94 95 96 97 98 99 100

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R **M** **R**

d

Use dry chemical, foam, carbon dioxide (CO₂) or water spray or water fog.

d

Do not direct a solid stream of water or foam into hot, burning pools of oil liquid since this may spread fire.

rd r

Carbon monoxide, carbon dioxide, aldehydes, hydrocarbons, oxides of sulfur, nitrogen, phosphorus and other oxides may be products of combustion.

r r

Wear full firefighting turn-out gear (full bunker gear), and respiratory protection (SCBA).

r r

Cool fire exposed containers with water spray and avoid spreading burning material with water used for cooling purposes.

6 **D** **R** **M** **R**

r r d r

Personal Protection, see section 8. Evacuate surrounding area. Keep unnecessary personnel from entering. Any individual not wearing protective equipment should not enter spill or contaminated area until all clean-up has been completed.

r r d r

For personal emergency procedures see section 4. For fire emergency procedures see section 5. Contain spilled oil liquid if possible without posing any risk or personal injury.

r r

Prevent spreading over a wide area. Contain spill immediately. Contact appropriate authorities of spill. Do not allow spill to enter sewer system, drains of any kind, surface water or water courses. Avoid flushing to such areas as well.

M d d r r d

Soak up or absorb with appropriate inert materials such as, sand, clay, silica gel, acid binder, universal binder, sawdust, paper fiber etc. Large spills may be picked up using vacuum pumps, shovels, buckets or other means of transfer and placed into drums or any other approved and suitable containers.

D **D** **R**

r **d**

d **r**

Store in only approved and marked containers. Keep containers closed when not in use and during transportation. Keep containers away from flame or other ignition sources.

Strong oxidizing agents, acids, halogens.

R **R** **R** **R**

Contains no substances with occupational exposure limit values.

r **r** **d** **r** **d**

5.00 mg/m³ suggested for oil mist.

R **r** **r**

If vapor mist is generated when the material is heated or handled, use approved respiratory protection. All respirators must be NIOSH certified. Fit testing may be required before use. Do not use compressed oxygen in hydrocarbon atmospheres. Adequate ventilation in accordance with good engineering practices must be provided to maintain concentrations below the specified exposure or flammable limits.

d **r**

For prolonged or repeated exposures hand protection is required. Wear chemical resistant gloves suitable for the product, contact your safety department or supplier to determine the proper hand protection.

r

Not required under normal conditions of use. If material is handled such that it could be splashed or misted into eyes, wear plastic face shield or splash resistant safety goggles or glasses with side shields.

d **d** **r**

For prolonged or repeated exposures, use impervious clothing (boots, gloves, aprons, bibs, etc.) over parts of the body subject to exposure. Contact your facility safety department or safety supplier to determine the proper protective equipment for your use.

r

Thoroughly wash contaminated areas of the body which may have been exposed with soap and water. Do not use contaminated clothing, launder clothing before reuse. Properly dispose of contaminated clothing or articles that cannot be laundered such as leather gloves, boots, etc. Wash thoroughly before handling food and beverages. Food and beverage consumption should be avoided in work areas where hydrocarbons are present.

D M R R

Clear, amber

Liquid

Lubricating oil

$\rho_{20} = 0.8790$

M No data available

d No data available

d 215°C, (420°F)

r No data available

r Not determined

r Negligible

r Negligible

d d Not determined

r Not determined

10 D R

R May react strong with oxidizing agents

Stable under normal temperatures and pressures

rd Product will not undergo hazardous polymerization

d Heat, open flames, oxidizing materials and mist

r Strong oxidizing agents, acids, halogens

rd d Carbon monoxide, carbon dioxide and other oxides may be generated as products of combustion

11 RM

r No data available

r No data available

Health: 0
 Flammability: 1
 Reactivity: 0

Health: 0
 Flammability: 1
 Physical Hazards: 0
 Personal Protection: B



Health	0
Flammability	1
Physical Hazards	0
Personal Protection	B

16 R RM

The information and recommendations contained within this document are believed by PetroChoice to be accurate and reliable as of the date prepared. The information and recommendations are offered for the user's consideration and analysis and in no way guarantee the chemical specifications for the specified product. It is solely the responsibility of the user to determine safe conditions for use of this product and to assume liability for any loss, damage or expense arising out of the product's improper use. The user should consider the information in this document in the context of how the selected product will be handled and used in conjunction with other products. It is the user's responsibility to determine that the product is suitable for the intended use.

Appropriate warnings and safe-handling procedures should be provided to all handlers and users. PetroChoice assumes no responsibility for any damage or injury resulting from abnormal use or from any failure to adhere to recommended practices within this document.

Rev. Date: 4/03/2017

SAFETY DATA SHEET



Issuing Date: 04-Mar-2016

Revision date 27-Aug-2020

Revision Number 3

1. IDENTIFICATION

Product Name	Era with Febreze Freshness Linen and Sky
Product Identifier	97298020_RET_NG
Product Type:	Finished Product - Retail
Recommended use	Laundry Care.
Restrictions on use	Use only as directed on label.
Synonyms	C-97298020-002 Era plus Febreze Freshness Linen and Sky HEC (PA00203749_RET_NG)
Details of the supplier of the safety data sheet	PROCTER & GAMBLE - Fabric and Home Care Division Ivorydale Technical Centre 5289 Spring Grove Avenue Cincinnati, Ohio 45217-1087 USA Procter & Gamble Inc. P.O. Box 355, Station A Toronto, ON M5W 1C5 1-800-331-3774
E-mail Address	pgsds.im@pg.com
Emergency Telephone	Transportation (24 HR) CHEMTREC - 1-800-424-9300 (U.S./ Canada) or 1-703-527-3887 Mexico toll free in country: 800-681-9531

2. HAZARD IDENTIFICATION

"Consumer Products", as defined by the US Consumer Product Safety Act and which are used as intended (typical consumer duration and frequency), are exempt from the OSHA Hazard Communication Standard (29 CFR 1910.1200). This SDS is being provided as a courtesy to help assist in the safe handling and proper use of the product.

This product is classified under 29CFR 1910.1200(d) and the Canadian Hazardous Products Regulation as follows:.

Hazard Category

Acute toxicity - Oral	Category 4
Eye Damage / Irritation	Category 2B
Physical hazards	Category 4
Flammable liquids	
Signal word	Warning

Hazard statements	Harmful if swallowed Causes eye irritation
--------------------------	---

Hazard pictograms



Precautionary Statements

Wash hands thoroughly after handling
 Do not eat, drink or smoke when using this product
 Keep away from heat/sparks/open flames/hot surfaces. — No smoking
 Keep container tightly closed

Precautionary Statements - Response

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing
 If eye irritation persists: Get medical advice/attention
 IF SWALLOWED:
 Rinse with plenty of water
 Drink 1 or 2 glasses of water
 Call a POISON CENTER or doctor/physician if you feel unwell
 In case of fire: Use water, CO₂, dry chemical, or foam for extinction

Precautionary Statements - Storage Store in a well-ventilated place. Keep cool

Precautionary Statements - Disposal None

3. COMPOSITION/INFORMATION ON INGREDIENTS

Ingredients are listed according to 29CFR 1910.1200 Appendix D and the Canadian Hazardous Products Regulation

Chemical name	Synonyms	Trade Secret	CAS No	Weight-%
Poly(oxy-1,2-ethanediyl), alpha-sulfo-omega-hydroxy-, C10-16-alkyl ethers, sodium salts	Poly(oxy-1,2-ethanediyl), alpha-sulfo-omega-hydroxy-, C10-16-alkyl ethers, sodium salts	No	68585-34-2	5 - 10
Benzenesulfonic acid, mono-C10-16-alkyl derivs., sodium salts	Benzenesulfonic acid, mono-C10-16-alkyl derivs., sodium salts	No	68081-81-2	1 - 5
Disodium tetraborate pentahydrate	Boron sodium oxide (B ₄ Na ₂ O ₇), pentahydrate	No	12179-04-3	0.5 - 1.5
Glycine, N,N-bis[2-[bis(carboxymethyl)amino]ethyl]-, sodium salt (1:5)	Glycine, N,N-bis[2-[bis(carboxymethyl)amino]ethyl]-, sodium salt (1:5)	No	140-01-2	0.5 - 1.5

Additional information

Actual substance concentrations fall within the ranges stated. Maximum values do not necessarily represent the values present in the formula.

4. FIRST AID MEASURES

Description of first aid measures

Eye contact

Rinse with plenty of water. Get medical attention immediately if irritation persists. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention.

Skin contact	Rinse with plenty of water. Call a physician if irritation develops and persists.
Ingestion	Rinse mouth. Drink 1 or 2 glasses of water. Do NOT induce vomiting. Get medical attention immediately if symptoms occur. IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician.
Inhalation	Move to fresh air. If symptoms persist, call a physician.
Most important symptoms/effects, acute and delayed	May cause eye irritation

Indication of any immediate medical attention and special treatment needed

Notes to Physician Treat symptomatically.

5. FIRE-FIGHTING MEASURES

Flammable properties	Flammable liquid and vapor
Suitable extinguishing media	In case of fire: Use water, CO ₂ , dry chemical, or foam for extinction. Dry chemical. Alcohol resistant foam. Carbon dioxide (CO ₂).
Unsuitable Extinguishing Media	Do not use a solid water stream as it may scatter and spread fire.
Special hazard	Combustible liquid. Fumes may catch fire.
Special protective equipment for fire-fighters	As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.
Specific hazards arising from the chemical	None.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

Personal precautions	Use personal protective equipment as required. Do not get in eyes, on skin, or on clothing.
Advice for emergency responders	Use personal protective equipment as required.
Environmental precautions	Do not discharge product into natural waters without pre-treatment or adequate dilution

Methods and material for containment and cleaning up

Methods for containment	Absorb with earth, sand or other non-combustible material and transfer to containers for later disposal. Prevent further leakage or spillage if safe to do so.
Methods for cleaning up	Contain spillage, and then collect with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and place in container for disposal according to local / national regulations (see section 13).

7. HANDLING AND STORAGE

Precautions for safe handling

Advice on safe handling Keep away from open flames, hot surfaces and sources of ignition. Use personal protective equipment as required. Keep container closed when not in use. Never return spills in original containers for re-use. Keep out of the reach of children.

Conditions for safe storage, including any incompatibilities

Technical measures/Storage conditions	Keep away from open flames, hot surfaces and sources of ignition. Store away from other materials.
Storage Conditions	Store in a cool/low-temperature, well-ventilated, dry place away from heat and ignition sources. Keep containers tightly closed in a dry, cool and well-ventilated place.
Incompatible products	None known.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

Exposure Guidelines No exposure limits noted for ingredient(s).

No relevant exposure guidelines for other ingredients

Appropriate engineering controls

Engineering Measures

Distribution, Workplace and Household Settings:
Ensure adequate ventilation

Product Manufacturing Plant (needed at Product-Producing Plant ONLY):
Where reasonably practicable this should be achieved by the use of local exhaust ventilation and good general extraction

Manufacturing Sites:
Not relevant

Personal Protective Equipment

Eye Protection

Distribution, Workplace and Household Settings:
No special protective equipment required

Product Manufacturing Plant (needed at Product-Producing Plant ONLY):
Use appropriate eye protection

Manufacturing Sites:
Wear safety glasses with side shields (or goggles)
No special protective equipment required

Hand Protection

Distribution, Workplace and Household Settings:
No special protective equipment required

Product Manufacturing Plant (needed at Product-Producing Plant ONLY):
Protective gloves

Skin and Body Protection

Distribution, Workplace and Household Settings:
No special protective equipment required

Product Manufacturing Plant (needed at Product-Producing Plant ONLY):
Wear suitable protective clothing

Respiratory Protection

Distribution, Workplace and Household Settings:
No special protective equipment required

Inhalation No known effect.
Skin contact No known effect.
Ingestion May be harmful if swallowed. Harmful if swallowed.
Eye contact Irritating to eyes. Avoid contact with eyes.

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Acute toxicity May be harmful if swallowed.
Skin corrosion/irritation No known effect.
Serious eye damage/eye irritation Irritating to eyes.
Skin sensitization No known effect.
Respiratory sensitization No known effect.
Germ cell mutagenicity No known effect.
Neurological Effects No known effect.
Reproductive toxicity No known effect.
Developmental toxicity No known effect.
Teratogenicity No known effect.
STOT - single exposure No known effect.
STOT - repeated exposure No known effect.
Aspiration hazard No known effect.
Carcinogenicity No known effect.

Component Information

Chemical name	CAS No	Oral LD50	Dermal LD50	Inhalation LC50
Poly(oxy-1,2-ethanediyl), alpha-sulfo-omega-hydroxy-, C10-16-alkyl ethers, sodium salts	68585-34-2	>2001 mg/kg	-	-
Glycine, N,N-bis[2-[bis(carboxymethyl)amino]ethyl]-, sodium salt (1:5)	140-01-2	> 5000 mg/kg bw (OECD 401)	> 2000 mg/kg bw (OECD 402)	-

12. ECOLOGICAL INFORMATION

Ecotoxicity

The product is not expected to be hazardous to the environment.

Persistence and degradability No information available.
Bioaccumulative potential No information available.
Mobility No information available.
Other adverse effects No information available.

13. DISPOSAL CONSIDERATIONS

Waste treatment methods

Waste from Residues/Unused Products Disposal should be in accordance with applicable regional, national and local laws and regulations.
Contaminated packaging Disposal should be in accordance with applicable regional, national and local laws and regulations.
California Hazardous Waste Codes (non-household setting) 331

14. TRANSPORT INFORMATION

DOT Not regulated

IMDG Not regulated

IATA Not regulated

15. REGULATORY INFORMATION

U.S. FEDERAL REGULATIONS

CERCLA

This material, as supplied, does not contain any substances regulated as hazardous substances under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302) or the Superfund Amendments and Reauthorization Act (SARA) (40 CFR 355). There may be specific reporting requirements at the local, regional, or state level pertaining to releases of this material.

Clean Air Act, Section 112 Hazardous Air Pollutants (HAPs) (see 40 CFR 61)

This product does not contain any substances regulated as hazardous air pollutants (HAPS) under Section 112 of the Clean Air Act Amendments of 1990.

Clean Water Act

This product does not contain any substances regulated as pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42).

California Proposition 65

This product is not subject to warning labeling under California Proposition 65.

U.S. State Regulations (RTK)

.

Chemical name	CAS No	Massachusetts
Disodium tetraborate pentahydrate	12179-04-3	X

Chemical name	CAS No	Pennsylvania
Ethanol	64-17-5	X
Propylene glycol	57-55-6	X
Monoethanolamine	141-43-5	X

International Inventories

United States

All intentionally-added components of this product(s) are listed on the US TSCA Inventory

Canada

This product is in compliance with CEPA for import by P&G

Legend

United States Toxic Substances Control Act Section 8(b) Inventory (TSCA)

CEPA - Canadian Environmental Protection Act

16. OTHER INFORMATION

HMIS

NFPA

Issuing Date: 04-Mar-2016

Revision date 27-Aug-2020

Disclaimer.

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text

End of Safety Data Sheet

Zep Formula 50

Version 1.1

Revision Date 04/20/2015

Print Date 07/06/2016

SECTION 1. PRODUCT AND COMPANY IDENTIFICATION

Material name : Zep Formula 50
 Material number : 000000000000085999

Manufacturer or supplier's details

Company : Zep Inc.
 Address : 1310 Seaboard Industrial Blvd., NW
 Atlanta, GA 30318
 Telephone : 404-352-1680

Emergency telephone numbers

For SDS Information : Compliance Services 1-877-428-9937
For a Medical Emergency : 877-541-2016 Toll Free - All Calls Recorded
For a Transportation Emergency : CHEMTREC: 800-424-9300 - All Calls Recorded.
 In the District of Columbia 202-483-7616

SECTION 2. HAZARDS IDENTIFICATION**Emergency Overview**

Appearance	liquid
Colour	clear, dark blue
Odour	mild

GHS Classification

Skin corrosion : Category 1A
 Serious eye damage : Category 1

GHS Label element

Hazard pictograms :



Signal word : Danger

Hazard statements : H314 Causes severe skin burns and eye damage.

Precautionary statements : **Prevention:**
 P264 Wash skin thoroughly after handling.
 P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.
Response:
 P301 + P330 + P331 IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.
 P303 + P361 + P353 IF ON SKIN (or hair): Remove/ Take off immediately all contaminated clothing. Rinse skin with water/ shower.

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P304 + P340 + P310 IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Immediately call a POISON CENTER or doctor/ physician.
 P305 + P351 + P338 + P310 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER or doctor/ physician.
 P363 Wash contaminated clothing before reuse.

Storage:

P405 Store locked up.

Disposal:

P501 Dispose of contents/container in accordance with local regulation.

Potential Health Effects**Carcinogenicity:****IARC**

No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

ACGIH

Confirmed animal carcinogen with unknown relevance to humans

2-butoxyethanol

111-76-2

OSHA

No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.

NTP

No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance / Mixture : Mixture

Hazardous components

Chemical Name	CAS-No.	Concentration [%]
2-butoxyethanol	111-76-2	>= 1 - < 5
Sodium metasilicate (disodium salt)	6834-92-0	>= 1 - < 5
sodium dodecylbenzenesulfonate	25155-30-0	>= 1 - < 5
tetrasodium ethylenediaminetetraacetate	64-02-8	>= 1 - < 5
Fatty acids, tall-oil, sodium salts	61790-45-2	>= 1 - < 5

SECTION 4. FIRST AID MEASURES

General advice : Move out of dangerous area.
 Consult a physician.
 Show this safety data sheet to the doctor in attendance.
 Do not leave the victim unattended.

If inhaled : If unconscious place in recovery position and seek medical advice.
 If symptoms persist, call a physician.

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- In case of skin contact : Immediate medical treatment is necessary as untreated wounds from corrosion of the skin heal slowly and with difficulty.
Wash off immediately with plenty of water for at least 15 minutes.
If on clothes, remove clothes.
- In case of eye contact : Small amounts splashed into eyes can cause irreversible tissue damage and blindness.
Continue rinsing eyes during transport to hospital.
Remove contact lenses.
Protect unharmed eye.
Keep eye wide open while rinsing.
If eye irritation persists, consult a specialist.
Rinse immediately with plenty of water for at least 15 minutes.
- If swallowed : Clean mouth with water and drink afterwards plenty of water.
Keep respiratory tract clear.
Never give anything by mouth to an unconscious person.
If symptoms persist, call a physician.
DO NOT induce vomiting unless directed to do so by a physician or poison control center.
Take victim immediately to hospital.

SECTION 5. FIREFIGHTING MEASURES

- Suitable extinguishing media : Dry chemical
Water
Foam
Carbon dioxide (CO₂)
- Unsuitable extinguishing media : High volume water jet
- Specific hazards during firefighting : Do not allow run-off from fire fighting to enter drains or water courses.
- Hazardous combustion products : Carbon dioxide (CO₂)
Carbon monoxide
Smoke
Nitrogen oxides (NO_x)
- Specific extinguishing methods :

Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
- Further information : Collect contaminated fire extinguishing water separately. This must not be discharged into drains.
Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations.
- Special protective equipment for firefighters : Wear self-contained breathing apparatus for firefighting if necessary.

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SECTION 6. ACCIDENTAL RELEASE MEASURES

- Personal precautions, protective equipment and emergency procedures : Use personal protective equipment.
- Environmental precautions : Prevent product from entering drains.
Prevent further leakage or spillage if safe to do so.
If the product contaminates rivers and lakes or drains inform respective authorities.
- Methods and materials for containment and cleaning up : Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust).
Keep in suitable, closed containers for disposal.

SECTION 7. HANDLING AND STORAGE

- Advice on safe handling : Do not breathe vapours/dust.
Avoid contact with skin and eyes.
For personal protection see section 8.
Smoking, eating and drinking should be prohibited in the application area.
To avoid spills during handling keep bottle on a metal tray.
Dispose of rinse water in accordance with local and national regulations.
- Conditions for safe storage : Keep container tightly closed in a dry and well-ventilated place.
Observe label precautions.
Electrical installations / working materials must comply with the technological safety standards.
- Materials to avoid : Oxidizing agents
Do not freeze.
Do not store near acids.

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION**Components with workplace control parameters**

Components	CAS-No.	Value type (Form of exposure)	Control parameters / Permissible concentration	Basis
2-butoxyethanol	111-76-2	TWA	20 ppm	ACGIH
		TWA	5 ppm 24 mg/m ³	NIOSH REL
		TWA	50 ppm 240 mg/m ³	OSHA Z-1
		TWA	25 ppm 120 mg/m ³	OSHA P0

Biological occupational exposure limits

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Component	CAS-No.	Control parameters	Biological specimen	Sampling time	Permissible concentration	Basis
2-BUTOXYETHANOL	111-76-2	Butoxyacetic acid (BAA)	Urine	End of shift (As soon as possible after exposure ceases)	200 mg/g	ACGIH BEI
Remarks: Creatinine						

Personal protective equipment

Respiratory protection : Use respiratory protection unless adequate local exhaust ventilation is provided or exposure assessment demonstrates that exposures are within recommended exposure guidelines.

Hand protection
Remarks : The suitability for a specific workplace should be discussed with the producers of the protective gloves.

Eye protection : Ensure that eyewash stations and safety showers are close to the workstation location.
Tightly fitting safety goggles

Skin and body protection : impervious clothing
Choose body protection according to the amount and concentration of the dangerous substance at the work place.

Hygiene measures : When using do not eat or drink.
When using do not smoke.
Wash hands before breaks and at the end of workday.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance : liquid

Colour : clear, dark blue

Odour : mild

Odour Threshold : no data available

pH : > 13

Melting point/freezing point : no data available

Boiling point : 104.44 °C

Flash point :
does not flash

Evaporation rate : 1

Upper explosion limit : no data available

Lower explosion limit : no data available

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Vapour pressure	: not determined
Relative vapour density	: no data available
Density	: 1.058 g/cm ³
Solubility(ies)	
Water solubility	: soluble
Partition coefficient: n-octanol/water	: no data available
Auto-ignition temperature	: not determined
Thermal decomposition	: no data available
Viscosity	
Viscosity, kinematic	: 5.2 mm ² /s (20 °C)

SECTION 10. STABILITY AND REACTIVITY

Reactivity	: Stable
Chemical stability	: Stable under normal conditions.
Possibility of hazardous reactions	: No decomposition if stored and applied as directed.
Conditions to avoid	: Extremes of temperature and direct sunlight.
Incompatible materials	: Acids Oxidizing agents
Hazardous decomposition products	: Carbon oxides Nitrogen oxides (NO _x)

SECTION 11. TOXICOLOGICAL INFORMATION**Acute toxicity****Product:**

Acute oral toxicity	: Acute toxicity estimate : > 5,000 mg/kg Method: Calculation method
Acute inhalation toxicity	: Acute toxicity estimate : > 40 mg/l Exposure time: 4 h Test atmosphere: vapour Method: Calculation method
Acute dermal toxicity	: Acute toxicity estimate : > 5,000 mg/kg Method: Calculation method

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Components:**Sodium metasilicate (disodium salt):**

Acute oral toxicity : LD50 rat: 1,153 mg/kg

sodium dodecylbenzenesulfonate:

Acute oral toxicity : LD50 Oral rat: 438 mg/kg

Skin corrosion/irritation**Product:**

Remarks: Extremely corrosive and destructive to tissue.

Serious eye damage/eye irritation**Product:**

Remarks: May cause irreversible eye damage.

Respiratory or skin sensitisation

no data available

Germ cell mutagenicity

no data available

Carcinogenicity

no data available

Reproductive toxicity

no data available

2-butoxyethanol:**Sodium metasilicate (disodium salt):****sodium dodecylbenzenesulfonate:****tetrasodium ethylenediaminetetraacetate:****Fatty acids, tall-oil, sodium salts:****STOT - single exposure**

no data available

STOT - repeated exposure

no data available

Aspiration toxicity

no data available

Further information**Product:**

Remarks: no data available

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SECTION 12. ECOLOGICAL INFORMATION

Ecotoxicity

no data available

Persistence and degradability

no data available

Bioaccumulative potential

Product:

Partition coefficient: n- octanol/water : Remarks: no data available

Mobility in soil

no data available

Other adverse effects

no data available

Product:

Regulation 40 CFR Protection of Environment; Part 82 Protection of Stratospheric Ozone - CAA Section 602 Class I Substances

Remarks This product neither contains, nor was manufactured with a Class I or Class II ODS as defined by the U.S. Clean Air Act Section 602 (40 CFR 82, Subpt. A, App.A + B).

Additional ecological information : no data available

SECTION 13. DISPOSAL CONSIDERATIONS

Disposal methods

Waste from residues : Do not dispose of waste into sewer. Do not contaminate ponds, waterways or ditches with chemical or used container.

Contaminated packaging : Empty remaining contents. Dispose of as unused product. Do not re-use empty containers.

SECTION 14. TRANSPORT INFORMATION

Transportation Regulation: 49 CFR (USA): NOT REGULATED AS DANGEROUS GOODS OR HAZARDOUS MATERIAL
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Transportation Regulation: IMDG (Vessel):
NOT REGULATED AS DANGEROUS GOODS OR HAZARDOUS MATERIAL

Transportation Regulation: IATA (Cargo Air):
NOT REGULATED AS DANGEROUS GOODS OR HAZARDOUS MATERIAL

Transportation Regulation: IATA (Passenger Air):
NOT REGULATED AS DANGEROUS GOODS OR HAZARDOUS MATERIAL

Transportation Regulation: TDG (Canada):
NOT REGULATED AS DANGEROUS GOODS OR HAZARDOUS MATERIAL

SECTION 15. REGULATORY INFORMATION

EPCRA - Emergency Planning and Community Right-to-Know Act

CERCLA Reportable Quantity

Components	CAS-No.	Component RQ (lbs)	Calculated product RQ (lbs)
sodium dodecylbenzenesulfonate	25155-30-0	1000	*

*: Calculated RQ exceeds reasonably attainable upper limit.

SARA 304 Extremely Hazardous Substances Reportable Quantity

This material does not contain any components with a section 304 EHS RQ.

SARA 311/312 Hazards : Acute Health Hazard

SARA 302 : SARA 302: No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.

SARA 313 : SARA 313: This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

California Prop 65 This product does not contain any chemicals known to State of California to cause cancer, birth defects, or any other reproductive harm.

The components of this product are reported in the following inventories:

TSCA	On TSCA Inventory
DSL	All components of this product are on the Canadian DSL.
AICS	On the inventory, or in compliance with the inventory
NZIoC	Not in compliance with the inventory
PICCS	On the inventory, or in compliance with the inventory

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IECSC On the inventory, or in compliance with the inventory

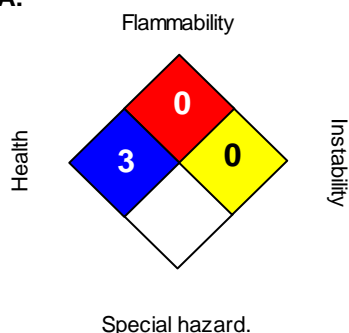
Inventory Acronym and Validity Area Legend:

AICS (Australia), DSL (Canada), IECSC (China), REACH (European Union), ENCS (Japan), ISHL (Japan), KECI (Korea), NZIoC (New Zealand), PICCS (Philippines), TSCA (USA)

SECTION 16. OTHER INFORMATION

Further information

NFPA:



HMIS III:

HEALTH	3
FLAMMABILITY	0
PHYSICAL HAZARD	0

0 = not significant, 1 = Slight,
2 = Moderate, 3 = High
4 = Extreme, * = Chronic

OSHA GHS Label Information:

Hazard pictograms :



Signal word :

Danger:

Hazard statements :

Causes severe skin burns and eye damage.

Precautionary statements :

Prevention: Wash skin thoroughly after handling. Wear protective gloves/ protective clothing/ eye protection/ face protection.

Response: IF SWALLOWED: Rinse mouth. Do NOT induce vomiting. IF ON SKIN (or hair): Remove/ Take off immediately all contaminated clothing. Rinse skin with water/ shower. IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Immediately call a POISON CENTER or doctor/ physician. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER or doctor/ physician. Wash contaminated clothing before reuse.

Storage: Store locked up.

Disposal: Dispose of contents/container in accordance with local regulation.

We believe the statements, technical information and recommendations contained herein are reliable, but they are given without warranty or guarantee of any kind. The information in this document applies to this specific material as supplied. It may not be valid for this material if it is used in combination with any other materials. Users should make their own investigations to determine the suitability and applicability of the information for their particular purposes. This SDS has been prepared by the Compliance Services organization supporting this manufacturer, supplier or distributor.

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Zep Inc. markets products under well recognized and established brand names such as Zep®, Zep Commercial®, Zep Professional®, Enforcer®, National Chemical™, Selig™, Misty®, Next Dimension™, Petro®, i-Chem®, TimeMist®, TimeWick™, MicrobeMax®, Country Vet®, Konk®, Original Bike Spirits®, Blue Coral®, Black Magic®, Rain-X®, Niagara National™, FC Forward Chemicals®, Rexodan®, Mykal™, and a number of private labeled brands.

SAFETY DATA SHEET

1. Product and Company Identification

Product Name: Free All

Product Code: RE 12, RE01, RE06 Product Type: Aerosol

Product Use: Penetrant

Manufacturer: Federal Process Corp

Revision Date: 03/23/2018

Address: 4520 Richmond Road

Cleveland, Ohio 44128

Phone: 1-800-846-7325

Emergency Phone Number: Call Chemtrec at 1-800-424-9300

NOTE: The information contained herein is accurate to the best of our knowledge. We do not suggest or guarantee that any hazards listed herein are the only ones which exist. We provide this information as guidance for providing personal protection to your employees. The user has the sole responsibility to determine the suitability of the materials for any use and the manner of use contemplated. The user must meet all applicable safety and health standards. We provide this information as guidance for providing personal protection to your employees.

2. Hazards Identification

Classification of Substance or mixture

Aerosols	Category 1
Aspiration Hazard	Category 1
Acute Toxicity (inhalation)	Category 4
Skin irritation	Category 2
Eye Damage/irritation	Category 2A
Specific target organ toxicity Single exposure	Category 3

GHS Label Elements

Pictograms



Signal Word: Danger:

Hazard Statements:

H222 Extremely flammable aerosol

H229 Pressurized container: may burst if heated
H304 May be fatal if swallowed and enters airways
H315 Causes skin irritation
H332 Harmful if inhaled
H319 Causes serious eye irritation
H335 May cause respiratory irritation

Precautionary Statements:

Prevention

P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P211 Do not spray on an open flame or other ignition source.
P251 Do not pierce or burn
P264 Wash hands thoroughly after handling
P280 Wear protective gloves/eye protection / face protection
P261 Avoid breathing dust/fume/gas/mist/vapors/spray
P271 Use only outdoors or in a well ventilated area
P262 Wash hands thoroughly after handling

Response:

P301+P310 If Swallowed: Immediately call a poison center or doctor
P302+P352 If on skin: Wash with plenty of soap and water
P304+P340 If inhaled: Remove person to fresh air and keep comfortable for breathing.
P312 Call poison center/doctor/ if you feel unwell.
P332+P313 If skin irritation occurs: Get medical advice/attention
P305+P351+
P338 If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P331 Do not induce vomiting
P337 If eye irritation persists: Get medical advice/attention.
P362+P364 Take off contaminated clothing and wash it before reuse.
P405 Store locked up
P410+P412 Protect from sunlight. Don not expose to temperatures exceeding 50°C/122°F
P501 Dispose of contents/container in accordance with local/regional regulations

3. Composition / Information on Ingredients

Ingredients	CAS #	Percent
Carbon Dioxide	124-38-9	.1-10 %
Distillates, petroleum, hydrotreated light	64742-47-8	5-15%
Petroleum Oil	64742-52-5	25-35%
Oleic Acid	112-80-1	25-35%
Methyl Isobutyl Ketone	108-10-1	25-35%

4. First Aid Measures

Eye Contact:

Flush with warm water for 15 minutes. Seek medical attention.

Skin Contact:

Wash with soap and water. Remove any contaminated clothing and launder before reusing. If irritation persists, seek medical attention.

Inhalation:

Remove exposed individual to fresh air, protecting yourself. Restore breathing if necessary. Contact a physician.

Ingestion:

Seek medical attention. If individual is drowsy or unconscious, do not give anything by mouth; place individual on the left side with the head down. Contact a physician, medical facility, or poison control center for advice about whether to induce vomiting. If possible, do not leave individual unattended.

5. Fire Fighting Measures

Flash Point: Flash point of liquid portion 104°F

Flammable limits liquid portion @ 77 deg:

Upper: 5.6.

Lower: 0.7

Auto-ignition temperature of liquid portion 689F

Extinguishing Media:

Dry chemical, carbon dioxide, halon, or foam is recommended. Water spray may be used to cool containers or structures. Halon may decompose into toxic materials and carbon dioxide will displace oxygen, take proper precautions when using these materials.

Unusual Fire & Explosion Hazards:

This material may be ignited by extreme heat, sparks, flames or other ignition sources (static electricity). Vapors are heavier than air and will collect in low areas (sewers) or travel considerable distances. If containers are not cooled in a fire, they may rupture and ignite.

Special Fire Fighting Procedures:

At elevated temperatures (over 130F) aerosol container may burst, vent or rupture; use equipment or shielding to protect personnel. Cooling exposed containers with streams of water may be helpful. Emergency responders should wear self-contained breathing apparatus. Wear other protective gear as conditions warrant. Keep unauthorized people out and try to contain spills or leaks if it can be done safely. Material will float on water, avoid spreading the fire.

6. Accidental Release Measures

Spill or Leak Instructions

Contain spill with dikes of soil or nonflammable absorbent to minimize contaminated area. Avoid run-off into storm sewers and ditches leading to waterways. If required, notify state and local authorities. Place leaking containers in well-ventilated area. Clean up small spills by using a nonflammable absorbent or flushing sparingly with water. Contain larger spills with nonflammable diking or absorbent. Clean up by vacuuming or sweeping.

Keep unnecessary people away; isolate hazard area and deny entry. Stay upwind; keep out of low areas. Assess the spill situation, as the spill may not evolve large amounts of hazardous airborne contaminants in many outdoor spill situations. It may be advisable in some cases to simply monitor the situation until spilled product is removed.

7. Handling and Storage

Handling:

Store below 120°F in cool, dry area, out of direct sunlight and away from strong oxidizers. Do not puncture or burst. Use in accordance with good work place practices. Use with adequate ventilation. Keep containers closed when not in use. Always open containers slowly to allow any excess pressure to vent. Avoid breathing vapor. Avoid contact with eyes, skin or clothing. Wash thoroughly with soap and water after handling. Decontaminate soiled clothing thoroughly before re-use. Destroy contaminated leather clothing.

Empty containers may contain residues from the product. Treat empty containers with the same precautions as the material last contained. Do not cut, weld or apply heat to empty containers Do not incinerate

Storage:

Store in a cool, dry area, away form heat or direct sunlight. Keep containers closed when not in use. Do not store with incompatible materials

8. Exposure Controls / Personal Protection

Protective Equipment:

Use synthetic gloves if necessary to prevent excessive skin contact. Do not wear contacts and always use ANSI approved safety glasses or splash shield.

Engineering Controls:

General or dilution ventilation is frequently sufficient as the sole means of controlling employee exposure. Local ventilation is usually preferred. Use a NIOSH approved respirator if ventilation is not adequate to maintain exposures below TLV levels.

Respiratory Protection:

Use adequate ventilation to maintain exposure limits. If the exposure limits of the products or any of its components is exceeded, an approved organic vapor mask should be used (consult your safety equipment supplier). Above exposure levels an approved self-contained breathing apparatus or airline respirator with full face-piece is required

Other Suggested Equipment:

Eye wash station and emergency showers should be available. Spill containment equipment should be available.

Discretion Advised:

We. take no responsibility for determining what measures are required for personal protection in any specific application. The general information should be used with discretion.

Exposure guidelines:

Ingredients	CAS #	Percent	Exposure Limits
Carbon Dioxide	124-38-9	.1-10 %	OSHA (PEL) 5000 ppm ACGIH TLV 5000 ppm
Distillates, petroleum, hydrotreated light	64742-47-8	5-15%	Supplier (TWA) 100 ppm
Petroleum Oil	64742-52-5	25-35%	TVL Oil Mist 5mg/m3

Oleic Acid	112-80-1	25-35 %	None established
Methyl Isobutyl Ketone	108-10-1	25-35 %	OSHA (TWA) 50 ppm ACGIH (TLV) 50 ppm

9. Physical and Chemical Properties

Boiling Point: NA
Vapor Density: >1(Air=1)
Odor/Appearance: Clear mist as dispensed from aerosol can.
Evaporation Rate: Ether = 1 Slower

Specific Gravity: <1
Water Solubility: Negligible

10. Stability and Reactivity

Stability: Stable
Conditions to Avoid: Heat, spark, and open flame
Incompatibility: Strong-Oxidizing Agents
Hazardous Decomposition: Combustion will produce Carbon Monoxide, Carbon Dioxide and hydrocarbons..
Hazardous Polymerization: Will not occur

11. Toxicological Information

Component Toxicological Information:

Oleic acid

Oral Rat LD50: 74,000 mg/kg
IrritationRabbit 500 mg open mild

Methyl Isobutyl Ketone

Oral Rat LD50 2080 mg/kg
Inhalation Rat LC50 2000-4000 ppm 4h
Acute dermal toxicity Rabbit LD50 > 10ml/kg
Skin irritation rabbit Mild Skin Irritation
Eye Rabbit Moderate eye irritation

Distillates, petroleum, hydrotreated light

Acute Oral LD50 Rat >5,000 mg/kg
Acute Inhalation LC50 Rat (4 hour) >6.8 mg/l
Acute dermal LD50 rabbit: 2,000 – 4,000 mg/kg

12. Ecological Information

The information given is based on data available for the material, the components of the material, and similar materials.

ECOTOXICITY

Material -- Not expected to be harmful to aquatic organisms.
Material -- Not expected to demonstrate chronic toxicity to aquatic organisms.

PERSISTENCE AND DEGRADABILITY

Biodegradation: Material -- Expected to be readily biodegradable.
Hydrolysis: Material -- Transformation due to hydrolysis not expected to be significant.
Photolysis: Material -- Transformation due to photolysis not expected to be significant.
Atmospheric Oxidation: Material -- Expected to degrade rapidly in air

13. Disposal Considerations

Do not puncture or burn containers. Give empty, leaking, or full containers to disposal service equipped to handle and dispose of aerosol (pressurized) containers. Dispose of spilled material in accordance with state and local regulations for waste that is non-hazardous by Federal definition. Note that this information applies to the material as manufactured; processing, use, or contamination may make this information inappropriate, inaccurate, or incomplete.

Note that this handling and disposal information may also apply to empty containers, liners and rinsate. State or local regulations or restrictions are complex and may differ from federal regulations. This information is intended as an aid to proper handling and disposal; the final responsibility for handling and disposal is with the owner of the waste. See Section 9 - Physical and Chemical Properties.

14. Transport Information

DOT
Consumer Commodity ORM-D

AIR (IATA)
ID8000 Consumer Commodity

Vessel
Aerosol (Limited Quantity), Class 2.1, UN1950, ERG 126

15. Regulatory Information

Environmental Regulations

Clean Water Act/Oil Pollutions Act:

SARA 302/304:

None

SARA 311/312:

Immediate (x) Delayed () Fire (x) Reactive () Sudden Release of Pressure (x)

Section 313

Toxic chemical list:

Methyl Isobutyl Ketone

All the chemicals used in this product are TSCA listed.
Check with your local regulators to be sure all local regulations are met.

16. Other Information

Hazard ratings This information is intended solely for the use of individuals trained in the NFPA and/or HMIS systems.

Level 3 Aerosol

HMIS: Health: 2 Flammability: 3 Reactivity: 0

RATING: 4-EXTREME 3-HIGH 2-MODERATE 1-SLIGHT 0-INSIGNIFICANT

Note:

For industrial use only. The information contained herein is accurate to the best of our knowledge. We do not suggest or guarantee that any hazards listed herein are the only ones which exist. We make no warranty of any kind, express or implied, concerning the safe use of this material in your process or in combination with other substances. Effects can be aggravated by other materials and/or this material may aggravate or add to the effects of other materials. This material may be released from gas, liquid, or solid materials made directly or indirectly from it. User has the sole responsibility to determine the suitability of the materials for any use and the manner of use contemplated. User must meet all applicable safety and health standards. Possession of an SDS does not indicate that the possessor of the SDS was a purchaser or user of the subject product.



SAFETY DATA SHEET

1. Identification

Product identifier	Gasket Remover
Other means of identification	
Product code	03017
Recommended use	Gasket remover
Recommended restrictions	None known.
Manufacturer/Importer/Supplier/Distributor information	
Manufactured or sold by:	
Company name	CRC Industries, Inc.
Address	885 Louis Dr. Warminster, PA 18974 US
Telephone	
General Information	215-674-4300
Technical Assistance	800-521-3168
Customer Service	800-272-4620
24-Hour Emergency (CHEMTREC)	800-424-9300 (US) 703-527-3887 (International)
Website	www.crcindustries.com

2. Hazard(s) identification

Physical hazards	Flammable aerosols	Category 1
	Gases under pressure	Liquefied gas
Health hazards	Skin corrosion/irritation	Category 2
	Serious eye damage/eye irritation	Category 2
	Carcinogenicity	Category 2
	Reproductive toxicity	Category 2
	Specific target organ toxicity, single exposure	Category 3 respiratory tract irritation
	Specific target organ toxicity, single exposure	Category 3 narcotic effects
	Aspiration hazard	Category 1
Environmental hazards	Hazardous to the aquatic environment, acute hazard	Category 3
OSHA defined hazards	Not classified.	
Label elements		



Signal word	Danger
Hazard statement	Extremely flammable aerosol. Contains gas under pressure; may explode if heated. May be fatal if swallowed and enters airways. Causes skin irritation. Causes serious eye irritation. May cause respiratory irritation. May cause drowsiness or dizziness. Suspected of causing cancer. Suspected of damaging fertility or the unborn child. Harmful to aquatic life.

Precautionary statement

Prevention

Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Keep away from heat/sparks/open flames/hot surfaces. - No smoking. Do not spray on an open flame or other ignition source. Do not apply while equipment is energized. Pressurized container: Do not pierce or burn, even after use. Extinguish all flames, pilot lights and heaters. Vapors will accumulate readily and may ignite. Use only with adequate ventilation; maintain ventilation during use and until all vapors are gone. Open doors and windows or use other means to ensure a fresh air supply during use and while product is drying. If you experience any symptoms listed on this label, increase ventilation or leave the area. Avoid breathing mist or vapor. Avoid breathing gas. Wash thoroughly after handling. Wear protective gloves/protective clothing/eye protection/face protection. Avoid release to the environment.

Response

If swallowed: Immediately call a poison center/doctor. Do NOT induce vomiting. If on skin: Wash with plenty of water. If skin irritation occurs: Get medical attention. Take off contaminated clothing and wash before reuse. If inhaled: Remove person to fresh air and keep comfortable for breathing. Call a poison center/doctor if you feel unwell. If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical attention. If exposed or concerned: Get medical attention.

Storage

Store in a well-ventilated place. Store locked up. Protect from sunlight. Do not expose to temperatures exceeding 50°C/122°F. Exposure to high temperature may cause can to burst.

Disposal

Dispose of contents/container in accordance with local/regional/national regulations.

Hazard(s) not otherwise classified (HNOC)

Static accumulating flammable liquid can become electrostatically charged even in bonded and grounded equipment. Sparks may ignite liquid and vapor. May cause flash fire or explosion.

3. Composition/information on ingredients

Mixtures

Chemical name	Common name and synonyms	CAS number	%
Acetone		67-64-1	50 - 60
Liquefied Petroleum Gas		68476-86-8	20 - 30
N-Methyl-2-pyrrolidone		872-50-4	10 - 20
Xylene		1330-20-7	1 - 3
Ethylbenzene		100-41-4	< 1

Specific chemical identity and/or percentage of composition has been withheld as a trade secret.

4. First-aid measures

Inhalation

Remove victim to fresh air and keep at rest in a position comfortable for breathing. Call a POISON CENTER or doctor/physician if you feel unwell.

Skin contact

Remove contaminated clothing. Rinse skin with water/shower. If skin irritation occurs: Get medical advice/attention. Wash contaminated clothing before reuse.

Eye contact

Immediately flush eyes with plenty of water for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Get medical attention if irritation develops and persists.

Ingestion

Call a physician or poison control center immediately. Rinse mouth. Do not induce vomiting. If vomiting occurs, keep head low so that stomach content doesn't get into the lungs.

Most important symptoms/effects, acute and delayed

May cause drowsiness and dizziness. Headache. Nausea, vomiting. Irritation of nose and throat. Aspiration may cause pulmonary edema and pneumonitis. Severe eye irritation. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. May cause respiratory irritation. Skin irritation. May cause redness and pain.

Indication of immediate medical attention and special treatment needed

Provide general supportive measures and treat symptomatically. Keep victim under observation. Symptoms may be delayed.

General information

IF exposed or concerned: Get medical advice/attention. Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves. Show this safety data sheet to the doctor in attendance.

5. Fire-fighting measures

Suitable extinguishing media

Alcohol resistant foam. Water fog. Carbon dioxide (CO₂). Dry chemical powder, carbon dioxide, sand or earth may be used for small fires only.

Unsuitable extinguishing media

None known.

Specific hazards arising from the chemical	Contents under pressure. Pressurized container may rupture when exposed to heat or flame. This product is a poor conductor of electricity and can become electrostatically charged. If sufficient charge is accumulated, ignition of flammable mixtures can occur. Static electricity accumulation may be significantly increased by the presence of small quantities of water or other contaminants. Material will float and may ignite on surface of water. During fire, gases hazardous to health may be formed.
Special protective equipment and precautions for firefighters	Firefighters must use standard protective equipment including flame retardant coat, helmet with face shield, gloves, rubber boots, and in enclosed spaces, SCBA.
Fire-fighting equipment/instructions	In case of fire: Stop leak if safe to do so. Move containers from fire area if you can do so without risk. Containers should be cooled with water to prevent vapor pressure build up.
General fire hazards	Extremely flammable aerosol. Contents under pressure. Pressurized container may rupture when exposed to heat or flame.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures	Keep unnecessary personnel away. Keep people away from and upwind of spill/leak. Keep out of low areas. Remove all possible sources of ignition in the surrounding area. Many gases are heavier than air and will spread along ground and collect in low or confined areas (sewers, basements, tanks). Wear appropriate protective equipment and clothing during clean-up. Avoid breathing mist or vapor. Avoid breathing gas. Emergency personnel need self-contained breathing equipment. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Ventilate closed spaces before entering them. Use appropriate containment to avoid environmental contamination. Local authorities should be advised if significant spillages cannot be contained. For personal protection, see section 8 of the SDS.
Methods and materials for containment and cleaning up	Eliminate all ignition sources (no smoking, flares, sparks, or flames in immediate area). Keep combustibles (wood, paper, oil, etc.) away from spilled material. This product is miscible in water. Stop the flow of material, if this is without risk. Wipe up with absorbent material (e.g. cloth, fleece). Clean surface thoroughly to remove residual contamination. For waste disposal, see section 13 of the SDS. Prevent entry into waterways, sewer, basements or confined areas.
Environmental precautions	Avoid release to the environment. Prevent further leakage or spillage if safe to do so. Avoid discharge into drains, water courses or onto the ground. Inform appropriate managerial or supervisory personnel of all environmental releases. Use appropriate containment to avoid environmental contamination.

7. Handling and storage

Precautions for safe handling	Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Minimize fire risks from flammable and combustible materials (including combustible dust and static accumulating liquids) or dangerous reactions with incompatible materials. Handling operations that can promote accumulation of static charges include but are not limited to: mixing, filtering, pumping at high flow rates, splash filling, creating mists or sprays, tank and container filling, tank cleaning, sampling, gauging, switch loading, vacuum truck operations. Pressurized container: Do not pierce or burn, even after use. Do not use if spray button is missing or defective. Do not spray on a naked flame or any other incandescent material. Do not smoke while using or until sprayed surface is thoroughly dry. Do not cut, weld, solder, drill, grind, or expose containers to heat, flame, sparks, or other sources of ignition. Use caution around energized equipment. The metal container will conduct electricity if it contacts a live source. This may result in injury to the user from electrical shock and/or flash fire. Avoid breathing mist or vapor. Avoid breathing gas. Avoid contact with eyes, skin, and clothing. Pregnant or breastfeeding women must not handle this product. Should be handled in closed systems, if possible. Use only in well-ventilated areas. Wear appropriate personal protective equipment. Wash hands thoroughly after handling. Avoid release to the environment. Observe good industrial hygiene practices. For product usage instructions, please see the product label.
Conditions for safe storage, including any incompatibilities	Level 3 Aerosol. Pressurized container. Protect from sunlight and do not expose to temperatures exceeding 50°C/122 °F. Do not puncture, incinerate or crush. Do not handle or store near an open flame, heat or other sources of ignition. This material can accumulate static charge which may cause spark and become an ignition source. Avoid spark promoters. These alone may be insufficient to remove static electricity. Store in a well-ventilated place. Store away from incompatible materials (see Section 10 of the SDS).

8. Exposure controls/personal protection

Occupational exposure limits

US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000)

Components	Type	Value
Acetone (CAS 67-64-1)	PEL	2400 mg/m3

US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000)

Components	Type	Value
Ethylbenzene (CAS 100-41-4)	PEL	1000 ppm
		435 mg/m ³
Xylene (CAS 1330-20-7)	PEL	100 ppm
		435 mg/m ³
		100 ppm

US. ACGIH Threshold Limit Values

Components	Type	Value
Acetone (CAS 67-64-1)	STEL	750 ppm
	TWA	500 ppm
Ethylbenzene (CAS 100-41-4)	TWA	20 ppm
Xylene (CAS 1330-20-7)	STEL	150 ppm
	TWA	100 ppm

US. NIOSH: Pocket Guide to Chemical Hazards

Components	Type	Value
Acetone (CAS 67-64-1)	TWA	590 mg/m ³
		250 ppm
Ethylbenzene (CAS 100-41-4)	STEL	545 mg/m ³
		125 ppm
		435 mg/m ³
	TWA	100 ppm

US. AIHA Workplace Environmental Exposure Level (WEEL) Guides

Components	Type	Value
N-Methyl-2-pyrrolidone (CAS 872-50-4)	TWA	40 mg/m ³
		10 ppm

Biological limit values**ACGIH Biological Exposure Indices**

Components	Value	Determinant	Specimen	Sampling Time
Acetone (CAS 67-64-1)	50 mg/l	Acetone	Urine	*
Ethylbenzene (CAS 100-41-4)	0.15 g/g	Sum of mandelic acid and phenylglyoxylic acid	Creatinine in urine	*
N-Methyl-2-pyrrolidone (CAS 872-50-4)	100 mg/l	5-Hydroxy-N-methyl-2-pyrrolidone	Urine	*
Xylene (CAS 1330-20-7)	1.5 g/g	Methylhippuric acids	Creatinine in urine	*

* - For sampling details, please see the source document.

Exposure guidelines**US WEEL Guides: Skin designation**

N-Methyl-2-pyrrolidone (CAS 872-50-4)

Can be absorbed through the skin.

Appropriate engineering controls

Good general ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level. Eye wash facilities and emergency shower must be available when handling this product.

Individual protection measures, such as personal protective equipment**Eye/face protection**

Wear safety glasses with side shields (or goggles).

Skin protection	
Hand protection	Wear protective gloves such as: Butyl rubber.
Other	Wear appropriate chemical resistant clothing. Use of an impervious apron is recommended.
Respiratory protection	If engineering controls are not feasible or if exposure exceeds the applicable exposure limits, use a NIOSH-approved cartridge respirator with an organic vapor cartridge. Use a self-contained breathing apparatus in confined spaces and for emergencies. Air monitoring is needed to determine actual employee exposure levels.
Thermal hazards	Wear appropriate thermal protective clothing, when necessary.
General hygiene considerations	When using, do not eat, drink or smoke. Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants.

9. Physical and chemical properties

Appearance

Physical state	Liquid.
Form	Aerosol.
Color	Light grey.
Odor	Solvent.
Odor threshold	Not available.
pH	Not available.
Melting point/freezing point	-138.5 °F (-94.7 °C) estimated
Initial boiling point and boiling range	132.9 °F (56.1 °C) estimated
Flash point	56 °F (13.3 °C) Tag Closed Cup
Evaporation rate	Fast.
Flammability (solid, gas)	Not available.
Upper/lower flammability or explosive limits	
Flammability limit - lower (%)	1 % estimated
Flammability limit - upper (%)	12.8 % estimated
Vapor pressure	1329.6 hPa estimated
Vapor density	> 1 (air = 1)
Relative density	0.78
Solubility (water)	Soluble.
Partition coefficient (n-octanol/water)	Not available.
Auto-ignition temperature	473 °F (245 °C) estimated
Decomposition temperature	Not available.
Viscosity (kinematic)	Not available.
Percent volatile	79.2 % estimated

10. Stability and reactivity

Reactivity	The product is stable and non-reactive under normal conditions of use, storage and transport.
Chemical stability	Material is stable under normal conditions.
Possibility of hazardous reactions	No dangerous reaction known under conditions of normal use.
Conditions to avoid	Heat, flames and sparks. Contact with incompatible materials.
Incompatible materials	Strong acids. Acids. Strong oxidizing agents. Halogens. Peroxides. Phenols.
Hazardous decomposition products	Carbon oxides.

11. Toxicological information

Information on likely routes of exposure

Ingestion	Droplets of the product aspirated into the lungs through ingestion or vomiting may cause a serious chemical pneumonia.
Inhalation	May cause drowsiness and dizziness. Headache. Nausea, vomiting. May cause irritation to the respiratory system.
Skin contact	Causes skin irritation.
Eye contact	Causes serious eye irritation.

Symptoms related to the physical, chemical and toxicological characteristics May cause drowsiness and dizziness. Headache. Nausea, vomiting. Irritation of nose and throat. Aspiration may cause pulmonary edema and pneumonitis. Severe eye irritation. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. May cause respiratory irritation. Skin irritation. May cause redness and pain.

Information on toxicological effects

Acute toxicity May be fatal if swallowed and enters airways. Narcotic effects. May cause respiratory irritation.

Product	Species	Test Results
Gasket Remover		
Acute		
<i>Dermal</i>		
LD50	Rabbit	15685.5908 mg/kg estimated
<i>Inhalation</i>		
LC50	Rat	49210.4023 ppm, 4 hours estimated 21.4031 mg/l, 4 hours estimated
<i>Oral</i>		
LD50	Rat	6989.7153 mg/kg estimated
TDLO	Human	5.6188 g/kg estimated
Chronic		
<i>Inhalation</i>		
NOEL	Rat	36812.8984 ppm, 8 weeks estimated
<i>Oral</i>		
LD50	Mouse	248.0888 g/kg estimated
NOEL	Rat	193.7521 mg/kg, 90 days estimated

* Estimates for product may be based on additional component data not shown.

Skin corrosion/irritation	Causes skin irritation.
Serious eye damage/eye irritation	Causes serious eye irritation.
Respiratory sensitization	Not available.
Skin sensitization	This product is not expected to cause skin sensitization.
Germ cell mutagenicity	No data available to indicate product or any components present at greater than 0.1% are mutagenic or genotoxic.
Carcinogenicity	Suspected of causing cancer.
IARC Monographs. Overall Evaluation of Carcinogenicity	
Ethylbenzene (CAS 100-41-4)	2B Possibly carcinogenic to humans.
Xylene (CAS 1330-20-7)	3 Not classifiable as to carcinogenicity to humans.
Reproductive toxicity	Components in this product have been shown to cause birth defects and reproductive disorders in laboratory animals. Suspected of damaging fertility or the unborn child.
Specific target organ toxicity - single exposure	May cause respiratory irritation. May cause drowsiness and dizziness.
Specific target organ toxicity - repeated exposure	Not classified.
Aspiration hazard	May be fatal if swallowed and enters airways. If aspirated into lungs during swallowing or vomiting, may cause chemical pneumonia, pulmonary injury or death.
Chronic effects	Prolonged exposure may cause chronic effects.

12. Ecological information

Ecotoxicity

Harmful to aquatic life.

Product		Species	Test Results
Gasket Remover			
Aquatic			
Crustacea	EC50	Daphnia	765.7355 mg/l, 48 hours estimated
<i>Acute</i>			
Crustacea	EC50	Daphnia	765.7355 mg/l, 48 hours estimated
Fish	LC50	Fish	912.7318 mg/l, 96 hours estimated
Components			
Species			
Test Results			
Acetone (CAS 67-64-1)			
Aquatic			
Crustacea	EC50	Water flea (Daphnia magna)	21.6 - 23.9 mg/l, 48 hours
Fish	LC50	Rainbow trout,donaldson trout (Oncorhynchus mykiss)	4740 - 6330 mg/l, 96 hours
Ethylbenzene (CAS 100-41-4)			
Aquatic			
<i>Acute</i>			
Crustacea	EC50	Water flea (Daphnia magna)	2.1 mg/l, 48 hours
Fish	LC50	Fathead minnow (Pimephales promelas)	12.1 mg/l, 96 hours
N-Methyl-2-pyrrolidone (CAS 872-50-4)			
Aquatic			
<i>Acute</i>			
Algae	EC50	Freshwater algae	125 mg/l, 72 hours
Crustacea	EC50	Water flea (Daphnia magna)	> 1000 mg/l, 24 hours
Fish	LC50	Bluegill (Lepomis macrochirus)	832 mg/l
		Fathead minnow (Pimephales promelas)	1072 mg/l
		Rainbow trout,donaldson trout (Oncorhynchus mykiss)	> 500 mg/l, 96 hours
		Salmo gairdneri (new name Oncorhynchus mykiss)	3048 mg/l
Xylene (CAS 1330-20-7)			
Aquatic			
Fish	LC50	Rainbow trout,donaldson trout (Oncorhynchus mykiss)	9.5 - 19.2 mg/l, 96 hours

* Estimates for product may be based on additional component data not shown.

Persistence and degradability No data is available on the degradability of this product.

Bioaccumulative potential No data available.

Partition coefficient n-octanol / water (log Kow)

Acetone	-0.24
Ethylbenzene	3.15
N-Methyl-2-pyrrolidone	-0.46, at 25 °C
Xylene	3.12 - 3.2

Bioconcentration factor (BCF)

Xylene	15
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Mobility in soil No data available.

Other adverse effects No other adverse environmental effects (e.g. ozone depletion, photochemical ozone creation potential, endocrine disruption, global warming potential) are expected from this component.

13. Disposal considerations

Disposal of waste from residues / unused products	If discarded, this product is considered a RCRA ignitable waste, D001. Collect and reclaim or dispose in sealed containers at licensed waste disposal site. Contents under pressure. Do not puncture, incinerate or crush. Do not allow this material to drain into sewers/water supplies. Do not contaminate ponds, waterways or ditches with chemical or used container. Dispose in accordance with all applicable regulations.
Hazardous waste code	D001: Waste Flammable material with a flash point <140 F
Contaminated packaging	Empty containers should be taken to an approved waste handling site for recycling or disposal. Since emptied containers may retain product residue, follow label warnings even after container is emptied.

14. Transport information

DOT

UN number	UN1950
UN proper shipping name	Aerosols, flammable, Limited Quantity
Transport hazard class(es)	
Class	2.1
Subsidiary risk	-
Label(s)	2.1
Packing group	Not applicable.
Special precautions for user	Read safety instructions, SDS and emergency procedures before handling.
Special provisions	N82
Packaging exceptions	306
Packaging non bulk	None
Packaging bulk	None

IATA

UN number	UN1950
UN proper shipping name	Aerosols, flammable, Limited Quantity
Transport hazard class(es)	
Class	2.1
Subsidiary risk	-
Packing group	Not applicable.
Environmental hazards	No.
ERG Code	10L
Special precautions for user	Read safety instructions, SDS and emergency procedures before handling.
Other information	
Passenger and cargo aircraft	Allowed.
Cargo aircraft only	Allowed.

IMDG

UN number	UN1950
UN proper shipping name	AEROSOLS, LIMITED QUANTITY
Transport hazard class(es)	
Class	2
Subsidiary risk	-
Packing group	Not applicable.
Environmental hazards	
Marine pollutant	No.
EmS	Not available.
Special precautions for user	Read safety instructions, SDS and emergency procedures before handling.

15. Regulatory information

US federal regulations	This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200. All components are on the U.S. EPA TSCA Inventory List.
TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)	Not regulated.
SARA 304 Emergency release notification	Not regulated.

US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)

Not listed.

US EPCRA (SARA Title III) Section 313 - Toxic Chemical: Listed substance

Ethylbenzene (CAS 100-41-4)
N-Methyl-2-pyrrolidone (CAS 872-50-4)
Xylene (CAS 1330-20-7)

CERCLA Hazardous Substance List (40 CFR 302.4)

Acetone (CAS 67-64-1)
Ethylbenzene (CAS 100-41-4)
Xylene (CAS 1330-20-7)

CERCLA Hazardous Substances: Reportable quantity

Acetone (CAS 67-64-1)	5000 LBS
Ethylbenzene (CAS 100-41-4)	1000 LBS
Xylene (CAS 1330-20-7)	100 LBS

Spills or releases resulting in the loss of any ingredient at or above its RQ require immediate notification to the National Response Center (800-424-8802) and to your Local Emergency Planning Committee.

Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List

Xylene (CAS 1330-20-7)

Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130)

Not regulated.

Safe Drinking Water Act (SDWA) Not regulated.

Drug Enforcement Administration (DEA). List 2, Essential Chemicals (21 CFR 1310.02(b) and 1310.04(f)(2) and Chemical Code Number

Acetone (CAS 67-64-1)	6532
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Drug Enforcement Administration (DEA). List 1 & 2 Exempt Chemical Mixtures (21 CFR 1310.12(c))

Acetone (CAS 67-64-1)	35 %WV
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DEA Exempt Chemical Mixtures Code Number

Acetone (CAS 67-64-1)	6532
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Food and Drug Administration (FDA) Not regulated.

Superfund Amendments and Reauthorization Act of 1986 (SARA)

Section 311/312	Immediate Hazard - Yes
Hazard categories	Delayed Hazard - Yes
	Fire Hazard - Yes
	Pressure Hazard - Yes
	Reactivity Hazard - No

SARA 302 Extremely hazardous substance	No
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US state regulations

US. California Controlled Substances. CA Department of Justice (California Health and Safety Code Section 11100)

Not listed.

US. New Jersey Worker and Community Right-to-Know Act

Acetone (CAS 67-64-1)
Ethylbenzene (CAS 100-41-4)
N-Methyl-2-pyrrolidone (CAS 872-50-4)
Xylene (CAS 1330-20-7)

US. Massachusetts RTK - Substance List

Acetone (CAS 67-64-1)
N-Methyl-2-pyrrolidone (CAS 872-50-4)
Xylene (CAS 1330-20-7)

US. Pennsylvania Worker and Community Right-to-Know Law

Acetone (CAS 67-64-1)
Ethylbenzene (CAS 100-41-4)
Xylene (CAS 1330-20-7)
N-Methyl-2-pyrrolidone (CAS 872-50-4)

US. Rhode Island RTK

Acetone (CAS 67-64-1)
Ethylbenzene (CAS 100-41-4)

N-Methyl-2-pyrrolidone (CAS 872-50-4)
Xylene (CAS 1330-20-7)

US. California Proposition 65

WARNING: This product contains a chemical known to the State of California to cause cancer and birth defects or other reproductive harm.

US - California Proposition 65 - CRT: Listed date/Carcinogenic substance

Benzene (CAS 71-43-2)	Listed: February 27, 1987
Cumene (CAS 98-82-8)	Listed: April 6, 2010
Ethanal (CAS 75-07-0)	Listed: April 1, 1988
Ethylbenzene (CAS 100-41-4)	Listed: June 11, 2004

US - California Proposition 65 - CRT: Listed date/Developmental toxin

Benzene (CAS 71-43-2)	Listed: December 26, 1997
N-Methyl-2-pyrrolidone (CAS 872-50-4)	Listed: June 15, 2001

US - California Proposition 65 - CRT: Listed date/Male reproductive toxin

Benzene (CAS 71-43-2)	Listed: December 26, 1997
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Volatile organic compounds (VOC) regulations

EPA

VOC content (40 CFR 51.100(s)) 47.5 %

Consumer products (40 CFR 59, Subpt. C) Not regulated

State

Consumer products This product is regulated as a Gasket Adhesive Remover, Graffiti Remover and Paint Remover or Stripper. This product is compliant for use in all 50 states.

VOC content (CA) 47.5 %

VOC content (OTC) 47.5 %

International Inventories

Country(s) or region	Inventory name	On inventory (yes/no)*
Australia	Australian Inventory of Chemical Substances (AICS)	Yes
Canada	Domestic Substances List (DSL)	Yes
Canada	Non-Domestic Substances List (NDSL)	No
China	Inventory of Existing Chemical Substances in China (IECSC)	Yes
Europe	European Inventory of Existing Commercial Chemical Substances (EINECS)	No
Europe	European List of Notified Chemical Substances (ELINCS)	No
Japan	Inventory of Existing and New Chemical Substances (ENCS)	No
Korea	Existing Chemicals List (ECL)	Yes
New Zealand	New Zealand Inventory	Yes
Philippines	Philippine Inventory of Chemicals and Chemical Substances (PICCS)	Yes
United States & Puerto Rico	Toxic Substances Control Act (TSCA) Inventory	Yes

*A "Yes" indicates that all components of this product comply with the inventory requirements administered by the governing country(s)

A "No" indicates that one or more components of the product are not listed or exempt from listing on the inventory administered by the governing country(s).

16. Other information, including date of preparation or last revision

Issue date	10-15-2014
Prepared by	Allison Cho
Version #	01
Further information	Not available.
HMIS® ratings	Health: 2* Flammability: 4 Physical hazard: 0 Personal protection: B
NFPA ratings	Health: 2 Flammability: 4 Instability: 0

NFPA ratings**Disclaimer**

CRC cannot anticipate all conditions under which this information and its product, or the products of other manufacturers in combination with its product, may be used. It is the user's responsibility to ensure safe conditions for handling, storage and disposal of the product, and to assume liability for loss, injury, damage or expense due to improper use. The information contained in this document applies to this specific material as supplied. It may not be valid for this material if it is used in combination with any other materials. This information is accurate to the best of CRC Industries' knowledge or obtained from sources believed by CRC to be accurate. Before using any product, read all warnings and directions on the label. For further clarification of any information contained on this (M)SDS consult your supervisor, a health & safety professional, or CRC Industries.

SAFETY DATA SHEET

Section 1. IDENTIFICATION

Product Identifier

Product Name GASOILA® SOFT SET.

Other means of Identification

Product Code SS01, SS02, SS04, SS08, SS16, SS32, SB32, SS28..

Recommended Use Pipe Thread Sealant.

Recommended Restrictions None Known.

Manufacturer

Company Name Federal Process Corporation
Address 4520 Richmond Road
Cleveland OH 44128
Telephone 1-800-846-7325

Emergency Telephone Number: Call Chemtrec at 1-800-424-9300

Section 2. HAZARDS IDENTIFICATION

PHYSICAL STATE: Liquid

GHS Hazard and Precautionary Statements:

Flammable liquid	Category 3
Acute toxicity (oral)	Category 4
Serious eye irritation	Category 2A
Skin sensitization	Category 1



Signal Word:

Warning

Hazard Statements:

H226 - Flammable liquid and vapor.
H302 - Harmful if swallowed.
H319 - Causes serious eye irritation.
H317 - May cause an allergic skin reaction

Precautionary Statements:

GASOILA®SOFT SET

Prevention: P210 – Keep away heat, sparks, open flames, and hot surfaces. No smoking.
P261 – Avoid breathing dust/fume/gas/mist/vapors/spray.
P272 – Contaminated clothing should not be allowed out of the workplace.

Response: P305 + P351 + P338 – IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P301 + P331 + P310 – IF SWALLOWED: Do NOT induce vomiting. Immediately call POISON CENTER or doctor/physician.
P337 + P313 – If eye irritation persists: Get medical advice/attention.
P332 + P313 – If skin irritation or rash occurs: Get medical advice/attention.

Disposal: P501- Dispose of contents/container to an approved waste disposal plant.

Other Hazards: Toxic to aquatic life with long lasting effects.

Unknown Acute Toxicity: 2% of the mixture consists of ingredient(s) of unknown toxicity.

Section 3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Name	CAS Number	Weight %
Isopropyl alcohol	67-63-0	<8.0
2 butoxyethanol	111-76-2	<5.0

Section 4. FIRST AID MEASURES

First Aid Measures:

Eye Contact Rinse thoroughly with plenty of water, for 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Get medical advice/attention.

Skin Contact If skin irritation occurs, rinse affected area with water. If skin irritation or rash occurs: Get medical advice/attention.

Inhalation Remove to fresh air. If signs/symptoms continue, get medical attention. Give oxygen or artificial respiration as needed.

Ingestion Do NOT induce vomiting Get medical attention immediately. Rinse mouth with water. Never give anything by mouth to an unconscious individual.

Most Important Symptoms and effects:

Symptoms Direct contact with eyes may cause temporary irritation.
Do NOT ingest.

Section 5. FIRE-FIGHTING MEASURES

Suitable Extinguishing Media: Use foam, dry chemical, carbon dioxide or water fog.

Unsuitable Extinguishing Media: Not determined.

Specific Hazards Arising from the Chemical:

Carbon oxides expected to be the primary hazardous combustion product.

Protective Equipment and Precautions for Firefighters:

As in any fire, wear self-contained breathing apparatus and other protective clothing. (approved or equivalent) and full protective gear.

Section 6. ACCIDENTAL RELEASE MEASURES

–

Personal Precautions, Protective Equipment and Emergency Procedures:

Personal Precautions: Use personal protective equipment as required. Keep unnecessary personnel away.

Methods and Material for Containment and Cleaning Up:

Methods for Containment: Prevent further leakage or spillage if safe to do so.

Methods for Clean-Up: Keep in suitable, closed containers for disposal.

Section 7. HANDLING AND STORAGE

Precautions for Safe Handling:

Advice on Safe Handling: Avoid breathing vapors or mists. Contaminated work-clothing should not be allowed out of the workplace

Conditions for Safe Storage, including Any Incompatibilities:

GASOILA®SOFT SET

Storage Conditions: Keep containers tightly closed in a dry, cool and well-ventilated place.
Do not store near heat, sparks, or open flames.
KEEP OUT OF REACH OF CHILDREN.

Incompatible Materials: None known based on information supplied.

Section 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Exposure Guidelines:

Chemical Name	ACGIH TWA	ACGIH STEL	OSHA TWA
Isopropyl alcohol (CAS 67-63-0)	200 ppm	400 ppm	400 ppm
2 butoxyethanol (CAS 111-76-2)	20 ppm	200 mg/g	x

Appropriate Engineering Controls:

Engineering Controls: Apply technical measures to comply with the occupational exposure limits.

Individual Protection Measures, such as Personal Protective Equipment:

Eye/Face Protection: Avoid contact with eyes.

Skin and Body Protection: No protective equipment is needed under normal use conditions.

Respiratory Protection: Ensure adequate ventilation, especially in confined areas. If confined in poorly ventilated areas use NIOSH/MSHA

General Hygiene Considerations: Handle in accordance with good industrial hygiene and safety practice. Wash exposed areas thoroughly before eating, drinking, smoking or leaving work area. Launder contaminated clothing before reusing.

Section 9. PHYSICAL AND CHEMICAL PROPERTIES

Information on Basic Physical and Chemical Properties

Physical State: Liquid. Odor: Mild alcoholic.

Appearance: Viscous liquid. Odor Threshold: Not available.
 Color: Blue green.

<u>Property</u>	<u>Values</u>
pH	N/A
Melting Point/Freezing Point	Not determined.
Boiling Point/Boiling Range	Not determined.
Flash Point	98F (37C) Closed Cup.
Evaporation Rate	Not determined.
Flammability (Solid, Gas)	n/a-liquid
Upper Flammability Limit	Not determined.
Lower Flammability Limit	Not determined.
Vapor Pressure	Not determined.
Vapor Density	Not determined.
Specific Gravity	1.44
Water Solubility	None.
Solubility in other Solvents	Not determined.
Partition Coefficient (n-octanol/water)	Not determined.
Auto-ignition Temperature	Not determined.
Decomposition Temperature	Not determined.
Kinematic Viscosity	Not determined.
Explosive Properties	Not determined.
Oxidizing Properties	Not determined.
V.O.C.	205g/L

Section 10. STABILITY AND REACTIVITY

Reactivity: Not reactive under normal conditions.

Chemical Stability: Stable under recommended storage conditions.

Possibility of Hazardous Reactions: None under normal processing.

Conditions to Avoid: Keep out of reach of children.

Incompatible Materials: None known.

Hazardous Decomposition Products: Oxides of carbon.

Section 11. TOXICOLOGICAL INFORMATION

Information on Likely Routes of Exposure:

Eye Contact: Causes serious eye irritation.

Skin Contact: May cause an allergic skin reaction.

Inhalation: Avoid breathing vapors or mists.

Ingestion: Do not taste or swallow.

Component Information:

Chemical Name	Oral LD50	Dermal LD50	Inhalation LC50
Isopropyl alcohol (67-63-0)	4,396 mg/kg (Rat) 3,600 mg/kg (Mouse)	12,870 mg/kg (Rabbit)	19,600 ppm (Rat)
2 butoxyethanol (111-76-2)	1,300mg/g (Rat) 1,400 mg/g (Guinea Pig)	>2,000 mg/g (Rat) >2,000 mg/g (Guinea Pig)	>4.9 mg/L (Rat 3 h) >3.4 mg/L (Guinea Pig 1h)

Information on physical, chemical and toxicological effects:

Symptoms: Please section 4 of this SDS for symptoms.

Delayed and Immediate Effects as Well as Chronic Effects From Short and Long Term Exposure:

Sensitization: May cause an allergic skin reaction.

Carcinogenicity: Not classifiable as a human carcinogen.

Chemical Name	ACGIH	IARC	NTP	OSHA
Isopropyl alcohol (67-63-0)	NO	NO	NO	NO
2 butoxyethanol (111-76-2)	NO	NO	NO	NO

Legend

IARC (International Agency for Research on Cancer).
 Group3 IARC components are "not classifiable as human carcinogens".
 OSHA (Occupational Safety and Health Administration of the US Department of Labor)
 X - Present

Numerical Measures of Toxicity:

Not Determined.

Section 12. ECOLOGICAL INFORMATION

Ecotoxicity:

Toxic to aquatic life with lasting effects.

Chemical Name	Algae/aquatic plants	Fish	Toxicity to Microorganisms	Crustacea
Isopropyl alcohol (67-63-0)	EC50/72 hours Scenedesmus subspicatus >1,000 mg/L	LC50/96 hours Pimephales promelas: 9,640 mg/L	EC50/3 hours Activated sludge >1,000 mg/L	N/A
2 butoxyethanol (111-76-2)	EC50 Algae (Pseudokircheriella subcapitata, 72h) 1,840 mg/L	LC50/96 hours Oncorhynchus mykiss, 1,474 mg/L		

Persistence/Degradability: Not determined.

Bioaccumulation: Not determined.

Mobility: Not determined.

Other Adverse Effects: Not determined.

Section 13. DISPOSAL CONSIDERATIONS

Waste Treatment Method:

Disposal of Wastes: Disposal should be in accordance with applicable regional, national and local laws and regulations.

Contaminated Packaging: Disposal should be in accordance with applicable regional, national and local laws and regulations.

Section 14. TRANSPORT INFORM

IN ACCORDANCE WITH DOT:

UN-NUMBER UN 1993

PROPER SHIPPING NAME: FLAMMABLE LIQUIDS, n.o.s. (isopropanol)

HAZARD CLASS CLASS 3 – Flammable and combustible liquid

PACKING GROUP III

IATA: ID8000 Consumer Commodity, Hazard Class 9.

Section 15. REGULATORY INFORMATION

International Inventories: Not determined.

U.S. Federal Regulations: Not determined.

SARA Title 313: Not determined.

U.S. State Regulations:

U.S Right-to-Know Regulations: Not determined.

Section 16. OTHER INFORMATION

NFPA:	Health Hazards 1	Flammability 2	Instability 0	Special Hazards Not determined
HMIS	Health Hazards 1	Flammability 2	Instability 0	Special Hazards Not determined

Issue Date: 1st March 2014

Revision Date: 26th May 2020

GASOILA®SOFT SET

DISCLAIMER: The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

End of Safety Data Sheet

SAFETY DATA SHEET

Gasoline (All Grades)



Section 1. Identification

Product name : Gasoline (All Grades)
Synonyms : Gasoline, Unleaded Gasoline, Regular Gasoline, Premium Gasoline, Oxyfuel, Reformulated Gasoline

Relevant identified uses of the substance or mixture and uses advised against

Product use : Use as a fuel - Industrial use

Manufacturer : HollyFrontier Refining & Marketing LLC
2828 North Harwood
Suite 1300
Dallas, Texas 75201
USA
Customer Service: (888) 286-8836

Emergency telephone number : CHEMTREC® (800) 424-9300
CCN 201319

Section 2. Hazards identification

OSHA/HCS status : This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).

Classification of the substance or mixture : FLAMMABLE LIQUIDS - Category 1
SKIN CORROSION/IRRITATION - Category 2
SERIOUS EYE DAMAGE/ EYE IRRITATION - Category 2A
GERM CELL MUTAGENICITY - Category 1B
CARCINOGENICITY - Category 1B
TOXIC TO REPRODUCTION [Fertility] - Category 2
TOXIC TO REPRODUCTION [Unborn child] - Category 2
SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) [Respiratory tract irritation and Narcotic effects] - Category 3
SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) [liver] - Category 2
ASPIRATION HAZARD - Category 1

GHS label elements

Hazard pictograms :



Signal word : Danger

Hazard statements : Extremely flammable liquid and vapor.
Causes serious eye irritation.
Causes skin irritation.
May cause genetic defects.
May cause cancer.
Suspected of damaging fertility or the unborn child.
May be fatal if swallowed and enters airways.
May cause respiratory irritation.
May cause drowsiness and dizziness.
May cause damage to organs through prolonged or repeated exposure. (liver)

Precautionary statements

- Prevention** : Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Use personal protective equipment as required. Wear protective gloves. Wear eye or face protection. Keep away from heat, sparks, open flames and hot surfaces. - No smoking. Use explosion-proof electrical, ventilating, lighting and all material-handling equipment. Use only non-sparking tools. Take precautionary measures against static discharge. Keep container tightly closed. Use only outdoors or in a well-ventilated area. Do not breathe vapor. Do not eat, drink or smoke when using this product. Wash hands thoroughly after handling.
- Response** : Get medical attention if you feel unwell. IF exposed or concerned: Get medical attention. IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Call a POISON CENTER or physician if you feel unwell. IF SWALLOWED: Immediately call a POISON CENTER or physician. Do NOT induce vomiting. IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water or shower. IF ON SKIN: Wash with plenty of soap and water. Take off contaminated clothing. If skin irritation occurs: Get medical attention. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical attention.
- Storage** : Store in a well-ventilated place. Keep cool.
- Disposal** : Dispose of contents and container in accordance with all local, regional, national and international regulations.
- Supplemental label elements** : Avoid contact with skin and clothing. Wash thoroughly after handling.
- Hazards not otherwise classified** : Prolonged or repeated contact may dry skin and cause irritation.

Section 3. Composition/information on ingredients

Substance/mixture : Mixture

CAS number/other identifiers

- CAS number** : Not applicable.
- Product code** : Not available.

Ingredient name	%	CAS number
Gasoline	88 - 100	86290-81-5
ethanol	0 - 10	64-17-5
toluene	0 - 10	108-88-3
1,2,4-trimethylbenzene	0 - 5	95-63-6
benzene	0 - 5	71-43-2
n-hexane	0 - 3	110-54-3

Any concentration shown as a range is to protect confidentiality or is due to batch variation.

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment and hence require reporting in this section.

Occupational exposure limits, if available, are listed in Section 8.

Section 4. First aid measures

Description of necessary first aid measures

- Eye contact** : Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Get medical attention. Continue to rinse for at least 15 minutes.
- Inhalation** : Remove victim to fresh air and keep at rest in a position comfortable for breathing. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Get medical attention. If necessary, call a poison center or physician. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.

- Skin contact** : Wash skin thoroughly with soap and water or use recognized skin cleanser. Remove contaminated clothing and shoes. Continue to rinse for at least 15 minutes. Get medical attention. Wash clothing before reuse. Clean shoes thoroughly before reuse.
- Ingestion** : Aspiration hazard if swallowed. Can enter lungs and cause damage. Do not induce vomiting. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Get medical attention immediately. Call a poison center or physician. Wash out mouth with water. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Stop if the exposed person feels sick as vomiting may be dangerous. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.

Most important symptoms/effects, acute and delayed

Potential acute health effects

- Eye contact** : Causes serious eye irritation.
- Inhalation** : Can cause central nervous system (CNS) depression. May cause drowsiness and dizziness. May cause respiratory irritation.
- Skin contact** : Causes skin irritation. Defatting to the skin.
- Ingestion** : Can cause central nervous system (CNS) depression. May be fatal if swallowed and enters airways. Irritating to mouth, throat and stomach.

Over-exposure signs/symptoms

- Eye contact** : pain or irritation; watering; redness
- Inhalation** : respiratory tract irritation; coughing; nausea or vomiting; headache; drowsiness/fatigue; dizziness/vertigo; unconsciousness
- Skin contact** : irritation; redness; dryness; cracking
- Ingestion** : nausea or vomiting

Indication of immediate medical attention and special treatment needed, if necessary

- Notes to physician** : Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled. Epinephrine and other sympathomimetic drugs may initiate cardiac arrhythmias in persons exposed to high concentrations of hydrocarbon solvents.
- Specific treatments** : No specific treatment.
- Protection of medical responders** : No action shall be taken involving any personal risk or without suitable training. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation.

See toxicological information (Section 11)

Section 5. Fire-fighting measures

Extinguishing media

- Suitable extinguishing media** : Use dry chemical, CO₂, water spray (fog) or foam.
- Unsuitable extinguishing media** : Do not use water jet.

Specific hazards arising from the chemical

- : Extremely flammable liquid and vapor. In a fire or if heated, a pressure increase will occur and the container may burst, with the risk of a subsequent explosion. The vapor/gas is heavier than air and will spread along the ground. Vapors may accumulate in low or confined areas or travel a considerable distance to a source of ignition and flash back. Runoff to sewer may create fire or explosion hazard.

Hazardous thermal decomposition products

- : Decomposition products may include the following materials:
carbon dioxide
carbon monoxide

- Special protective actions for fire-fighters** : Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training. Move containers from fire area if this can be done without risk. Use water spray to keep fire-exposed containers cool.
- Special protective equipment for fire-fighters** : Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

Section 6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

- For non-emergency personnel** : No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Shut off all ignition sources. No flares, smoking or flames in hazard area. Avoid breathing vapor or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.
- For emergency responders** : If specialised clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".

- Environmental precautions** : Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).

Methods and materials for containment and cleaning up

- Small spill** : Stop leak if without risk. Move containers from spill area. Use spark-proof tools and explosion-proof equipment. Absorb with an inert material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.
- Large spill** : Stop leak if without risk. Move containers from spill area. Use spark-proof tools and explosion-proof equipment. Approach release from upwind. Prevent entry into sewers, waterways, basements or confined areas. Wash spillages into an effluent treatment plant or proceed as follows. Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations (see Section 13). Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spilled product. Note: see Section 1 for emergency contact information and Section 13 for waste disposal.

Section 7. Handling and storage

Precautions for safe handling

- Protective measures** : Put on appropriate personal protective equipment (see Section 8). Avoid exposure - obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Do not get in eyes or on skin or clothing. Do not breathe vapor or mist. Do not swallow. Use only with adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Do not enter storage areas and confined spaces unless adequately ventilated. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Store and use away from heat, sparks, open flame or any other ignition source. Use explosion-proof electrical (ventilating, lighting and material handling) equipment. Use only non-sparking tools. Take precautionary measures against electrostatic discharges. Empty containers retain product residue and can be hazardous. Do not reuse container. High pressure skin injections are serious medical emergencies. Injury will not appear serious at first. Within a few hours, tissue will become swollen, discolored and extremely painful.
- Advice on general occupational hygiene** : Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.

Conditions for safe storage, including any incompatibilities : Store in accordance with local regulations. Store in a segregated and approved area. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Eliminate all ignition sources. Separate from oxidizing materials. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination.

Section 8. Exposure controls/personal protection

Control parameters

Occupational exposure limits

Ingredient name	Exposure limits		
Gasoline	-	ACGIH TLV (United States, 3/2012). TWA: 300 ppm 8 hours. TWA: 890 mg/m ³ 8 hours. STEL: 500 ppm 15 minutes. STEL: 1480 mg/m ³ 15 minutes.	
ethanol	OSHA PEL 1989 (United States, 3/1989). TWA: 1000 ppm 8 hours. TWA: 1900 mg/m ³ 8 hours. OSHA PEL (United States, 6/2010). TWA: 1000 ppm 8 hours. TWA: 1900 mg/m ³ 8 hours.	ACGIH TLV (United States, 3/2012). STEL: 1000 ppm 15 minutes.	NIOSH REL (United States, 1/2013). TWA: 1000 ppm 10 hours. TWA: 1900 mg/m ³ 10 hours.
toluene	OSHA PEL 1989 (United States, 3/1989). TWA: 100 ppm 8 hours. TWA: 375 mg/m ³ 8 hours. STEL: 150 ppm 15 minutes. STEL: 560 mg/m ³ 15 minutes. OSHA PEL Z2 (United States, 11/2006). TWA: 200 ppm 8 hours. CEIL: 300 ppm AMP: 500 ppm 10 minutes.	ACGIH TLV (United States, 3/2012). TWA: 20 ppm 8 hours.	NIOSH REL (United States, 1/2013). TWA: 100 ppm 10 hours. TWA: 375 mg/m ³ 10 hours. STEL: 150 ppm 15 minutes. STEL: 560 mg/m ³ 15 minutes.
1,2,4-trimethylbenzene	OSHA PEL 1989 (United States, 3/1989). TWA: 25 ppm 8 hours. TWA: 125 mg/m ³ 8 hours.	ACGIH TLV (United States, 3/2012). TWA: 25 ppm 8 hours. TWA: 123 mg/m ³ 8 hours.	NIOSH REL (United States, 1/2013). TWA: 25 ppm 10 hours. TWA: 125 mg/m ³ 10 hours.
benzene	OSHA PEL 1989 (United States, 3/1989). TWA: 1 ppm 8 hours. STEL: 5 ppm 15 minutes. OSHA PEL Z2 (United States, 11/2006). TWA: 10 ppm 8 hours. CEIL: 25 ppm AMP: 50 ppm 10 minutes. OSHA PEL (United States, 6/2010). TWA: 1 ppm 8 hours. STEL: 5 ppm 15 minutes.	ACGIH TLV (United States, 3/2012). Absorbed through skin. TWA: 0.5 ppm 8 hours. TWA: 1.6 mg/m ³ 8 hours. STEL: 2.5 ppm 15 minutes. STEL: 8 mg/m ³ 15 minutes.	NIOSH REL (United States, 1/2013). TWA: 0.1 ppm 10 hours. STEL: 1 ppm 15 minutes.
n-hexane	OSHA PEL 1989 (United States, 3/1989). TWA: 50 ppm 8 hours. TWA: 180 mg/m ³ 8 hours. OSHA PEL (United States, 6/2010). TWA: 500 ppm 8 hours. TWA: 1800 mg/m ³ 8 hours.	ACGIH TLV (United States, 3/2012). Absorbed through skin. TWA: 50 ppm 8 hours.	NIOSH REL (United States, 1/2013). TWA: 50 ppm 10 hours. TWA: 180 mg/m ³ 10 hours.

Appropriate engineering controls : Use only with adequate ventilation. Use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits. The engineering controls also need to keep gas, vapor or dust concentrations below any lower explosive limits. Use explosion-proof ventilation equipment.

Environmental exposure controls : Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

Individual protection measures

- Hygiene measures** : Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.
- Eye/face protection** : Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: chemical splash goggles.
- Skin protection**
- Hand protection** : Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. Considering the parameters specified by the glove manufacturer, check during use that the gloves are still retaining their protective properties. It should be noted that the time to breakthrough for any glove material may be different for different glove manufacturers. In the case of mixtures, consisting of several substances, the protection time of the gloves cannot be accurately estimated.
- Body protection** : Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product. When there is a risk of ignition from static electricity, wear anti-static protective clothing. For the greatest protection from static discharges, clothing should include anti-static overalls, boots and gloves.
- Other skin protection** : Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.
- Respiratory protection** : Use a properly fitted, air-purifying or air-fed respirator complying with an approved standard if a risk assessment indicates this is necessary. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator.

Section 9. Physical and chemical properties

Appearance

- Physical state** : Liquid.
- Color** : Clear to Amber
- Odor** : Gasoline
- Odor threshold** : Not available.
- pH** : Not available.
- Melting point** : Not available.
- Boiling point** : 26.667 to 226.67°C (80 to 440°F)
- Flash point** : -40°C (-40°F)
- Evaporation rate** : Not available.
- Flammability (solid, gas)** : Not available.
- Lower and upper explosive (flammable) limits** : Lower: 1.4%
Upper: 7.6%
- Vapor pressure** : 350-760 mm Hg at 37.8°C (100°F)
- Vapor density** : 3 to 4 [Air = 1]
- Specific gravity** : 0.75 [15.5°C (60°F)]
- Solubility** : Negligible
- Partition coefficient: n-octanol/water** : Not available.
- Auto-ignition temperature** : >260°C (>500°F)

Decomposition temperature	: Not available.
Viscosity	: Kinematic (40°C (104°F)): 0.0064 cm ² /s (0.64 cSt)
Molecular weight	: Not applicable.

Section 10. Stability and reactivity

Reactivity	: No specific test data related to reactivity available for this product or its ingredients.
Chemical stability	: The product is stable.
Possibility of hazardous reactions	: Under normal conditions of storage and use, hazardous reactions will not occur.
Conditions to avoid	: Avoid all possible sources of ignition (spark or flame). Do not pressurize, cut, weld, braze, solder, drill, grind or expose containers to heat or sources of ignition. Do not allow vapor to accumulate in low or confined areas.
Incompatible materials	: Reactive or incompatible with the following materials: oxidizing materials
Hazardous decomposition products	: Under normal conditions of storage and use, hazardous decomposition products should not be produced.

Section 11. Toxicological information

Information on toxicological effects

Acute toxicity

Product/ingredient name	Result	Species	Dose	Exposure
Gasoline	LD50 Oral	Rat	13.6 g/kg	-
ethanol	LC50 Inhalation Vapor	Rat	124700 mg/m ³	4 hours
	LD50 Oral	Rat	7 g/kg	-

Irritation/Corrosion

Product/ingredient name	Result	Species	Score	Exposure	Observation
ethanol	Eyes - Moderate irritant	Rabbit	-	0.066666667 minutes	-
	Eyes - Moderate irritant	Rabbit	-	100 milligrams	-
	Eyes - Severe irritant	Rabbit	-	100 microliters	-
	Skin - Mild irritant	Rabbit	-	500 milligrams	-
				400 milligrams	

Carcinogenicity

Product/ingredient name	OSHA	IARC	NTP
toluene	-	3	-
benzene	+	1	Known to be a human carcinogen.

Teratogenicity

Specific target organ toxicity (single exposure)

Name	Category	Route of exposure	Target organs
Gasoline	Category 3	Not applicable.	Respiratory tract irritation and Narcotic effects
ethanol	Category 3	Not applicable.	Respiratory tract irritation and Narcotic effects

Specific target organ toxicity (repeated exposure)

Name	Category	Route of exposure	Target organs
ethanol	Category 2	Not determined	liver

Aspiration hazard

Name	Result
Gasoline	ASPIRATION HAZARD - Category 1

Information on the likely routes of exposure : Routes of entry anticipated: Oral, Dermal, Inhalation.

Delayed and immediate effects and also chronic effects from short and long term exposure**Short term exposure**

Potential immediate effects : Not available.

Potential delayed effects : Not available.

Long term exposure

Potential immediate effects : Not available.

Potential delayed effects : Not available.

Potential chronic health effects

General : Causes damage to organs through prolonged or repeated exposure. Prolonged or repeated contact can defat the skin and lead to irritation, cracking and/or dermatitis.

Carcinogenicity : May cause cancer. Risk of cancer depends on duration and level of exposure.

Mutagenicity : May cause genetic defects.

Teratogenicity : Suspected of damaging the unborn child.

Developmental effects : reduced fetal weight; skeletal malformations

Fertility effects : Suspected of damaging fertility.

Numerical measures of toxicity**Acute toxicity estimates**

Route	ATE value
Oral	8840.2 mg/kg
Inhalation (gases)	123841.8 ppm
Inhalation (vapors)	720 mg/l

Section 12. Ecological information**Toxicity**

Product/ingredient name	Result	Species	Exposure
ethanol	Acute EC50 17.921 mg/l Marine water	Algae - Ulva pertusa	96 hours

Persistence and degradability

Product/ingredient name	Test	Result	Dose	Inoculum
toluene	301C Ready Biodegradability - Modified MITI Test (I)	100 % - 14 days	-	-
benzene	301C Ready Biodegradability - Modified MITI Test (I)	100 % - 14 days	-	-

Product/ingredient name	Aquatic half-life	Photolysis	Biodegradability
ethanol	-	-	Readily

Bioaccumulative potential

Product/ingredient name	LogP _{ow}	BCF	Potential
Gasoline	2 to 7	10 to 2500	high
ethanol	-0.35	-	low

Mobility in soil

Soil/water partition coefficient (K_{oc}) : Not available.

Other adverse effects : No known significant effects or critical hazards.

Section 13. Disposal considerations







Disposal methods : The generation of waste should be avoided or minimized wherever possible. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. This material and its container must be disposed of in a safe way. Care should be taken when handling emptied containers that have not been cleaned or rinsed out. Empty containers or liners may retain some product residues. Vapor from product residues may create a highly flammable or explosive atmosphere inside the container. Do not cut, weld or grind used containers unless they have been cleaned thoroughly internally. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

United States - RCRA Toxic hazardous waste "U" List

Ingredient	CAS #	Status	Reference number
Toluene; Benzene, methyl-Benzene (I,T)	108-88-3	Listed	U220
	71-43-2	Listed	U019

Section 14. Transport information

	DOT Classification	TDG Classification	Mexico Classification	ADR/RID	IMDG	IATA
UN number	UN1203	UN1203	UN1203	UN1203	UN1203	UN1203
UN proper shipping name	Gasoline RQ (Benzene, toluene)	GASOLINE	GASOLINA	GASOLINE	GASOLINE	Gasoline

Transport hazard class(es)	3 	3 	3 	3 	3 	3 
Packing group	II	II	II	II	II	II
Environmental hazards	Yes.	Yes.	Yes.	Yes.	No.	No.
Additional information	<p>Reportable quantity 400 lbs / 181.6 kg [63.965 gal / 242.13 L] Package sizes shipped in quantities less than the product reportable quantity are not subject to the RQ (reportable quantity) transportation requirements.</p> <p>Limited quantity Yes.</p> <p>Packaging instruction Passenger aircraft Quantity limitation: 5 L</p> <p>Cargo aircraft Quantity limitation: 60 L</p> <p>Special provisions 144, 177, B1, B33, IB2, T4, TP1</p>	<p>Explosive Limit and Limited Quantity Index 30</p> <p>Passenger Carrying Ship Index 100</p> <p>Passenger Carrying Road or Rail Index 5</p> <p>Special provisions 17, 82, 88</p>	<p>Special provisions 243</p>	<p>Hazard identification number 33</p> <p>Limited quantity 1 L</p> <p>Special provisions 534 243</p> <p>Tunnel code (D/E)</p>	<p>Emergency schedules (EmS) F-E, S-E</p>	<p>Passenger and Cargo Aircraft Quantity limitation: 5 L Packaging instructions: 353</p> <p>Cargo Aircraft Only Quantity limitation: 60 L Packaging instructions: 364</p> <p>Limited Quantities - Passenger Aircraft Quantity limitation: 1 L Packaging instructions: Y341</p>

Special precautions for user : **Transport within user’s premises:** always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage.

Section 15. Regulatory information

U.S. Federal regulations : **United States inventory (TSCA 8b)**: All components are listed or exempted.
Clean Water Act (CWA) 307: toluene; benzene
Clean Water Act (CWA) 311: toluene; benzene

Clean Air Act Section 112 (b) Hazardous Air Pollutants (HAPs) : Listed

DEA List II Chemicals (Essential Chemicals) : Listed

SARA 302/304

Composition/information on ingredients

No products were found.

SARA 304 RQ : Not applicable.

SARA 311/312

Classification : Fire hazard
 Immediate (acute) health hazard
 Delayed (chronic) health hazard

Composition/information on ingredients

Name	%	Fire hazard	Sudden release of pressure	Reactive	Immediate (acute) health hazard	Delayed (chronic) health hazard
Gasoline	88 - 100	Yes.	No.	No.	Yes.	Yes.
ethanol	0 - 10	Yes.	No.	No.	Yes.	Yes.
toluene	0 - 10	Yes.	No.	No.	Yes.	Yes.
1,2,4-trimethylbenzene	0 - 5	Yes.	No.	No.	Yes.	Yes.
benzene	0 - 5	Yes.	No.	No.	Yes.	Yes.
n-hexane	0 - 3	Yes.	No.	No.	Yes.	Yes.

SARA 313

	Product name	CAS number	%
Form R - Reporting requirements	toluene	108-88-3	0 - 10
	1,2,4-trimethylbenzene	95-63-6	0 - 5
	benzene	71-43-2	0 - 5
	n-hexane	110-54-3	0 - 3
Supplier notification	toluene	108-88-3	0 - 10
	1,2,4-trimethylbenzene	95-63-6	0 - 5
	benzene	71-43-2	0 - 5
	n-hexane	110-54-3	0 - 3

SARA 313 notifications must not be detached from the SDS and any copying and redistribution of the SDS shall include copying and redistribution of the notice attached to copies of the SDS subsequently redistributed.

State regulations

Massachusetts : The following components are listed: TOLUENE; PSEUDOCUMENE; BENZENE; HEXANE; ETHYL ALCOHOL

New York : The following components are listed: Toluene; Benzene; Hexane

New Jersey : The following components are listed: TOLUENE; BENZENE, METHYL-; PSEUDOCUMENE; 1,2,4-TRIMETHYL BENZENE; BENZENE; n-HEXANE; HEXANE; ETHYL ALCOHOL; ALCOHOL

Pennsylvania : The following components are listed: GASOLINE; BENZENE, METHYL-; PSEUDOCUMENE; BENZENE; HEXANE; DENATURED ALCOHOL

California Prop. 65

WARNING: This product contains a chemical known to the State of California to cause cancer and birth defects or other reproductive harm.

Ingredient name	Cancer	Reproductive	No significant risk level	Maximum acceptable dosage level
toluene	No.	Yes.	No.	7000 µg/day (ingestion) 13000 µg/day (inhalation)
benzene	Yes.	Yes.	6.4 µg/day (ingestion) 13 µg/day (inhalation)	24 µg/day (ingestion) 49 µg/day (inhalation)

Canada inventory : All components are listed or exempted.

International regulations

International lists

- : **Australia inventory (AICS)**: All components are listed or exempted.
- : **China inventory (IECSC)**: Not determined.
- : **Japan inventory**: Not determined.
- : **Korea inventory**: All components are listed or exempted.
- : **Malaysia Inventory (EHS Register)**: Not determined.
- : **New Zealand Inventory of Chemicals (NZIoC)**: All components are listed or exempted.
- : **Philippines inventory (PICCS)**: All components are listed or exempted.
- : **Taiwan inventory (CSNN)**: Not determined.

Section 16. Other information

National Fire Protection Association (U.S.A.)



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Copyright ©2001, National Fire Protection Association, Quincy, MA 02269. This warning system is intended to be interpreted and applied only by properly trained individuals to identify fire, health and reactivity hazards of chemicals. The user is referred to certain limited number of chemicals with recommended classifications in NFPA 49 and NFPA 325, which would be used as a guideline only. Whether the chemicals are classified by NFPA or not, anyone using the 704 systems to classify chemicals does so at their own risk.

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Version : 1.01

Key to abbreviations

- : ATE = Acute Toxicity Estimate
- : BCF = Bioconcentration Factor
- : GHS = Globally Harmonized System of Classification and Labelling of Chemicals
- : IATA = International Air Transport Association
- : IMDG = International Maritime Dangerous Goods
- : LogPow = logarithm of the octanol/water partition coefficient
- : UN = United Nations

▣ Indicates information that has changed from previously issued version.

Notice to reader

To the best of our knowledge, the information contained herein is accurate. However, neither the above-named manufacturer, nor any of its subsidiaries, assumes any liability whatsoever for the accuracy or completeness of the information contained herein.

Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.

SAFETY DATA SHEET

Section 1 - Chemical Product and Company Information

Product Name: 1201 Red, Air-Dry Enamel **Product Code:** 1201

Trade Name: Glyptal

Manufactured by:

GLYPTAL, INC.
305 Eastern Ave.
Chelsea, MA 02150
Telephone (617) 884-6918

IN CASE OF EMERGENCY:

CHEMTREC 1-800-424-9300

Product Use: Coatings

Not recommended for: Nonindustrial Use

Section 2 - Hazards Identification

NFPA Ratings, risk phrases, and suggested WHMIS Hazard Categories:

GHS Ratings:

Flammable liquid	3	Flash point $\geq 23^{\circ}\text{C}$ and $\leq 60^{\circ}\text{C}$ (140°F)
Acute Toxicity - Oral	4	Oral $>300 \leq 2000$ mg/kg
Acute Toxicity - Dermal	4	Dermal $>1000 \leq 2000$ mg/kg
Acute Toxicity - Inhalation	4	Gases $>2500 \leq 20000$ ppm, Vapors $>10 \leq 20$ mg/l, Dusts&mists $>1 \leq 5$ mg/l
Skin corrosion/irritation	2	Reversible adverse effects in dermal tissue, Draize score: $\geq 2.3 < 4.0$ or persistent inflammation
Serious eye damage/eye irritation	2A	Eye irritant: Subcategory 2A, Reversible in 21 days
Carcinogenicity	2	Limited evidence of human or animal carcinogenicity
Specific target organ toxicity single exposure	3	Transient target organ effects- Narcotic effects- Respiratory tract irritation
Aspiration hazard	1	Aspiration Toxicity Category 1: Known (regarded)- human evidence - hydrocarbons with kinematic viscosity ≤ 20.5 mm ² /s at 40° C.
Acute aquatic toxicity	C2	

GHS Hazards

H226	Flammable liquid and vapour
H302	Harmful if swallowed
H304	May be fatal if swallowed and enters airways
H312	Harmful in contact with skin
H315	Causes skin irritation
H319	Causes serious eye irritation
H332	Harmful if inhaled
H335	May cause respiratory irritation
H336	May cause drowsiness or dizziness
H351	Suspected of causing cancer
H401	Toxic to aquatic life

GHS Precautions

P202	Do not handle until all safety precautions have been read and understood
P210	Keep away from heat/sparks/open flames/hot surfaces - No smoking
P233	Keep container tightly closed
P240	Ground/bond container and receiving equipment

P241	Use explosion-proof electrical/ventilating/light/.../equipment
P242	Use only non-sparking tools
P243	Take precautionary measures against static discharge
P264	Wash skin thoroughly after handling
P271	Use only outdoors or in a well-ventilated area
P273	Avoid release to the environment
P280	Wear protective gloves/protective clothing/eye protection/face protection
P331	Do NOT induce vomiting
P362	Take off contaminated clothing and wash before reuse
P301+P312	IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell
P303+P361+P353	IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower
P304+P312	IF INHALED: Call a POISON CENTER or doctor/physician if you feel unwell
P304+P340	IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing
P305+P351+P338	IF IN EYES: Rinse continuously with water for several minutes. Remove contact lenses if present and easy to do - continue rinsing
P308+P313	IF exposed or concerned: Get medical advice/attention
P332+P313	If skin irritation occurs: Get medical advice/attention
P337+P313	If eye irritation persists, get medical advice/attention
P370+P378	In case of fire: Use dry sand, dry chemical or alcohol-resistant foam for extinction
P403+P233	Store in a well ventilated place. Keep container tightly closed
P403+P235	Store in a well ventilated place. Keep cool
P501	Dispose of contents/container to an approved waste disposal plant

Signal Word: Danger



Section 3 - Composition/Information on Ingredients

Chemical Name	CAS number	Weight Concentration %
Xylene (mixed isomers)	1330-20-7	30.00% - 40.00%
Aliphatic Petroleum Distillates	64742-89-8	5.00% - 10.00%
Ethylbenzene	100-41-4	1.00% - 5.00%

Section 4 - First Aid Measures

INHALATION - Remove from area to fresh air. If symptomatic, contact a poison control center, emergency room, or physician as further medical treatment may be necessary. Administer oxygen if a qualified operator is available.

EYE CONTACT - In case of eye contact, flush the eyes with water for fifteen (15) minutes. If contact lenses are worn, quickly remove them, then flush the eyes with water. If irritation persists, contact a poison control center, emergency room, or physician as further medical treatment may be necessary.

SKIN CONTACT - In case of skin contact, remove contaminated clothing. Flush the skin with large amounts of water, then wash the skin with soap and water. If symptoms persist, contact a poison control center, emergency room, or physician as further medical treatment may be necessary.

INGESTION - If material is ingested, seek immediate medical attention. Do not induce vomiting. If vomiting occurs spontaneously, keep the head below the hips to prevent aspiration of liquid into the lungs. Contact a poison control center, emergency room, or physician as further medical treatment will be necessary.

Section 5 - Fire Fighting Measures

Flash Point: 29 °C (84 °F)

LEL: 1.00

UEL: 7.00

EXTINGUISHING MEDIA: Use carbon dioxide (CO₂), "alcohol" foam, dry chemical

UNUSUAL FIRE OR EXPLOSION HAZARDS: The product vapor is heavier than air and may travel a considerable distance to a source of ignition and flashback. Closed containers may explode or burst when exposed to extreme heat. May produce hazardous decomposition products when exposed to extreme heat.

HAZARDOUS COMBUSTION PRODUCTS: See section 10 for a list of hazardous decomposition products for this mixture.

FIRE FIGHTING: Water spray may be ineffective. If water is used, fog nozzles are preferable. Water may be used to cool closed containers to prevent pressure build-up and possible autoignition or explosion when exposed to extreme heat. If evacuation of personnel is necessary, evacuate to an upwind area. Decontaminate personnel and equipment with a water wash-down after fire and smoke exposure.

FIRE FIGHTING EQUIPMENT: Firemen and emergency responders: wear full turnout gear or Level A equipment, including positive-pressure, self-contained breathing apparatus (SCBA).

Section 6 - Accidental Release Measures

SPILL AND LEAK PROCEDURES: Spill supervisor - Ensure cleanup personnel wear all appropriate Personal Protective Equipment (PPE), including respiratory protection. Remove all ignition sources. Keep nonessential personnel away from the contaminated area.

SMALL SPILLS: Ventilate the contaminated area. Using nonsparking tools, mix the appropriate sorbent into the spilled material. Use an absorbent like sawdust for aqueous, waterborne, and solvent-borne coatings.

Collect the saturated sorbent and transfer it into a covered container. Steel containers are acceptable for all wastes except wastes which contain acid. Use suitable plastic containers for acid-bearing wastes.

Dispose of the waste in compliance with all Federal, state, regional, and local regulations.

LARGE SPILLS: Prevent this material from entering sewers and watercourses by diking or impounding the spilled material. Advise authorities if the product has entered or may enter, sewers, watercourses, or extensive land areas.

Ventilate the contaminated area. Using nonsparking tools, mix the appropriate sorbent into the spilled material. Use an absorbent like sawdust for aqueous, waterborne, and solvent-borne coatings.

Collect the saturated sorbent and transfer it into a covered container. Steel containers are acceptable for all wastes except wastes which contain acid. Use suitable plastic containers for acid-bearing wastes.

Label the waste container. Dispose of the waste in compliance with all Federal, state, regional, and local regulations.

Section 7 - Handling and Storage

HANDLING PRECAUTIONS: Wear all appropriate Personal Protective Equipment (PPE). Wear respiratory protection or ensure adequate ventilation at all times as vapors can accumulate in confined or poorly ventilated areas. Use the product in a manner which minimizes splashes and/or the creation of dust. Keep containers closed when not in use. Do not handle or store material near heat, sparks, open flames, or other sources of ignition. Store at room temperatures, i.e., 50 to 85 °F (10 to 30 °C).

STORAGE: Prevent from freezing. Do not store above 95 °F (35 °C).

Store only in original containers.

Section 8 - Exposure Controls / Personal Protection

Chemical Name / CAS No.	OSHA Exposure Limits	ACGIH Exposure Limits	Other Exposure Limits
Xylene (mixed isomers) 1330-20-7	PEL 100 ppm - TWA PEL 150 ppm - STEL	TLV 100 ppm - TWA TLV 150 ppm - STEL	Not Established
Aliphatic Petroleum Distillates 64742-89-8	TWA: 500 ppm / 2000 mg/m ³ (Z-1) TWA: 400 ppm / 1600 mg/m ³ (p0)	TWA: 300 ppm	Not Established
Ethylbenzene 100-41-4	STEL - 125 ppm (Z-1) TWA - 100 ppm (Z-1)	STEL - 125 ppm TLV TWA - 20 ppm TLV	Not Established

ENGINEERING: Provide general dilution of local exhaust ventilation in volume and pattern to keep concentration of ingredients listed in Section 2 below the lowest suggested exposure limits, the LEL below the stated limit, and to remove decomposition products during welding or flame cutting.

This coating may contain materials classified as nuisance particulates (listed "as Dust" in Section 2) which may be present at hazardous levels only during sanding or abrading of the dried film. If no specific dusts are listed in Section 2, the applicable limits for nuisance dusts are ACGIH TLV 10 mg/m³ (total dust), 3 mg/m³ (respirable fraction), OSHA PEL 15 mg/m³ (total dust), 5 mg/m³ (respirable fraction).

Ensure processing (curing) ovens are properly vented to prevent the introduction of processing fumes into the workplace. Use explosion-proof equipment and good manufacturing practice.

VENTILATION: Use only with adequate ventilation, i.e., ventilation in compliance with occupational exposure limits. Refer to OSHA standards 1910.94, 1910.107, 1910.108.

PERSONAL PROTECTIVE EQUIPMENT

EYES:

Wear splash goggles. If extra protection is required, wear a face shield over the splash goggles. Face shields are effective only if worn in addition to splash goggles.

PROTECTIVE GLOVES:

Wear chemical-resistant gloves (butyl rubber or neoprene). Protective gloves should be inspected frequently and

discarded when they exhibit cuts, tears, pinholes, or signs of excessive wear. If necessary, wear a chemical-resistant, butyl-rubber apron and other protective clothing, as deemed appropriate, to avoid skin contact with material.

RESPIRATORY PROTECTION:

Respiratory protection may not be needed if the local exhaust is sufficient to maintain levels of hazardous ingredients below occupational exposure limits. Where ventilation is inadequate, use a NIOSH/MSHA-approved, air-purifying respirator equipped with the appropriate chemical cartridges or positive-pressure, air-supplied respirator. Read the respirator manufacturer's instructions and literature carefully to determine the type of airborne contaminants against which the respirator is effective, its limitations, and how it is to be properly fitted and used.

CONTAMINATED EQUIPMENT: Dispose of the waste in compliance with all Federal, state, regional, and local regulations.

Section 9 - Physical and Chemical Properties

This mixture typically exhibits the following properties under normal circumstances:

Appearance Red Liquid	Odor Solvent odor
Vapor Pressure 7.5 mm Hg @ 60 F	Vapor Density 3.7
Specific Gravity 1.20	Boiling range 116 - 144°C
Evaporation Rate Slower than ether	Lbs VOC/Gallon Solids 8.9
Lbs VOC/Gallon Less Water and Exempt Solvent 4.00	Physical State Liquid

Section 10 - Stability and Reactivity

Stability:

STABLE

Components of this mixture are incompatible with the following materials:

Strong oxidizing agents

This mixture is likely to exhibit the following combustion products:

Carbon Dioxide, Carbon Monoxide

Hazardous polymerization will not occur.

Section 11 - Toxicological Information

Component Toxicity

Toxicological information: The preparation has been assessed following the conventional method of the Dangerous Preparations Directive 1999/45/EC and classified for toxicological hazards accordingly. See Sections 3 and 15 for details.

Routes of Entry:

Inhalation Skin Contact Eye Contact

Exposure to this material may affect the following organs:

Kidneys Liver Central Nervous System Reproductive System

Effects of Overexposure

100-41-4

Ethylbenzene

Systemic Effects	Chronic exposure to ethyl benzene causes fatigue, headache, and eye and upper respiratory tract irritation. Repeated contact with the skin may cause drying, defatting, and dermatitis.
Eye Contact	May cause mild irritation. Symptoms include stinging, tearing, and redness.
Ingestion	Aspiration hazard if swallowed. Can enter lungs and cause damage. May be fatal if swallowed. Possible pneumonia if vomited.
Inhalation	May cause respiratory tract irritation. May cause mucous membrane irritation. Can cause central nervous system (CNS) depression. Exposure at high concentrations may cause narcosis. Symptoms of narcosis include fatigue, drowsiness, staggering gait, and incoordination.
Skin Contact	Absorbed through skin. May cause skin irritation. Skin inflammation is characterized by itching, scaling, reddening or, occasionally, blistering.

1330-20-7

Xylene (mixed)

Signs and symptoms of exposure to this material through breathing, swallowing, and/or passage of the material through the skin may include: redness of the face and neck, mouth and throat irritation (soreness, dry or scratchy feeling, cough), stomach or intestinal upset (nausea, vomiting, diarrhea), irritation (nose, throat, airways), tight feeling in the chest, central nervous system excitation (giddiness, liveliness, light-headed feeling) followed by central nervous system depression (dizziness, drowsiness, weakness, fatigue, nausea, headache, unconsciousness) and other central nervous system effects, effects on memory, respiratory depression (slowing of the breathing rate), shortness of breath, loss of coordination, confusion, irregular heartbeat, narcosis (dazed or sluggish feeling), coma.

Eye Contact	May cause mild irritation. Symptoms include stinging, tearing, and redness.
Ingestion	Swallowing small amounts of this material during normal handling is not likely to cause harmful effects. Swallowing large amounts may be harmful. This material can get into the lungs during swallowing or vomiting. This results in lung inflammation and other lung injury.
Inhalation	Breathing of vapor or mist is possible. Breathing small amounts of this material during normal handling is not likely to cause harmful effects. Breathing large amounts may be harmful. Symptoms are not expected at air concentrations below the recommended exposure limits.
Skin Contact	Can cause skin irritation. Prolonged and repeated contact may dry the skin. Symptoms may include redness, burning, and drying and cracking of the skin, burns and other skin damage. Additional symptoms of skin contact may include: skin blistering. Passage of this material into the body through the skin is possible, but it is unlikely that this would result in harmful effects during safe handling and use.

64742-89-8

VM&P Naphtha

Signs and symptoms of exposure to this material through breathing, swallowing, and/or passage of the material through the skin may include: sweating, fever, stomach or intestinal upset (nausea, vomiting, diarrhea), irritation (nose, throat, airways), lung irritation, central nervous system depression (dizziness, drowsiness, weakness, fatigue, nausea, headache, unconsciousness), abdominal pain, frequent or painful urination, confusion, blood abnormalities, (breakage of red blood cells), kidney damage, lung damage, respiratory failure.

Eye Contact

May cause mild irritation. Symptoms include stinging, tearing, and redness.

Ingestion

Swallowing small amounts of this material during normal handling is not likely to cause harmful effects. Swallowing large amounts may be harmful. This material can get into the lungs during swallowing or vomiting. This results in lung inflammation and other lung injury.

Inhalation

Breathing of vapor or mist is possible. Breathing small amounts of this material during normal handling is not likely to cause harmful effects. Breathing large amounts may be harmful. Symptoms are not expected at air concentrations below the recommended exposure limits.

Skin Contact

May cause mild skin irritation. Symptoms may include redness and burning of skin. Passage of this material into the body through the skin is possible, but it is unlikely that this would result in harmful effects during safe handling and use.

Carcinogenicity: The following chemicals comprise 0.1% or more of this mixture and are listed and/or classified as carcinogens or potential carcinogens by NTP, IARC, OSHA (mandatory listing), or ACGIH (optional listing). See Section 15 for carcinogenicity assessment.

<u>CAS Number</u>	<u>Description</u>	<u>% Weight</u>	<u>Carcinogen Rating</u>
100-41-4	Ethylbenzene	1% - 5%	IARC (2B) ACGIH (A3)

Section 12 - Ecological Information

Component Ecotoxicity

Xylene (mixed isomers)

Ecotoxicity

No data available

Persistence and Degradability

No data available

Bioaccumulative Potential

No data available

Mobility in Soil

No data available

Other Adverse Effects

Ozone Depletion Potential - Regulation: 40 CFR Protection of Environment; Part 82 Protection of Stratospheric Ozone - CAA Section 602 Class I Substances -

Remarks: This product neither contains, nor was manufactured with a Class I or Class II ODS as defined by the U.S. Clean Air Act Section 602 (40 CFR 82, Subpt. A, App.A + B).

An environmental hazard cannot be excluded in the event of unprofessional handling or disposal.

Ecotoxicity

Toxicity to fish - LC50; (Oncorhynchus mykiss (rainbow trout)): 10 mg/l;
Exposure time: 96 h
Toxicity to fish - LC50; (Oncorhynchus mykiss (rainbow trout)): 8.2 mg/l;
Exposure time: 96 h; Test Type: semi-static test
Toxicity to fish - LC50 (Pimephales promelas (fathead minnow)): 8.2 mg/l;
Exposure time: 96 h
Toxicity to daphnia and other aquatic invertebrates - EC50 (Daphnia magna (Water flea)): 4.5 mg/l; Exposure time: 48 h; Test Type: Immobilization
Toxicity to algae - EC50 (Pseudokirchneriella subcapitata (green algae)): 3.1 mg/l; Exposure time: 72 h
Toxicity to algae - EC50 (Pseudokirchneriella subcapitata (green algae)): 3.7 mg/l; Exposure time: 96 h; Test Type: static test
Toxicity to fish (Chronic Toxicity) - NOELR (Pimephales promelas (fathead minnow)): 2.6 mg/l; Exposure time: 14 d
Toxicity to daphnia and other aquatic invertebrates (Chronic Toxicity)- NOEL (Daphnia magna (Water flea)): 2.6 mg/l; Exposure time: 21 days
Chronic aquatic toxicity (Assessment) - Toxic to aquatic life with long lasting effects.

Persistence and Degradability

No data available

Bioaccumulative Potential

Partition coefficient: n-octanol/water - log Pow: 2.13 - 4.85 (25 °C)

Mobility in Soil

No data available

Other Adverse Effects

Ozone Depletion Potential - Regulation: 40 CFR Protection of Environment; Part 82 Protection of Stratospheric Ozone - CAA Section 602 Class I Substances -
Remarks: This product neither contains, nor was manufactured with a Class I or Class II ODS as defined by the U.S. Clean Air Act Section 602 (40 CFR 82, Subpt. A, App.A + B).

An environmental hazard cannot be excluded in the event of unprofessional handling or disposal.

Toxic to aquatic life with long lasting effects

Ethylbenzene

Ecotoxicity

Toxicity to fish - LC50 Oncorhynchus mykiss (rainbow trout): 4.2 mg/l; Exposure time: 96 h

Toxicity to daphnia and other aquatic invertebrates - EC50 Daphnia magna (Water flea): 1.8 - 2.4 mg/l; Exposure time: 48 h; Test type: static test

Toxicity to algae - EC50 Skeletonema costatum (marine diatom): 4.9 mg/l - Exposure time: 72 h; Test type: static test

Persistence and Degradability

Biodegradability aerobic - Exposure time 28 d Result: 70 - 80 % - Readily biodegradable.

Bioaccumulative Potential

Due to the distribution coefficient n-octanol/water, accumulation in organisms is not expected.

Mobility in Soil

No data available

Other Adverse Effects

Ozone Depletion Potential - Regulation: 40 CFR Protection of Environment; Part 82 Pro-tection of Stratospheric Ozone - CAA Section 602 Class I Substances - Remarks: This product neither contains, nor was manufactured with a Class I or Class II ODS as defined by the U.S. Clean Air Act Section 602 (40 CFR 82, Subpt. A, App.A + B).

An environmental hazard cannot be excluded in the event of unprofessional handling or disposal.

Harmful to aquatic life with long lasting effects.

Section 13 - Disposal Considerations

The generation of waste should be avoided or minimized wherever possible. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. This material and its container must be disposed of in a safe way. Care should be taken when handling emptied containers that have not been cleaned or rinsed out. Empty containers or liners may retain some product residues. Vapor from product residues may create a highly flammable or explosive atmosphere inside the container. Do not cut, weld or grind used containers unless they have been cleaned thoroughly internally. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

Section 14 - Transport Information

This material is classified for transport as follows:

<u>Agency</u>	<u>Proper Shipping Name</u>	<u>UN Number</u>	<u>Packing Group</u>	<u>Hazard Class</u>
DOT	Paint	1263	III	3

Section 15 - Regulatory Information

According to the Reg. (EC) No 1272/2008, relating of the classification packaging and labelling of dangerous substances and preparations, the product is labelled as follows:

State of California Safe Drinking Water and Toxic Enforcement Act of 1986 (Proposition 65): WARNING!

This product contains the following chemicals which are listed by the State of California as carcinogenic or a reproductive toxin:

Ethylbenzene 100-41-4 1 - 5%

Carcinogenicity:

IARC: Group 2B: Possibly carcinogenic to humans

ACGIH: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by ACGIH.

OSHA: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.

NTP: No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

Ethylbenzene 100-41-4 1 - 5%

Carcinogenicity:

IARC - No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

ACGIH - Confirmed animal carcinogen with unknown relevance to humans.

OSHA - No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.

NTP - No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

Carcinogenicity:

IARC - No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

ACGIH - No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by ACGIH.

OSHA - No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.

NTP - No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

Aliphatic Petroleum Distillates 64742-89-8 5 - 10%

Xylene (mixed isomers) 1330-20-7 30 - 40%

Commonwealth of Massachusetts "Right to Know": This product contains the following toxic or hazardous substances which appear on the Massachusetts Substance List:

Ethylbenzene 100-41-4 1 - 5%

Xylene (mixed) 1330-20-7 30 - 40%

New Jersey Worker and Community Right To Know Hazardous Substance List: The following substances appear on the New Jersey Right To Know Hazardous Substance List.

Ethylbenzene 100-41-4 1 - 5%

Aliphatic Petroleum Distillates 64742-89-8 5 - 10%

Xylene (mixed) 1330-20-7 30 - 40%

Commonwealth of Pennsylvania Worker and Community Right-To-Know Act: This product contains the following chemicals which appear on the Pennsylvania Hazardous Substance List:

Ethylbenzene 100-41-4 1 - 5%

Aliphatic Petroleum Distillates 64742-89-8 5 - 10%

Xylene (mixed) 1330-20-7 30 - 40%



Toxic Substances Control Act (TSCA): All chemicals except those listed below appear in the Toxic Substances Control Act Chemical Substance Inventory:

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product contains a chemical or chemicals which are subject to the reporting requirements of the Act, and Title 40 of the Code of Federal Regulations, part 372.

1330-20-7 Xylene (mixed isomers) 30 - 40%
 100-41-4 Ethylbenzene 1.0 - 5%

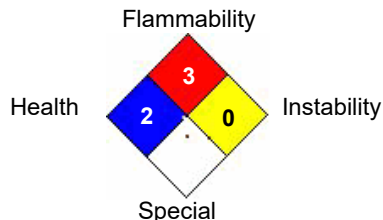
Section 16 - Other Information

Hazardous Material Information System (HMIS)

HEALTH	2
FLAMMABILITY	3
PHYSICAL HAZARD	0
PERSONAL PROTECTION	B

HMIS & NFPA Hazard Rating Legend
 * = Chronic Health Hazard
 0 = INSIGNIFICANT
 1 = SLIGHT
 2 = MODERATE
 3 = HIGH
 4 = EXTREME

National Fire Protection Association (NFPA)



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Reviewer Revision

Date Prepared: 2/25/2022



GOJO® NATURAL* ORANGE™ Pumice Hand

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Version 1.1 Revision Date: 02/12/2018 SDS Number: 400000005275 Date of last issue: 11/17/2016
 Date of first issue: 11/17/2016

Further information : Collect contaminated fire extinguishing water separately. This must not be discharged into drains. Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations.

Special protective equipment for firefighters : In the event of fire, wear self-contained breathing apparatus. Use personal protective equipment.

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Personal precautions, protective equipment and emergency procedures : Use personal protective equipment. Ensure adequate ventilation. Evacuate personnel to safe areas. Material can create slippery conditions.

Environmental precautions : Discharge into the environment must be avoided. Prevent further leakage or spillage if safe to do so. Prevent spreading over a wide area (e.g. by containment or oil barriers). Retain and dispose of contaminated wash water. Local authorities should be advised if significant spillages cannot be contained.

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Advice on safe handling : For personal protection see section 8. Do not swallow. Avoid contact with eyes. Keep container closed when not in use.

Conditions for safe storage : Keep in properly labelled containers. Keep container tightly closed in a dry and well-ventilated place. Store in accordance with the particular national regulations.

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Components	CAS-No.	Value type (Form of exposure)	Control parameters / Permissible concentration	Basis
C11-15 Alkane/cycloalkane	64742-47-8	TWA	200 mg/m ³ (As total hydrocarbon vapour)	CA BC OEL
		TWA	200 mg/m ³ (As total hydrocarbon vapour)	CA AB OEL
		TWA (Mist)	5 mg/m ³	CA AB OEL
		STEL (Mist)	10 mg/m ³	CA AB OEL


GOJO® NATURAL* ORANGE™ Pumice Hand


Version	Revision Date:	SDS Number:	Date of last issue: 11/17/2016
1.1	02/12/2018	400000005275	Date of first issue: 11/17/2016

Standard of the German Institute for Standardisation; DSL - Domestic Substances List (Canada); ECx - Concentration associated with x% response; ELx - Loading rate associated with x% response; EmS - Emergency Schedule; ENCS - Existing and New Chemical Substances (Japan); ErCx - Concentration associated with x% growth rate response; ERG - Emergency Response Guide; GHS - Globally Harmonized System; GLP - Good Laboratory Practice; IARC - International Agency for Research on Cancer; IATA - International Air Transport Association; IBC - International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk; IC50 - Half maximal inhibitory concentration; ICAO - International Civil Aviation Organization; IECSC - Inventory of Existing Chemical Substances in China; IMDG - International Maritime Dangerous Goods; IMO - International Maritime Organization; ISHL - Industrial Safety and Health Law (Japan); ISO - International Organisation for Standardization; KECI - Korea Existing Chemicals Inventory; LC50 - Lethal Concentration to 50 % of a test population; LD50 - Lethal Dose to 50% of a test population (Median Lethal Dose); MARPOL - International Convention for the Prevention of Pollution from Ships; n.o.s. - Not Otherwise Specified; Nch - Chilean Norm; NO(A)EC - No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NOELR - No Observable Effect Loading Rate; NOM - Official Mexican Norm; NTP - National Toxicology Program; NZIoC - New Zealand Inventory of Chemicals; OECD - Organization for Economic Co-operation and Development; OPPTS - Office of Chemical Safety and Pollution Prevention; PBT - Persistent, Bioaccumulative and Toxic substance; PICCS - Philippines Inventory of Chemicals and Chemical Substances; (Q)SAR - (Quantitative) Structure Activity Relationship; REACH - Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals; SADT - Self-Accelerating Decomposition Temperature; SDS - Safety Data Sheet; TCSI - Taiwan Chemical Substance Inventory; TDG - Transportation of Dangerous Goods; TSCA - Toxic Substances Control Act (United States); UN - United Nations; UNRTDG - United Nations Recommendations on the Transport of Dangerous Goods; vPvB - Very Persistent and Very Bioaccumulative; WHMIS - Workplace Hazardous Materials Information System

Revision Date : 02/12/2018

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

CA / EN



Safety Data Sheet – Gorilla Heavy Duty Construction

Date Revised: 08/19/2019
Date Issued: 07/09/2015

Version: 1.3

FOR CHEMICAL EMERGENCY:

During Business Hours: (800) 966-3458 | Outside Business Hours: (800) 420-7186

According to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

SECTION 1: IDENTIFICATION

Product Identifier

Product Name: Gorilla Heavy Duty Construction Adhesive

Synonyms: None

Intended Use of the Product

Construction Adhesive

Name, Address, and Telephone of the Responsible Party

Company

The Gorilla Glue Company

2101 E. Kemper Road

Cincinnati, Ohio 45241

513-271-3300

www.gorillatough.com

Emergency Telephone Number

Emergency number : 1-800-420-7186 (Prosar)

SECTION 2: HAZARDS IDENTIFICATION

Classification of the Substance or Mixture

Classification (GHS-US)

Skin Sens. 1 H317

Full text of H-phrases: see section 16

Label Elements

GHS-US Labeling

Hazard Pictograms (GHS-US)

:



GHS07

Signal Word (GHS-US)

: Warning

Hazard Statements (GHS-US)

: H317 - May cause an allergic skin reaction.

Precautionary Statements (GHS-US)

: P261 - Avoid breathing vapors, mist, or spray.
P272 - Contaminated work clothing must not be allowed out of the workplace.
P280 - Wear protective gloves.
P302+P352 – IF ON SKIN: Wash with plenty of water.
P333+P313 - If skin irritation or rash occurs: Get medical advice/attention.
P362+P364 - Take off contaminated clothing and wash it before reuse.
P501 - Dispose of contents/container in accordance with local, regional, national, territorial, provincial, and international regulations.

Other Hazards

Other Hazards: Small amounts of methanol (CAS# 67-56-1) are formed by hydrolysis and released upon curing.

Unknown Acute Toxicity (GHS-US) 11.55% of mixture consists of ingredient(s) on unknown toxicity.

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

Mixture

Name	Product Identifier	% (w/w)
Limestone	(CAS No) 1317-65-3	30 - 60
Carbonic acid, calcium salt (1:1)	(CAS No) 471-34-1	10 - 30
Stearic Acid	(CAS No) 57-11-4	1 - 5
Quartz*	(CAS No) 14808-60-7	0.1 - 1



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According to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

Tin, dibutylbis (2,4-pentanedionato-O,O')-, (OC-6-11)-	(CAS No) 22673-19-4	0.1 - 1
--	---------------------	---------

*Finely divided Quartz has caused cancer of the respiratory tract and lung disease in workers that inhaled it over an extended period of time. Studies suggest, however, that these hazards are not associated with other routes of exposure. The quartz in this formulation is in an adhesive matrix and is not expected to be "inhalable." Therefore, these hazards are not expected to be present.

SECTION 4: FIRST AID MEASURES

Description of First Aid Measures

General: Never give anything by mouth to an unconscious person. If you feel unwell, seek medical advice (show the label if possible).

Inhalation: If inhaled, remove to fresh air and keep at rest in a position comfortable for breathing. If you feel unwell, seek medical advice.

Skin Contact: Remove contaminated clothing. Gently wash with plenty of soap and water followed by rinsing with water for at least 15 minutes. Call a POISON CENTER or doctor/physician if you feel unwell. Wash contaminated clothing before reuse.

Eye Contact: Rinse cautiously with water for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Obtain medical attention.

Ingestion: Rinse mouth. Do not induce vomiting. Immediately call a POISON CENTER or doctor/physician.

Most Important Symptoms and Effects Both Acute and Delayed

General: May cause allergic skin reactions.

Inhalation: None known.

Skin Contact: May cause skin irritation and/or allergic skin reactions.

Eye Contact: None known.

Ingestion: Ingestion is likely to be harmful or have adverse effects.

Chronic Symptoms: None known.

Indication of Any Immediate Medical Attention and Special Treatment Needed

If medical advice is needed, have product container or label at hand.

SECTION 5: FIRE-FIGHTING MEASURES

Extinguishing Media

Suitable Extinguishing Media: Carbon dioxide, dry powder, water spray, and alcohol resistant foam.

Unsuitable Extinguishing Media: Do not use a heavy water stream. Use of heavy stream of water may spread fire.

Special Hazards Arising From the Substance or Mixture

Fire Hazard: Not flammable.

Explosion Hazard: Product is not explosive.

Reactivity: Hazardous reactions will not occur under normal conditions.

Advice for Firefighters

Precautionary Measures Fire: Exercise caution when fighting any chemical fire.

Firefighting Instructions: Do not allow run-off from fire fighting to enter drains or water courses.

Protection During Firefighting: Do not enter fire area without proper protective equipment, including respiratory protection.

Hazardous Combustion Products: Carbon oxides (CO, CO₂).

Reference to Other Sections

Refer to section 9 for flammability properties

SECTION 6: ACCIDENTAL RELEASE MEASURES

Personal Precautions, Protective Equipment and Emergency Procedures

General Measures: Do not get in eyes, on skin, or on clothing.

For Non-Emergency Personnel

Protective Equipment: Use appropriate personal protection equipment (PPE).

Emergency Procedures: Evacuate unnecessary personnel.



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For Emergency Personnel

Protective Equipment: Equip cleanup crew with proper protection.

Emergency Procedures: Upon arrival at the scene, a first responder is expected to recognize the presence of dangerous goods, protect oneself and the public, secure the area, and call for the assistance of trained personnel as soon as conditions permit.

Environmental Precautions

Prevent entry to sewers and public waters.

Methods and Material for Containment and Cleaning Up

For Containment: Absorb and/or contain spill with inert material, then place in suitable container.

Methods for Cleaning Up: Dispose of waste safely and in accordance with local, state, federal, national, and international regulations.

Reference to Other Sections

See heading 8, Exposure Controls and Personal Protection. Concerning disposal elimination after cleaning, see item 13.

SECTION 7: HANDLING AND STORAGE

Precautions for Safe Handling

Hygiene Measures: Handle in accordance with good industrial hygiene and safety procedures. Wash hands and other exposed areas with mild soap and water before eating, drinking, or smoking and again when leaving work.

Conditions for Safe Storage, Including Any Incompatibilities

Storage Conditions: Store in a dry, cool and well-ventilated place. Keep container closed when not in use. Keep out of reach of children and animals.

Incompatible Materials: None known.

Specific End Use(s)

Construction Adhesive

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

Control Parameters

For substances listed in section 3 that are not listed here, there are no established Exposure limits from the manufacturer, supplier, importer, or the appropriate advisory agency including: ACGIH (TLV), NIOSH (REL), OSHA (PEL), Canadian provincial governments, or the Mexican government.

Limestone (1317-65-3)		
USA NIOSH	NIOSH (TWA) (mg/m ³)	5 mg/m ³ (respirable dust) 10 mg/m ³ (total dust)
USA OSHA	OSHA PEL (mg/m ³)	5 mg/m ³ (respirable fraction) 15 mg/m ³ (total dust)
Alberta	OEL TWA (mg/m ³)	10 mg/m ³
British Columbia	OEL STEL (mg/m ³)	20 mg/m ³ (total dust)
British Columbia	OEL TWA (mg/m ³)	3 mg/m ³ (respirable fraction) 10 mg/m ³ (total dust)
New Brunswick	OEL TWA (mg/m ³)	10 mg/m ³ (particulate matter containing no Asbestos and <1% Crystalline Silica)
Nunavut	OEL TWA (mg/m ³)	5 mg/m ³ (respirable mass) 10 mg/m ³ (total mass)
Northwest Territories	OEL TWA (mg/m ³)	5 mg/m ³ (respirable mass) 10 mg/m ³ (total mass)
Québec	VEMP (mg/m ³)	10 mg/m ³ (Limestone, containing no Asbestos and <1% Crystalline Silica-total dust)
Saskatchewan	OEL STEL (mg/m ³)	20 mg/m ³
Saskatchewan	OEL TWA (mg/m ³)	10 mg/m ³
Yukon	OEL TWA (mg/m ³)	30 mppcf



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Yukon	OEL TWA (mg/m ³)	10 mg/m ³
Mexico	OEL TWA (mg/m ³)	10 mg/m ³
Mexico	OEL STEL (mg/m ³)	20 mg/m ³
Carbonic acid, calcium salt (1:1) (471-34-1)		
USA NIOSH	NIOSH (TWA) (mg/m ³)	5 mg/m ³ (respirable dust)
USA NIOSH	NIOSH (TWA) (mg/m ³)	10 mg/m ³ (total dust)
Quartz (14808-60-7)		
USA ACGIH	ACGIH TWA (mg/m ³)	0.025 mg/m ³ (respirable fraction)
USA ACGIH	ACGIH chemical category	A2 – Suspected Human Carcinogen
USA OSHA	OSHA PEL TWA (mppcf)	250 mppcf/% SiO ₂ +5 (respirable fraction)
USA OSHA	OSHA PEL TWA (mg/m ³)	10 mg/m ³ /%SiO ₂ +2 (respirable fraction)
USA OSHA	OSHA PEL TWA (mg/m ³)	30 mg/m ³ /%SiO ₂ +2 (total dust)
USA NIOSH	NIOSH REL (TWA) (mg/m ³)	0.05 mg/m ³ (respirable dust)
USA IDLH	US IDLH (mg/m ³)	50 mg/m ³ (respirable dust)
Alberta	OEL TWA (mg/m ³)	0.025 mg/m ³ (respirable particulate)
British Columbia	OEL TWA (mg/m ³)	0.025 mg/m ³ (respirable)
Manitoba	OEL TWA (mg/m ³)	0.025 mg/m ³ (respirable fraction)
New Brunswick	OEL TWA (mg/m ³)	0.1 mg/m ³ (respirable fraction)
Newfoundland & Labrador	OEL TWA (mg/m ³)	0.025 mg/m ³ (respirable fraction)
Nova Scotia	OEL TWA (mg/m ³)	0.025 mg/m ³ (respirable fraction)
Nunavut	OEL TWA (mg/m ³)	0.1 mg/m ³ (respirable mass) 0.3 mg/m ³ (total mass)
Northwest Territories	OEL TWA (mg/m ³)	0.1 mg/m ³ (respirable mass) 0.3 mg/m ³ (total mass)
Ontario	OEL Ceiling (mg/m ³)	0.1 mg/m ³ (designated substances regulation-respirable)
Prince Edward Island	OEL TWA (mg/m ³)	0.025 mg/m ³ (respirable fraction)
Québec	VEMP (mg/m ³)	0.1 mg/m ³ (respirable dust)
Saskatchewan	OEL TWA (mg/m ³)	0.05 mg/m ³ (respirable fraction)
Yukon	OEL TWA (mg/m ³)	300 particle/mL
Mexico	OEL TWA (mg/m ³)	0.1 mg/m ³
Tin, dibutylbis(2,4-pentanedionato-O,O'), (OC-6-11)- (22673-19-4)		
USA ACGIH	ACGIH STEL (mg/m ³)	0.2 mg/m ³ Sn
USA ACGIH	ACGIH TWA (mg/m ³)	0.1 mg/m ³ Sn
USA NIOSH	NIOSH (TWA) (mg/m ³)	0.1 mg/m ³ except Cyhexatin Sn
USA IDLH	US IDLH (mg/m ³)	25 mg/m ³ Sn
USA OSHA	OSHA PEL (mg/m ³)	0.1 mg/m ³ Sn
Mexico	OEL TWA (mg/m ³)	0.1 mg/m ³
Mexico	OEL STEL (mg/m ³)	0.2 mg/m ³
Methanol* (67-56-1)		
USA ACGIH	ACGIH STEL (ppm)	250 ppm
USA ACGIH	ACGIH TWA (ppm)	200 ppm
USA NIOSH	NIOSH (TWA) (ppm)	200 ppm
USA NIOSH	NIOSH (TWA) (mg/m ³)	260 mg/m ³
USA NIOSH	NIOSH (STEL) (ppm)	250 ppm
USA NIOSH	NIOSH (STEL) (mg/m ³)	325 mg/m ³
USA IDLH	US IDLH (ppm)	6000 ppm
USA OSHA	OSHA PEL (ppm)	200 ppm



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USA OSHA	OSHA PEL (mg/m ³)	260 mg/m ³
Mexico	OEL TWA (ppm)	200 ppm
Mexico	OEL TWA (mg/m ³)	260 mg/m ³
Mexico	OEL STEL (ppm)	250 ppm
Mexico	OEL STEL (mg/m ³)	310 mg/m ³

*Small amounts of Methanol are formed by hydrolysis and released upon curing.

Exposure Controls

Appropriate Engineering Controls: Emergency eye wash fountains and safety showers should be available in the immediate vicinity of any potential exposure. Provide sufficient ventilation to keep vapors below permissible exposure limit. Ensure all national/local regulations are observed.

Personal Protective Equipment: Protective clothing. Safety glasses. Gloves.



Materials for Protective Clothing: Chemically resistant materials and fabrics.

Hand Protection: Wear chemically resistant protective gloves.

Eye Protection: Chemical goggles or safety glasses.

Skin and Body Protection: Wear suitable protective clothing.

Respiratory Protection: Use a NIOSH-approved respirator or self-contained breathing apparatus whenever exposure may exceed established Occupational Exposure Limits.

Other Information: When using, do not eat, drink or smoke.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

Information on Basic Physical and Chemical Properties

Physical State	: Paste
Appearance	: White
Odor	: Musty
Odor Threshold	: Not available
pH	: Not applicable
Evaporation Rate	: Not available
Melting Point	: Not available
Freezing Point	: Not available
Boiling Point	: Not available
Flash Point	: > 93.3 °C (>200 °F)
Auto-ignition Temperature	: Not available
Decomposition Temperature	: Not available
Flammability (solid, gas)	: Not available
Lower Flammable Limit	: Not available
Upper Flammable Limit	: Not available
Vapor Pressure	: Not available
Relative Vapor Density at 20 °C	: Not available
Relative Density	: Not available
Specific gravity	: Not available
Density	: 1.7 g/cm ³
Solubility	: Insoluble in water.



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Partition Coefficient: N-Octanol/Water	:	Not available
Viscosity	:	Not available
VOC (%)	:	2
Solid Content (%)	:	95
Explosion Data – Sensitivity to Mechanical Impact	:	Not expected to present an explosion hazard due to mechanical impact.
Explosion Data – Sensitivity to Static Discharge	:	Not expected to present an explosion hazard due to static discharge.

SECTION 10: STABILITY AND REACTIVITY

Reactivity: None known.

Chemical Stability: Stable under recommended handling and storage conditions (see section 7).

Possibility of Hazardous Reactions: Hazardous polymerization will not occur.

Conditions to Avoid: Direct sunlight. Extremely high or low temperatures.

Incompatible Materials: None known.

Hazardous Decomposition Products: Carbon oxides (CO, CO₂).

SECTION 11: TOXICOLOGICAL INFORMATION

Information on Toxicological Effects - Product

Acute Toxicity: Not available

LD50 and LC50 Data: Not available

Skin Corrosion/Irritation: Not available

pH: Not applicable

Serious Eye Damage/Irritation: Not available

pH: Not applicable

Respiratory or Skin Sensitization: Not available

Germ Cell Mutagenicity: Not available

Teratogenicity: Not available

Carcinogenicity: Not available

Specific Target Organ Toxicity (Repeated Exposure): Not available

Reproductive Toxicity: Not available

Specific Target Organ Toxicity (Single Exposure): Not available

Aspiration Hazard: Not available

Symptoms/Injuries After Inhalation: Not available

Symptoms/Injuries After Skin Contact: May cause skin irritation or an allergic skin reaction.

Symptoms/Injuries After Eye Contact: Not available

Symptoms/Injuries After Ingestion: Ingestion is likely to be harmful or have adverse effects.

Chronic Symptoms: Not available

Information on Toxicological Effects - Ingredient(s)

LD50 and LC50 Data:

Limestone (1317-65-3)	
Oral LD50 Rat	>5000 mg/kg
Carbonic acid, Calcium salt (1:1) (471-34-1)	
LD50 Oral Rat	6450 mg/kg
LD50 Dermal	> 2000 mg/kg
LC50 Inhalation Rat	> 3 mg/ml (Exposure time: 4 h)
Stearic acid (57-11-4)	
LD50 Oral Rat	> 5000 mg/kg
LD50 Dermal Rabbit	> 5 g/kg



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Quartz (14808-60-7)

Oral LD50 Rat

>5000 mg/kg

SECTION 12: ECOLOGICAL INFORMATION

Toxicity Not available

Persistence and Degradability Not available

Bioaccumulative Potential Not available

Mobility in Soil Not available

Other Adverse Effects

Other Information: Avoid release to the environment.

SECTION 13: DISPOSAL CONSIDERATIONS

Sewage Disposal Recommendations: Do not dispose of waste into sewer.

Waste Disposal Recommendations: Dispose of waste material in accordance with all local, regional, national, provincial, territorial and international regulations.

SECTION 14: TRANSPORT INFORMATION

In Accordance with DOT Not regulated for transport

In Accordance with IMDG Not regulated for transport

In Accordance with IATA Not regulated for transport

In Accordance with TDG Not regulated for transport

SECTION 15: REGULATORY INFORMATION

US Federal Regulations

Gorilla Heavy Duty Construction Adhesive

TSCA – Toxic Substance Control Act

The ingredients in this product are listed within this act.

US State Regulations

Gorilla Heavy Duty Construction Adhesive

California Prop 65: This product contains one or more substances listed on Proposition 65 at or above 0.01 wt. %.

1,2-Benzenedicarboxylic acid, di-C9-11-branched alkyl esters, C10-rich (68515-49-1)

Quartz (14808-60-7)

Methanol (67-56-1)

Canadian Regulations

Gorilla Heavy Duty Construction Adhesive

WHMIS Classification

Class D Division 2 Subdivision B - Toxic material causing other toxic effects



The ingredients in this product are listed on or are exempt from the Canadian Domestic Substances List. This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations (CPR) and the SDS contains all of the information required by CPR.



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SECTION 16: OTHER INFORMATION, INCLUDING DATE OF PREPARATION OR LAST REVISION

Revision Date : 04/27/18
Other Information : This document has been prepared in accordance with the SDS requirements of the OSHA Hazard Communication Standard 29 CFR 1910.1200.

GHS Full Text Phrases:

Skin Sens. 1	Skin sensitization Category 1
H317	May cause an allergic skin reaction

HMIS

HEALTH	2
FLAMMABILITY	1
PHYSICAL HAZARD	0

Party Responsible for the Preparation of This Document

The Gorilla Glue Company
+1 513-271-3300

The information presented in this Safety Data Sheet was prepared by qualified personnel and to the best of our knowledge is true and accurate. The information and recommendations are furnished for this product with the understanding that the purchaser will independently determine the suitability of the product for this purpose. This data does not constitute a warranty, expressed or implied, statutory or otherwise, nor is it representation for which The Gorilla Glue Company assumes legal responsibility. The data is submitted for the user's information and consideration only. Any use of this product must be determined by the user to be in accordance with applicable federal, state, provincial and local laws and regulations.

Gorilla Heavy Duty Construction Adhesive NA GHS SDS

Material Safety Data Sheet

24 Hour Assistance:
1-847-367-7700
Rust-Oleum Corp.
www.rustoleum.com

Section 1 - Chemical Product / Company Information

Product Name: High Performance V2100 System Enamel Revision Date: 03/26/2009
 Identification Number: V2115838, V2124838, V2125838, V2133838, V2137838, V2143838, V2147838, V2148838, V2155838, V2156838, V2163838, V2164838, V2171838, V2175838, V2178838, V2179838, V2183838, V2187838, V2190838, V2192838, V2123838
 Product Use/Class: Topcoat/Aerosols
 Supplier: Rust-Oleum Corporation Manufacturer: Rust-Oleum Corporation
 11 Hawthorn Parkway 11 Hawthorn Parkway
 Vernon Hills, IL 60061 Vernon Hills, IL 60061
 USA USA
 Preparer: Regulatory Department

Section 2 - Composition / Information On Ingredients

Chemical Name	CAS Number	Weight % Less Than				OSHA PEL-TWA	OSHA PEL CEILING
		ACGIH TLV-TWA	ACGIH TLV-STEL	OSHA PEL-TWA	OSHA PEL CEILING		
Liquefied Petroleum Gas	68476-86-8	25.0	1000 ppm	N.E.	1000 ppm	N.E.	
Acetone	67-64-1	20.0	500 ppm	750 ppm	750 ppm	N.E.	
n-Butyl Acetate	123-86-4	10.0	150 ppm	200 ppm	150 ppm	N.E.	
Xylene	1330-20-7	10.0	100 ppm	150 ppm	100 ppm	N.E.	
Methyl Ethyl Ketone	78-93-3	10.0	200 ppm	300 ppm	200 ppm	N.E.	
Titanium Dioxide	13463-67-7	5.0	10 mg/m3	N.E.	10 mg/m3	N.E.	
Ethylbenzene	100-41-4	5.0	100 ppm	125 ppm	100 ppm	N.E.	
Propylene Glycol Monobutyl Ether	5131-66-8	5.0	N.E.	N.E.	N.E.	N.E.	
Aromatic Petroleum Distillates	64742-94-5	5.0	10 ppm	N.E.	10 ppm	N.E.	

Section 3 - Hazards Identification

*** Emergency Overview ***: Contains Aromatic Distillate, which may cause cancer. Contents Under Pressure. Harmful if inhaled. May affect the brain or nervous system causing dizziness, headache or nausea. Harmful if swallowed. Extremely flammable liquid and vapor. Vapors may cause flash fire or explosion.

Effects Of Overexposure - Eye Contact: Causes eye irritation.

Effects Of Overexposure - Skin Contact: Prolonged or repeated contact may cause skin irritation. Substance may cause slight skin irritation.

Effects Of Overexposure - Inhalation: High vapor concentrations are irritating to the eyes, nose, throat and lungs. Harmful if inhaled. High gas, vapor, mist or dust concentrations may be harmful if inhaled. Avoid breathing vapors or mists.

Effects Of Overexposure - Ingestion: Aspiration hazard if swallowed; can enter lungs and cause damage. Substance may be harmful if swallowed.

Effects Of Overexposure - Chronic Hazards: IARC lists Ethylbenzene as a possible human carcinogen (group 2B). Contains Titanium Dioxide. Titanium Dioxide is listed as a Group 2B-"Possibly carcinogenic to humans" by IARC.

Significant exposure is not anticipated during brush application or drying. Risk of overexposure depends on duration and level of exposure to dust from repeated sanding of surfaces or spray mist and the actual concentration of Titanium Dioxide in the formula.

May cause central nervous system disorder (e.g., narcosis involving a loss of coordination, weakness, fatigue, mental confusion, and blurred vision) and/or damage. Reports have associated repeated and prolonged occupational overexposure to solvents with permanent brain and nervous system damage. Overexposure to xylene in laboratory animals has been associated with liver abnormalities, kidney, lung, spleen, eye and blood damage as well as reproductive disorders. Effects in humans, due to chronic overexposure, have included liver, cardiac abnormalities and nervous system damage. Overexposure to methyl ethyl ketone in laboratory animals has been associated with liver abnormalities, kidney and lung damage. Fetotoxic/embryotoxic effects from inhalation have been seen in rats exposed to >1000ppm during gestation.

Primary Route(s) Of Entry: Skin Contact, Skin Absorption, Inhalation, Eye Contact

Section 4 - First Aid Measures

First Aid - Eye Contact: Immediately flush eyes with plenty of water for at least 15 minutes holding eyelids open. Get medical attention.

First Aid - Skin Contact: Wash with soap and water. Get medical attention if irritation develops or persists.

First Aid - Inhalation: If you experience difficulty in breathing, leave the area to obtain fresh air. If continued difficulty is experienced, get medical assistance immediately.

First Aid - Ingestion: Aspiration hazard: Do not induce vomiting or give anything by mouth because this material can enter the lungs and cause severe lung damage. Get immediate medical attention.

Section 5 - Fire Fighting Measures

Flash Point: -156 F
(Setaflash)

LOWER EXPLOSIVE LIMIT: 0.7 %
UPPER EXPLOSIVE LIMIT : 12.8 %

Extinguishing Media: Dry Chemical, Foam, Water Fog

Unusual Fire And Explosion Hazards: Water spray may be ineffective. FLASH POINT IS LESS THAN 20 °. F. - EXTREMELY FLAMMABLE LIQUID AND VAPOR! Closed containers may explode when exposed to extreme heat. Vapors may form explosive mixtures with air. Vapors can travel to a source of ignition and flash back. Keep containers tightly closed. Isolate from heat, electrical equipment, sparks and open flame. Perforation of the pressurized container may cause bursting of the can.

Special Firefighting Procedures: Evacuate area and fight fire from a safe distance.

Section 6 - Accidental Release Measures

Steps To Be Taken If Material Is Released Or Spilled: Contain spilled liquid with sand or earth. DO NOT use combustible materials such as sawdust. Remove all sources of ignition, ventilate area and remove with inert absorbent and non-sparking tools. Dispose of according to local, state (provincial) and federal regulations. Do not incinerate closed containers.

Section 7 - Handling And Storage

Handling: Follow all MSDS/label precautions even after container is emptied because it may retain product residues. Avoid breathing vapor or mist. Wash thoroughly after handling. Use only in a well-ventilated area. Wash hands before eating.

Storage: Keep containers tightly closed. Isolate from heat, electrical equipment, sparks and open flame. Do not store above 120 ° F. Store large quantities in buildings designed and protected for storage of NFPA Class I flammable liquids. Contents under pressure. Do not expose to heat or store above 120 ° F.

Section 8 - Exposure Controls / Personal Protection

Engineering Controls: Prevent build-up of vapors by opening all doors and windows to achieve cross-ventilation. Use process enclosures, local exhaust ventilation, or other engineering controls to control airborne levels below recommended exposure limits. Use explosion-proof ventilation equipment.

Respiratory Protection: A respiratory protection program that meets OSHA 1910.134 and ANSI Z88.2 requirements must be followed whenever workplace conditions warrant a respirator's use. A NIOSH/MSHA approved air purifying respirator with an organic vapor cartridge or canister may be permissible under certain circumstances where airborne concentrations are expected to exceed exposure limits.

Protection provided by air purifying respirators is limited. Use a positive pressure air supplied respirator if there is any potential for an uncontrolled release, exposure levels are not known, or in any other circumstances where air purifying respirators may not provide adequate protection.

Skin Protection: Use impervious gloves to prevent skin contact and absorption of this material through the skin. Nitrile or Neoprene gloves may afford adequate skin protection.

Eye Protection: Use safety eyewear designed to protect against splash of liquids.

Other protective equipment: Refer to safety supervisor or industrial hygienist for further information regarding personal protective equipment and its application.

Hygienic Practices: Wash thoroughly with soap and water before eating, drinking or smoking.

Section 9 - Physical And Chemical Properties

Boiling Range:	-34 - 650 F	Vapor Density:	Heavier than Air
Odor:	Solvent Like	Odor Threshold:	N.E.
Appearance:	Aerosolized Mist	Evaporation Rate:	Faster than Ether
Solubility in H ₂ O:	Slight		
Freeze Point:	N.D.	Specific Gravity:	0.827
Vapor Pressure:	N.D.	PH:	N.A.
Physical State:	Liquid		

(See section 16 for abbreviation legend)

Section 10 - Stability And Reactivity

Conditions To Avoid: Avoid temperatures above 120° F. Avoid all possible sources of ignition.

Incompatibility: Incompatible with strong oxidizing agents, strong acids and strong alkalies.

Hazardous Decomposition: When heated to decomposition, it emits acrid smoke and irritating fumes. By open

flame, carbon monoxide and carbon dioxide.

Hazardous Polymerization: Will not occur under normal conditions.

Stability: This product is stable under normal storage conditions.

Section 11 - Toxicological Information

Product LD50: N.D.

Product LC50: N.D.

Chemical Name	LD50	LC50
Liquefied Petroleum Gas	N.E.	N.E.
Acetone	5800 mg/kg (Rat)	50100 mg/m3 (Rat, 8Hr)
n-Butyl Acetate	13100 mg/kg (Rat, Oral)	2000 ppm (Rat, Inhalation, 4 Hr)
Xylene	4300 mg/kg (Rat, Oral)	5000 ppm (Rat, Inhalation, 4Hr)
Methyl Ethyl Ketone	N.E.	N.E.
Titanium Dioxide	>7500 mg/kg (Rat, Oral)	N.E.
Ethylbenzene	3500 mg/kg (Rat, Oral)	N.E.
Propylene Glycol Monobutyl Ether	2200 mg/kg (Rat, Oral)	N.E.
Aromatic Petroleum Distillates	4900 mg/kg (Rat, Oral)	N.E.

Section 12 - Ecological Information

Ecological Information: Product is a mixture of listed components.

Section 13 - Disposal Information

Disposal Information: Dispose of material in accordance to local, state and federal regulations and ordinances. Do not allow to enter storm drains or sewer systems.

Section 14 - Transportation Information

DOT Proper Shipping Name:	Aerosols	Packing Group:	N.A.
DOT Technical Name:	N.A.	Hazard Subclass:	N.A.
DOT Hazard Class:	2.1	Resp. Guide Page:	126
DOT UN/NA Number:	UN1950		

Section 15 - Regulatory Information

CERCLA - SARA Hazard Category

This product has been reviewed according to the EPA "Hazard Categories" promulgated under Sections 311 and 312 of the Superfund Amendment and Reauthorization Act of 1986 (SARA Title III) and is considered, under applicable definitions, to meet the following categories:

IMMEDIATE HEALTH HAZARD, CHRONIC HEALTH HAZARD, FIRE HAZARD, PRESSURIZED GAS HAZARD

SARA Section 313:

Listed below are the substances (if any) contained in this product that are subject to the reporting requirements of Section 313 of Title III of the Superfund Amendment and Reauthorization Act of 1986 and 40 CFR part 372:

<u>Chemical Name</u>	<u>CAS Number</u>
Xylene	1330-20-7
Methyl Ethyl Ketone	78-93-3
Ethylbenzene	100-41-4
Aromatic Petroleum Distillates	64742-94-5

Toxic Substances Control Act:

Listed below are the substances (if any) contained in this product that are subject to the reporting requirements of TSCA 12(B) if exported from the United States:

U.S. State Regulations: As follows -

New Jersey Right-to-Know:

The following materials are non-hazardous, but are among the top five components in this product.

<u>Chemical Name</u>	<u>CAS Number</u>
Alkyd Resin	PROPRIETARY

Pennsylvania Right-to-Know:

The following non-hazardous ingredients are present in the product at greater than 3%.

<u>Chemical Name</u>	<u>CAS Number</u>
Alkyd Resin	PROPRIETARY
Barium Sulfate	7727-43-7

California Proposition 65:

WARNING! This product contains a chemical(s) known by the State of California to cause cancer.

WARNING! This product contains a chemical(s) known to the State of California to cause birth defects or other reproductive harm.

International Regulations: As follows -

CANADIAN WHMIS:

This MSDS has been prepared in compliance with Controlled Product Regulations except for the use of the 16 headings.

CANADIAN WHMIS CLASS: AB5 D2A D2B

Section 16 - Other Information

HMIS Ratings:

Health: 2*

Flammability: 4

Reactivity: 0

Personal Protection: X

REASON FOR REVISION: Regulatory Update

Legend: N.A. - Not Applicable, N.E. - Not Established, N.D. - Not Determined

The information contained on this MSDS has been checked and should be accurate. However, it is the responsibility of the user to comply with all Federal, State, and Local laws and regulations.

Section 1: Product and Company Identification

Manufacturer: AMSOIL, Inc. Telephone:
 925 Tower Avenue CHEMTREC (Spill Emergency Only): 1-800-424-9300
 Superior, WI 54880 Information: 715-392-7101

Product Code	GLA, NLGI #0	GLB, NLGI #1	GLC, NLGI #2
Label Name	High Temperature MP Synthetic Lithium Complex Grease		

Product UseLUBRICATING GREASE

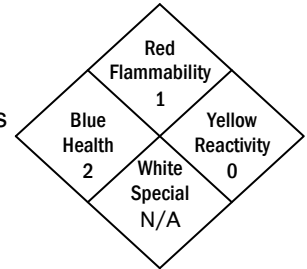
Section 2: Composition/Information on Ingredients

OSHA HAZARDOUS COMPONENTS (29 CFR 1910.1200)

This product is not formulated to contain ingredients that have exposure limits exceeding those established by US agencies.

*See Section 8 for exposure limits.

NFPA & HMIS Rating



Section 3: Hazards Identification

POTENTIAL HEALTH EFFECTS: Minor eye, inhalation and skin irritant.

*See Section 11 for toxicological information.

Section 4: First Aid Measures

- EYE: Flush with water for 15-20 minutes. Seek medical attention if irritation develops.
- SKIN: Wash immediately with soap and water. Remove contaminated clothing and launder before reuse. Discard shoes and leather articles saturated with the product. Obtain medical advice if irritation occurs.
- INHALATION: Remove exposed person to fresh air. If breathing is labored give oxygen. If breathing has stopped apply artificial respiration. Get immediate medical attention.
- INGESTION: DO NOT INDUCE VOMITING. If conscious, give 2 glasses of water. If vomiting does occur, keep head below hips to reduce risk of aspiration. Get immediate medical attention.

Section 5: Fire Fighting Measures

FLAMMABILITY PROPERTIES:

	GLA, NLGI #0	GLB, NLGI #1	GLC, NLGI #2
Flash Point	450°F(232°C)		

MethodCOC ASTM D-92
 LFL/UFLNot Determined
 Auto-ignition TemperatureNot Determined

EXTINGUISHING MEDIA: Carbon dioxide, dry chemical, and alcohol foam.

Product Code: GLA, High Temperature MP Synthetic Lithium Complex Grease, NLGI #0
 GLB, High Temperature MP Synthetic Lithium Complex Grease, NLGI #1
 GLC, High Temperature MP Synthetic Lithium Complex Grease, NLGI #2

AMSOIL Material Safety Data Sheet

Date Issued/Revised: February 9, 2012
Supersedes: October 17, 2005

FIREFIGHTING EQUIPMENT: Full bunker gear recommended including a positive pressure self-contained breathing apparatus.

Section 6: Accidental Release Measures

Isolate spill area. Provide adequate ventilation. Wear appropriate personal protection. Recover free product for recycle and/or disposal. Add sand, earth or other suitable absorbent to spill area. Prevent entry into sewers and waterways. Check under Transportation and Labeling (DOT/CERCLA) and Other Regulator Information Section (SARA) for hazardous substances to determine regulatory reporting requirements for spill.

Section 7: Handling and Storage

HANDLING: Keep containers closed. Avoid contact with eyes, skin or clothing. Wash hands after handling. Empty container may retain product residue which may exhibit hazards of product.

STORAGE: Keep away from heat or flame.

Section 8: Exposure Controls/Personal Protection

VENTILATION: Use adequate general or local exhaust ventilation to keep airborne concentrations below exposure limits.

RESPIRATORY: Use a NIOSH approved respirator when necessary.

SKIN: Use Viton or Nitrile gloves to avoid prolonged or repeated skin contact.

EYE: Use splash goggles or face shield where splashing is expected or can occur.

EXPOSURE LIMITS: The Threshold Limit Value (TLV) of 5 mg/m³ is suggested for oil mist.

Section 9: Physical and Chemical Properties

	GLA, NLGI #0	GLB, NLGI #1	GLC, NLGI #2
Physical State	Semi-Solid		
Boiling Point	600°F(316C)		
Melting Point	500°F(260°C)		
Vapor Pressure	Not Determined		
Vapor Density (Air=1)	Negligible		
Evaporation Rate	Not Determined		
Solubility in Water	Negligible		
Specific Gravity (Water=1)	0.8900		
Volatility (Volume)	Negligible		
VOC	Unknown		
pH	Essentially Neutral		
Odor	Mild, Bland Odor		
Odor Threshold	Not Determined		
Appearance	Red Semi-Solid		
Viscosity, cSt @ 100°C	13	14	18
Viscosity, cSt @ 40°C	110	110	155

Section 10: Stability and Reactivity

STABILITY: Stable under moderately elevated temperatures and pressures.

INCOMPATIBILITY: Avoid contact with strong oxidants.

HAZARDOUS POLYMERIZATION: Will not occur.

HAZARDOUS DECOMPOSITION OF PRODUCT: Toxic oxides of carbon, aldehydes and other products of incomplete combustion.

Section 11: Toxicological Information**ACUTE EXPOSURE**

- Eye Irritation: Moderate to strong eye irritation. Based on data from components or similar material.
- Skin Irritation: Not expected to be a primary skin irritant. Based on data from components or similar material. Prolonged or repeated skin contact as from clothing wet with material may cause dermatitis. Symptoms may include redness, edema, drying, defatting, and cracking of the skin.
- Respiratory Irritation: If material is misted or if vapors are generated from heating, exposure may cause irritation of mucous membranes and the upper respiratory tract similar to that observed with mineral oil. Based on data from components or similar materials. Under good industrial hygiene practices where all exposure limits are observed, respiratory irritation should not be a problem.

CHRONIC EXPOSURE

- Chronic Toxicity: No data available to indicate product present at greater than 1.0% are chronic health hazards.
- Carcinogenicity: No data available to indicate product present at greater than 0.1% are a carcinogenic hazard.
- Mutagenicity: No data available to indicate product present at greater than 1.0% present a mutagenic or genotoxic hazard.
- Reproductive Toxicity: No data available to indicate product present at greater than 1.0% present a reproductive hazard.
- Teratogenicity: No data available to indicate product present at greater than 1.0% present a teratogenic hazards.

ADDITIONAL INFORMATION

- Exposure Limits: Under conditions which may generate mists, observe the OSHA PEL of 5 mg per cubic meter.

Section 12: Ecological Information

No data available on the adverse effects of this product on the environment.

Section 13: Disposal Considerations

If this product as supplied becomes a waste, it does not meet the criteria of a hazardous waste as defined under the Resource Conservation and Recovery Act (RCRA) 40 CFR 261.

Section 14: Transport Information

This product is not classified as hazardous material for DOT shipping. For further information relative to spills resulting from transportation incidents, refer to the latest DOT Emergency Response Guidebook for Hazardous Materials.

Section 15: Regulatory Information

U.S. Federal Regulations

- OSHA Table Z Synthetic Base Stock (mist)
- TSCA All components of this material are listed on the U.S. TSCA Inventory.
- CERCLA 40 CFR 302.4 Zinc and Compounds@ 0-2%, Statutory RQ 1 lb
- SARA Title III
 - Section 302 Extremely Hazardous Not Applicable
 - Section 311/312
 - Fire Hazard Yes
 - Reactive Hazard No
 - Release of Pressure No
 - Acute Health Hazard Yes
 - Chronic Health Hazard No
 - Section 313 Toxic Chemical Not Applicable

U.S. State Regulations

- California (Prop 65)
 - Does not contain chemicals known to the state of California to cause cancer.

International Regulations

- WHMIS All components listed

Section 16: Other Information

The information and recommendations contained herein are, to the best of AMSOIL's knowledge and belief, accurate and reliable as of the date issued. AMSOIL makes no warranty or guarantee, expressed or implied, of their accuracy or reliability, and AMSOIL shall not be liable for any loss or damage based upon the criteria supplied by the developers of these rating systems, together with AMSOIL's interpretation of the available data.



Emergency Contact: Chemtrec (800) 424-9300
Or Norco (208) 336-1643

1125 West Amity Road
Boise, ID 83705
(208) 336-1643

Hydrogen Sulfide 0.0001% to 2% in Air

MATERIAL SAFETY DATA SHEET

Identification

Product Name: Hydrogen Sulfide 0.0001% to 2% in Air
CAS Number: N/A
Chemical Family: Gas Mixture
Chemical Formula: H²S in Air
Synonyms: N/A
MSDS Identification Code/Number 2090
Prepared By: Quality Dept.

Revision Date: 02/26/01
Last Review Date: 03/04/13

Composition, Information on Ingredients

Exposure Limits¹:

INGREDIENT	% VOLUME	PEL-OSHA ²	TLV-ACGIH ³	LD ₅₀ or LC ₅₀ Route/Species
Hydrogen Sulfide Formula: H ₂ S CAS: 7783-06-4 RTECS#: MX1225000	≤ 2%	20 ppm ceiling 50 ppm (10-min max. peak)	10 ppm TWA 15 ppm STEL	LC50: 712 ppm Inhalation/rat (1 hr.)
Air Formula: Not Applicable CAS: Not Applicable RTECS#: Not Applicable	98.0 to 99.9999%	Not Applicable	Not Applicable	Not Applicable

¹ Refer to individual state or provincial regulations, as applicable, for limits that may be more stringent than those listed here.

² As stated in 29 CFR 1910, Subpart Z (revised July 1, 1993).

³ As stated in the ACGIH 2007 Threshold Limit Values for Chemical Substances and Physical Agents.

OSHA Regulatory Status: This material is classified as hazardous under OSHA regulations.
IDLH: 100 ppm (H²S)

Hazards Identification

Emergency Overview:

Colorless gas with characteristic "rotten egg" odor. The odor cannot be relied on as an adequate warning of the presence of Hydrogen Sulfide, because olfactory fatigue occurs. Irritating to the eyes, mucous membranes and respiratory system. Hydrogen sulfide can cause respiratory paralysis, sudden collapse and death. Contents under pressure. Use and store below 125^o F (52^o C).

Route of Entry:

Skin Contact Yes	Skin Absorption No	Eye Contact Yes	Inhalation Yes	Ingestion No
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Health Effects:

Exposure Limits Yes	Irritant Yes	Sensitization No
Teratogen No	Reproductive Hazard No	Mutagen No

Synergistic Effects
None known

Hazards Identification Continued

Carcinogenicity: NTP: No IARC: No OSHA: No

Eye Effects:

Low concentrations will generally cause irritation to the conjunctiva. Repeated exposure to low concentrations is reported to cause conjunctivitis, photophobia, tears, pain and blurred vision. Contact with rapidly expanding gas near the point of release may cause frostbite.

Skin Effects:

May irritate the skin upon contact. Contact with rapidly expanding gas near the point of release may cause frostbite with redness, skin color change to gray or white, and blistering.

Ingestion Effects:

Ingestion is unlikely. Hydrogen sulfide will irritate the mucous membranes causing a burning feeling with excess salivation likely. Irritation of the gastrointestinal tract may also occur.

Inhalation Effects:

Lethal concentrations of hydrogen sulfide cause respiratory paralysis and breathing stops. Life threatening pulmonary edema is common following prolonged exposure to concentrations between 250 and 600 ppm. Edema has been reported following prolonged exposure at concentrations as low as 50 ppm.

Sense of smell becomes rapidly fatigued and cannot be used as warning of exposure.

Medical Conditions Aggravated by Exposure:

May aggravate pre-existing eye, skin, respiratory and central nervous system (CNS) disorder.

NFPA Hazard Codes

Health: 1
Flammability: 0
Instability: 0

HMIS Hazard Codes

Health: 1
Flammability: 0
Physical Hazard: 3

Ratings System

0 = No Hazard
1 = Slight hazard
2 = Moderate Hazard
3 = Serious Hazard
4 = Severe Hazard

Hazard ratings were assigned in accordance with Compressed Gas Association (CGA) guidelines as published in CGA Pamphlet P-19-2004, *CGA Recommended Hazard Ratings for compressed Gases, 2nd Edition*.

First Aid Measures

Eye:

PERSONS WITH POTENTIAL EXPOSURE TO HYDROGEN SULFIDE SHOULD NOT WEAR CONTACT LENSES. Flush eyes with large amounts of water for at least 15 minutes, holding eyelids open to ensure adequate rinsing. If irritation persists, seek immediate medical attention.

Skin:

Remove contaminated clothing and flush affected area with large quantities of water. If irritation persists or symptoms occur, seek medical attention.

Ingestion:

Not anticipated; product is a gas.

Inhalation:

PROMPT REMOVAL FROM THE CONTAMINATED AREA AND IMMEDIATE MEDICAL ATTENTION IS MANDATORY IN ALL CASES OF OVEREXPOSURE. RESCUE PERSONNEL SHOULD BE EQUIPPED WITH SELF-CONTAINED BREATHING APPARATUS. Rescue personnel should recognize the hazards of overexposure due to olfactory fatigue.

First Aid Measures Continued

Immediately remove to fresh air. If breathing is difficult, administer oxygen. If breathing has stopped, give artificial respiration. Keep victim warm and calm. Further treatment should be symptomatic and supportive. Seek immediate medical attention.

Note to physician: Acute hydrogen sulfide poisoning can be treated by induction of methemoglobinemia through parenteral injection of methemoglobin generating agents (i.e. sodium nitrite). This acts as an antidote by restoring the normal activity of the sulfide inhibited enzyme.

Fire Fighting Measures

Conditions of Flammability: Not flammable		
Flash point: Gas	Method: Not Applicable	Autoignition Temperature: None
LEL (%): Not Applicable	UEL (%): Not Applicable	
Hazardous combustion products: Sulfur dioxide, irritants, toxic gases		
Sensitivity to mechanical shock: No Data		
Sensitivity to static discharge: No Data		

Fire and Explosion Hazards:

The majority of this product is a nonflammable, inert gas. This product does contain 0.0001 – 2% hydrogen sulfide, a flammable component but below its flammable limit. Containers may explode when exposed to heat or flames.

Extinguishing Media:

Use media suitable for surrounding combustible or flammable materials.

Fire Fighting Instructions:

Stop the flow of gas if it can be done without risk. Use water spray to cool surrounding containers. Continue to cool surrounding containers until well after flames are extinguished. Firefighters should wear a full-face piece, NIOSH/MSHA-approved self-contained breathing apparatus (SCBA) operated in positive pressure mode and full turnout gear.

Accidental Release Measures

Isolate hazard area, evacuate personnel and deny entry to unauthorized/unprotected individuals. Extinguish all ignition sources and ventilate closed spaces and low areas. Hydrogen sulfide is soluble, use water spray to knock down vapors and protect personnel. Dike run-off waters for later disposal. Personnel entering area should wear appropriate protective equipment, including respiratory protection suitable for unknown concentrations. Personnel should not re-enter an area until hydrogen sulfide has sufficiently dispersed and adequate oxygen re-established. If a leak is in user's equipment, be certain to purge piping with an inert gas prior to attempting repairs. If leak is in container valve, contact the appropriate emergency telephone number listed in Section 1 or call your closest Norco/NorLab location.

Handling and Storage

Electrical classification:

Non-hazardous

Use only in well-ventilated areas. Valve protection caps must remain in place on refillable cylinders unless cylinder is secured with valve outlet piped to use point. Do not drag, slide or roll cylinders. Use a suitable hand truck for cylinder movement. Use a pressure reducing regulator when connecting cylinder to lower pressure piping or systems. Do not heat cylinder by any means to increase the discharge rate of product from the cylinder. Use a check valve or trap in the discharge line to prevent hazardous back flow into the cylinder.

Protect cylinders from physical damage. Store in cool, dry, well-ventilated area of non-combustible construction away from heavy traffic areas and emergency exits. Do not allow the temperature where cylinders are stored to exceed 125^o F. Cylinders should be stored upright and firmly secured to prevent falling or being knocked over. Use a "first in-first out" inventory system to prevent full cylinders being stored for excessive periods of time.

Handling and Storage Continued

Do not rely on the olfactory sense to detect the presence of hydrogen sulfide. Analytical devices and instrumentation are readily available for this purpose. Perform frequent analytical tests to be certain that the TWA is not exceeded. Many metals corrode rapidly with wet hydrogen sulfide. Anhydrous hydrogen sulfide can be handled in carbon steel, aluminum, Inconel®, Stelite®, 304 and 316 stainless steels. Avoid hard steels, which are highly stressed since they may be susceptible to hydrogen embrittlement from hydrogen sulfide. Multipoint air samplers with alarms for plant production units should be provided to constantly monitor the air in and around the units.

For additional recommendations, consult Compressed Gas Association Pamphlets P-1 and G-12.

Never carry a compressed gas cylinder or a container of a gas in cryogenic liquid form in an enclosed space such as a car trunk, van or station wagon. A leak can result in a fire, explosion, asphyxiation or a toxic exposure.

Exposure Controls, Personal Protection

Engineering Controls:

Use a laboratory hood with forced ventilation for handling small quantities. Use local exhaust to prevent accumulation above the exposure limit.

Eye/Face Protection:

Chemical safety goggles with full face shield.

Skin Protection:

Protective gloves of neoprene, butyl rubber, PVC or polyethylene should be worn.

Respiratory Protection:

A NIOSH/MSHA-approved full-facepiece SCBA operated in positive mode and/or any supplied air respirator with a full-facepiece and operated in a positive pressure mode in combination with an auxiliary self contained breathing apparatus operated in positive pressure mode should be used for high or unknown concentrations. Respirators should be stored in an area not likely to be contaminated.

Other/General Protection:

Safety shoes, safety showers and an emergency eyewash station should be available. Personnel with potential exposure to hydrogen sulfide should work in pairs, wear a gas mask with an all purpose canister or light three minute unit with a self contained air supply for instantaneous use, and carry wet lead acetate paper on wrists or belt for detection of dangerous concentrations of hydrogen sulfide, (turns black in the presence of minute amounts of hydrogen sulfide).

Physical and Chemical Properties

PARAMETER	VALUE	UNITS
Physical state (gas, liquid, solid)	: Gas	
Vapor pressure	: Not available	
Vapor density (Air = 1)	: Not available	
Evaporation point	: Not available	
Boiling point	: Not available	°F °C
Freezing point	: Not available	°F °C
pH	: Not applicable	
Specific gravity	: 1.105	
Oil/water partition coefficient	: Not available	
Solubility (H ₂ O)	: Slightly soluble	
Odor threshold	: Not available	
Odor and appearance	: Colorless gas/vapor. Characteristic hydrogen sulfide – rotten egg odor.	

Stability and Reactivity

Stability:

Stable under normal conditions.

Conditions to Avoid:

Avoid heat, flames, ignition sources, and oxidizing agents.

Incompatible Materials:

Pure hydrogen sulfide is dangerously reactive with fuming or strong nitric acid and strong oxidizers; may ignite on contact with a variety of metal oxides (i.e. copper oxide, nickel oxide, silver (I & II) oxide, sodium peroxide); ignites in contact with fluorine and chlorine monoxide; and forms explosive reactions with oxygen difluoride, nitrogen trifluoride and many halogenic compounds.

Hazardous Decomposition Products:

Oxides of sulfur.

Hazardous Polymerization:

Will not occur.

Toxicological Information

Inhalation:

Inhalation of 1000-3000 ppm (dogs) was lethal. Respiration ceased after several breaths at 3000 ppm and death occurred within 15-20 minutes at concentrations of 1000 ppm.

Skin and Eye:

Concentrations of 50-500 ppm cause eye and respiratory irritation. Ocular toxicity has been reported at hydrogen sulfide concentrations ranging from 5-30 ppm.

Chronic:

Hydrogen sulfide is not considered a cumulative poison; however, headaches, fatigue, dizziness, irritability and loss of libido have been reported following chronic exposure. It is unclear whether low level exposures, repeated unmeasured acute exposures or pre-existing neurological disease are responsible for the above symptoms.

Ecological Information

Environmental Fate:

Hydrogen sulfide does not absorb solar radiation and therefore does not undergo photolysis or photochemical reaction with oxygen. The persistence of hydrogen sulfide in the atmosphere is dependent on season, latitude and atmospheric conditions, ranging from 1 to 40 days with decreased temperatures and decreased levels of hydroxide in northern regions increasing residence time. In soil and water, hydrogen sulfide is oxidized to elemental sulfur by microorganisms via oxidation-reduction reactions, which form part of the global sulfur cycle.

Ecotoxicity:

Data indicates that hydrogen sulfide is toxic to a variety of life forms including both domestic and wild animals, fish, birds, insects and plants.

Disposal Considerations

Do not attempt to dispose of waste or unused quantities in returnable cylinders. Return in the shipping container, *properly labeled, with any valve outlet plugs or caps secure and valve protection cap in place* to NorLab for proper disposal. Non-refillable containers should be vented in a well-ventilated area then disposed of in compliance with local regulations, or returned to NorLab.

Transportation Information

Parameter	United States DOT	Canada TDG
Proper Shipping Name:	Compressed gas, N. O. S., (Hydrogen Sulfide, Air)	Compressed gas, N. O. S.,
Hazard Class:	2.2	2.2
Identification Number:	UN 1956	UN 1956
Shipping Label:	Non Flammable Gas	Non Flammable Gas

Regulatory Information

Hydrogen sulfide is listed under the accident prevention provisions of section 112 (r) of the Clean Air Act (CAA) with a threshold quantity (TQ) of 10,000 pounds.

SARA Title III Notifications and Information:

Hydrogen sulfide is listed as an extremely hazardous substance (EHS) subject to state and local reporting under Section 304 of SARA Title III (EPCRA). The presence of hydrogen sulfide in quantities in excess of the threshold planning quantity (TPQ) of 500 pounds requires certain emergency planning activities to be conducted.

Releases of hydrogen sulfide in quantities equal to or greater than the reportable quantity (RQ) of 100 pounds are subject to reporting to the national Response Center under CERCLA, Section 304 SARA Title III.

SARA Title III – Hazard Classes:

Acute health Hazard
Sudden Release of Pressure Hazard

SARA Title III – Section 313 Supplier Notification:

This product contains the following toxic chemicals subject to the reporting requirements of section 313 of the Emergency Planning and Community Right-To-Know Act (EPCRA) of 1986 and of 40 CFR 372:

CAS Number	Ingredient Name	Percent by Volume
7783-06-4	Hydrogen sulfide	≤2%

This information must be included on all MSDSs that are copied and distributed for this material.

California Proposition 65: This product does not contain ingredient(s) known to the State of California to cause cancer or reproductive toxicity.

Other Information

Compressed gas cylinders must not be refilled without the express written permission of the owner. Shipment of a compressed gas cylinder which has not been filled by the owner or with his/her (written) consent is a violation of transportation regulations.

Disclaimer of expressed and implied warranties:

Although reasonable care has been taken in the preparation of this document, we extend no warranties and make no representations as to the accuracy or completeness of the information contained herein, and assume no responsibility regarding the suitability of this information for the user's intended purposes or for the consequences of its use. Each individual should make a determination as to the suitability of the information for their particular purpose(s).

Product Name: Hydrogen sulphide/inert gas mixture

MSDS# E-6777-I

Date: Oct. 15, 2016

Praxair Material Safety Data Sheet

1. Chemical Product and Company Identification

Product Name: Hydrogen sulphide/inert gas mixture	Trade Name: Hydrogen sulphide/inert gas mixture
Product Use: Not available.	
Chemical Name: Not applicable.	Synonym: Not applicable.
Chemical Formula: Not applicable.	Chemical Family: Not applicable.
Telephone:	Emergencies: * 1-800-363-0042
	Supplier /Manufacture: Praxair Canada Inc. 1 City Centre Drive Suite 1200 Mississauga, ON L5B 1M2
	Phone: 905-803-1600
	Fax: 905-803-1682

**Call emergency numbers 24 hours a day only for spills, leaks, fire, exposure, or accidents involving this product. For routine information, contact your supplier or Praxair sales representative.*

2. Composition and Information on Ingredients

INGREDIENTS	% (VOL)	CAS NUMBER	LD ₅₀ (Species & Routes)	LC ₅₀ (Rat, 4 hrs.)	TLV-TWA (ACGIH)
Hydrogen sulphide AND CONTAINS ONE OR MORE OF THE FOLLOWING GASES:	0.0001-0.9999	7783-06-4	Not applic.	356 ppm	1 ppm
Argon	Balance	7440-37-1	Not applic.	Not available.	Simple asphyxiant.
Helium	Balance	7440-59-7	Not applic.	Not available.	Simple asphyxiant.
Krypton	Balance	7439-90-9	Not applic.	Not available.	Simple asphyxiant.
Neon	Balance	7440-01-1	Not applic.	Not available.	Simple asphyxiant.
Nitrogen	Balance	7727-37-9	Not applic.	Not available.	Simple asphyxiant.
Xenon	Balance	7440-63-3	Not applic.	Not available.	Simple asphyxiant.

3. Hazards Identification

Emergency Overview

CAUTION! High-pressure gas. Can cause rapid suffocation. May cause dizziness and drowsiness. Self-contained breathing apparatus may be required by rescue workers.

ROUTES OF EXPOSURE:

Inhalation.

EFFECTS OF A SINGLE (ACUTE) OVEREXPOSURE:

INHALATION: Asphyxiant. Moderate concentrations may cause headaches, drowsiness, dizziness, excitation, excess salivation, vomiting, and unconsciousness. This mixture contains traces of hydrogen sulphide which may cause some irritation of the respiratory tract and damage the central nervous system if inhaled in large quantities. Lack of oxygen can kill.

SKIN CONTACT: No evidence of adverse effects from available information.

SKIN ABSORPTION: No evidence of adverse effects from available information.

SWALLOWING: Unlikely route of exposure. This product is a gas at normal temperature and pressure.

EYE CONTACT: No evidence of adverse effects from available information.

EFFECTS OF REPEATED (CHRONIC) OVEREXPOSURE:

No evidence of adverse effects from available information.

OTHER EFFECTS OF OVEREXPOSURE:

None known. This product is an asphyxiant. Lack of oxygen can cause death.

MEDICAL CONDITIONS AGGRAVATED BY OVEREXPOSURE:

Repeated or prolonged exposure is not known to aggravate medical condition.

SIGNIFICANT LABORATORY DATA WITH POSSIBLE RELEVANCE TO HUMAN HEALTH HAZARD EVALUATION:

Not available - mixture not tested.

CARCINOGENICITY:

Not listed as carcinogen by OSHA, NTP or IARC.

4. First Aid Measures

INHALATION:

If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention.

SKIN CONTACT:

Wash contaminated skin with soap and water.

SWALLOWING:

This product is a gas at normal temperature and pressure.

EYE CONTACT:

Flush with water.

NOTES TO PHYSICIAN:

There is no specific antidote. Treatment of over-exposure should be directed at the control of symptoms and the clinical condition.

5. Fire Fighting Measures

FLAMMABLE : No. **IF YES, UNDER WHAT CONDITIONS?** Not applicable.

FLASH POINT (test method)	Not applicable.	AUTOIGNITION TEMPERATURE	Not applicable.
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Product Name: Hydrogen sulphide/inert
gas mixture

MSDS# E-6777-I

Date: Oct. 15, 2016

**FLAMMABLE LIMITS
IN AIR, % by volume:**

LOWER: Not applicable.

UPPER: Not applicable.

EXTINGUISHING MEDIA:

This mixture cannot catch fire. Use media appropriate for surrounding fire.

SPECIAL FIRE FIGHTING PROCEDURES:

CAUTION! High-pressure gas. Asphyxiant. Effects are due to lack of oxygen. Evacuate all personnel from danger area. Immediately deluge cylinders with water from maximum distance until cool; then move them away from fire area if without risk. Self-contained breathing apparatus may be required by rescue workers

UNUSUAL FIRE AND EXPLOSION HAZARD:

Nonflammable material. This material cannot catch fire. Container may rupture due to heat of fire. No part of a container should be subjected to temperature higher than 52 C. Most containers are provided with a pressure relief device designed to vent contents when they are exposed to elevated temperature. Toxic fumes may be produced when heated.

HAZARDOUS COMBUSTION PRODUCTS:

Not applicable.

SENSITIVITY TO IMPACT:

Avoid impact against container.

SENSITIVITY TO STATIC DISCHARGE:

Not applicable.

6. Accidental Release Measures

STEPS TO BE TAKEN IF MATERIAL IS RELEASED OR SPILLED:

CAUTION! High-pressure gas. Evacuate all personnel from danger area. Use self-contained breathing apparatus where needed. Shut off flow if you can do so without risk. Ventilate area or move cylinder to a well-ventilated area. Test for sufficient oxygen, especially in confined spaces, before allowing reentry.

WASTE DISPOSAL METHOD:

Prevent waste from contaminating the surrounding environment. Keep personnel away. Discard any product, residue, disposable container, or liner in an environmentally acceptable manner, in full compliance with federal, provincial, and local regulations. If necessary, call your local supplier for assistance.

7. Handling and Storage

PRECAUTIONS TO BE TAKEN IN STORAGE:

Store and use with adequate ventilation. Separate flammable cylinders from oxygen, chlorine, and other oxidizers by at least 6 m or use a barricade of non-combustible material. This barricade should be at least 1.5 m high and have a fire resistance rating of at least ½ hour. Firmly secure cylinders upright to keep them from falling or being knocked over. Screw valve protection cap firmly in place by hand. Post "No Smoking or Open Flames" signs in storage and use areas. There must be no sources of ignition. All electrical equipment in storage areas must be explosion-proof. Storage areas must meet national electric codes for Class 1 hazardous areas. Store only where temperature will not exceed 52 C. Store full and empty cylinders separately. Use a first-in, first-out inventory system to prevent storing full cylinders for long periods.

PRECAUTIONS TO BE TAKEN IN HANDLING:

Protect cylinders from damage. Use a suitable hand truck to move cylinders; do not drag, roll, slide, or drop. Never attempt to lift a cylinder by its cap; the cap is intended solely to protect the valve. Never insert an object (e.g., wrench, screwdriver, pry bar) into cap openings; doing so may damage the valve and cause a leak. Use an adjustable strap wrench to remove over-tight or rusted caps. Open valve slowly. If valve is hard to open, discontinue use and contact your supplier. For other precautions, see section 16.

For additional information on storage and handling, refer to Compressed Gas Association (CGA) pamphlet P-1, *Safe*

Product Name: Hydrogen sulphide/inert gas mixture

MSDS# E-6777-I

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Handling of Compressed Gases in Containers, available from the CGA. Refer to section 16 for the address and phone number along with a list of other available publications.

OTHER HAZARDOUS CONDITIONS OF HANDLING, STORAGE, AND USE:

High pressure gas. Use piping and equipment adequately designed to withstand pressures to be encountered. **Gas can cause rapid suffocation due to oxygen deficiency.** Store and use with adequate ventilation. Close valve after each use; keep closed even when empty. **Prevent reverse flow.** Reverse flow into cylinder may cause rupture. Use a check valve or other protective device in any line or piping from the cylinder. **When returning cylinder to supplier,** be sure valve is closed, then install valve outlet plug tightly. **Never work on pressurized system.** If there is a leak, close the cylinder valve. Vent the system down in a safe and environmentally sound manner in compliance with all federal, provincial, and local laws; then repair the leak. **Never place a compressed gas cylinder where it may become part of an electrical circuit.**

8. Exposure Controls/Personal Protection

VENTILATION/ENGINEERING CONTROLS:

LOCAL EXHAUST: Preferred.

MECHANICAL (general): Acceptable.

SPECIAL: None.

OTHER: Not applicable.

PERSONAL PROTECTION:

RESPIRATORY PROTECTION: Select in accordance with provincial regulations, local bylaws or guidelines. Selection should also be based on the current CSA standard Z94.4, "Selection, Care and Use of Respirators". Respirators should also be approved by NIOSH and MSHA.

SKIN PROTECTION: Wear work gloves when handling cylinders.

EYE PROTECTION: Wear safety glasses when handling cylinders.

Select in accordance with the current CSA standard Z94.3, "Industrial Eye and Face Protection", and any provincial regulations, local bylaws or guidelines.

OTHER PROTECTIVE EQUIPMENT: Metatarsal shoes for cylinder handling. Protective clothing where needed. Cuffless trousers should be worn outside the shoes. Select in accordance with the current CSA standard Z195, "Protective Foot Wear", and any provincial regulations, local bylaws or guidelines.

9. Physical and Chemical Properties

PHYSICAL STATE: Gas.	FREEZING POINT: Not available - mixture not tested.	pH: Not available - mixture not tested.
BOILING POINT: Not available - mixture not tested.	VAPOUR PRESSURE: Gas.	MOLECULAR WEIGHT: Not applicable.
SPECIFIC GRAVITY: LIQUID (Water = 1) : Not applicable.	SOLUBILITY IN WATER: Not available - mixture not tested.	
SPECIFIC GRAVITY: VAPOUR (air = 1) : Not available - mixture not tested.	EVAPORATION RATE (Butyl Acetate=1): Not available.	COEFFICIENT OF WATER/OIL DISTRIBUTION: Not applicable.

Product Name: Hydrogen sulphide/inert gas mixture

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VAPOUR DENSITY: Not available - mixture not tested.

% VOLATILES BY VOLUME: Not available.

ODOUR THRESHOLD: Not available.

APPEARANCE & ODOUR: Colourless.

Rotten eggs.

10. Stability and Reactivity

STABILITY: The product is stable.

CONDITIONS OF CHEMICAL INSTABILITY: Not available.

INCOMPATIBILITY (materials to avoid): Not available - mixture not tested.

HAZARDOUS DECOMPOSITION PRODUCTS: Not available - mixture not tested.

HAZARDOUS POLYMERIZATION: Not available.

CONDITIONS OF REACTIVITY: None currently known.

11. Toxicological Information

See section 3.

12. Ecological Information

No adverse ecological effects expected. This product does not contain any Class I or Class II ozone-depleting chemicals. The components of this mixture are not listed as marine pollutants by TDG Regulations.

13. Disposal Considerations

WASTE DISPOSAL METHOD: Do not attempt to dispose of residual or unused quantities. Return cylinder to supplier.

14. Transport Information

TDG/IMO SHIPPING NAME: Compressed gas, n.o.s.

HAZARD CLASS: CLASS 2.2:
Non-flammable and non-toxic gas.

IDENTIFICATION #: UN1956

PRODUCT RQ:
Any accidental release in a quantity that could pose a danger to public safety or any sustained release of 10 minutes or more

SHIPPING LABEL(s): Non-flammable, non-toxic gas

PLACARD (when required): Non-flammable, non-toxic gas

SPECIAL SHIPPING INFORMATION:

Cylinders should be transported in a secure position, in a well-ventilated vehicle. Cylinders transported in an enclosed, non-ventilated compartment of a vehicle can present serious safety hazards.

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gas mixture

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15. Regulatory Information

The following selected regulatory requirements may apply to this product. Not all such requirements are identified. Users of this product are solely responsible for compliance with all applicable federal, provincial, and local regulations.

DSL (Canada) This product is on the DSL list

WHMIS (Canada) CLASS A: Compressed gas.

International Regulations

EINECS Not available.

DSCL (EEC) R20- Harmful by inhalation.

International Lists No products were found.

16. Other Information

MIXTURES:

When two or more gases, or liquefied gases are mixed, their hazardous properties may combine to create additional, unexpected hazards. Obtain and evaluate the safety information for each component before you produce the mixture. Consult an Industrial Hygienist, or other trained person when you make your safety evaluation of the end product. Remember, gases and liquids have properties which can cause serious injury or death.

HAZARD RATING SYSTEM:

HMIS RATINGS:

HEALTH 0

FLAMMABILITY 0

PHYSICAL HAZARD 2

STANDARD VALVE CONNECTIONS FOR U.S. AND CANADA:

THREADED: CGA-330

PIN-INDEXED YOKE: Not available.

ULTRA-HIGH-INTEGRITY CONNECTION: Not available.

Use the proper CGA connections. **DO NOT USE ADAPTERS.** Additional limited-standard connections may apply. See CGA pamphlets V-1 and V-7 listed below.

Ask your supplier about free Praxair safety literature as referred to in this MSDS and on the label for this product. Further information about this product can be found in the following pamphlets published by the Compressed Gas Association, Inc. (CGA), 4221 Walney Road, 5th Floor, Chantilly, VA 20151-2923, Telephone (703) 788-2700, Fax (703) 961-1831, website: www.cganet.com.

AV-1 Safe Handling and Storage of Compressed Gas

P-1 Safe Handling of Compressed Gases in Containers

P-14 Accident Prevention in Oxygen-Rich, Oxygen-Deficient Atmosphere

SB-2 Oxygen-Deficient Atmospheres

V-1 Compressed Gas Cylinder Valve Inlet and Outlet Connections

V-7 Standard Method of Determining Cylinder Valve Outlet Connections for Industrial Gas Mixtures

--- Handbook of Compressed Gases, Fourth Edition

For more indepth information for each component, refer to the pure product MSDS.

The information contained in this MSDS is generated from technical sources using the Chemmate Mixture

Product Name: Hydrogen sulphide/inert
gas mixture

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Date: Oct. 15, 2016

MSDS system and the pure-product MSDS for each component. These mixtures are not tested as a whole for chemical, physical, or health effects.

PREPARATION INFORMATION:

DATE: October 15, 2016
DEPARTMENT: Safety and Environmental Services
TELEPHONE: 905-803-1600

The opinions expressed herein are those of qualified experts within Praxair Canada Inc. We believe that the information contained herein is current as of the date of this Material Safety Data Sheet. Since the use of this information and the conditions of use of the product are not within the control of Praxair Canada Inc., it is the user's obligation to determine the conditions of safe use of the product.

Praxair Canada Inc. requests the users of this product to study this Material Data Sheet (MSDS) and become aware of product hazards and safety information. To promote safe use of this product, a user should (1) notify its employees, agents and contractors of the information on this MSDS and any product hazards and safety information, (2) furnish this same information to each of its customers for the product, and (3) request such customers to notify their employees and customers for the product of the same product hazards and safety information.

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Praxair Canada Inc.

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Praxair Canada Inc.
1 City Centre Drive
Suite 1200
Mississauga, ON L5B 1M2

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P281: Use personal protective equipment as required.

P235: Keep cool.

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P301+310: IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician.

P302+352: IF ON SKIN: Wash with plenty of soap and water.

P303+361+353: IF ON SKIN (or hair): Remove/take off immediately all contaminated clothing. Rinse skin with water/shower.

P304+340: IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.

P305+351+338: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P308+313: IF exposed or concerned: Get medical attention/advice.

P312: Call a POISON CENTER or doctor/physician if you feel unwell.

P314: Get medical attention/advice if you feel unwell.

P321: Specific treatment see label.

P331: Do NOT induce vomiting.

P332+313: If skin irritation occurs, get medical advice/attention.

P337+313: If eye irritation persists, get medical advice/attention.

P362: Take off contaminated clothing and wash before re-use.

P370+378: In case of fire, use dry chemical powder to extinguish.

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P403+233: Store container tightly closed in well-ventilated place.

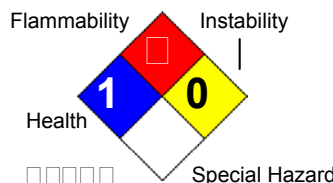
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P405: Store locked up.

P501: Dispose of contents/container according to local, state and federal regulations.

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This material is classified as hazardous under OSHA regulations.

Inhalation Acute Exposure Effects:

May cause dizziness; headache; watering of eyes; eye irritation; weakness; nausea; muscle twitches, and depression of central nervous system. Severe overexposure may cause convulsions; unconsciousness; and death. Intentional misuse of this product by deliberately concentrating and inhaling can be harmful or fatal.

Skin Contact Acute Exposure Effects:

May cause irritation; numbness in the fingers and arms; drying of skin; and dermatitis. May cause increased severity of symptoms listed under inhalation.

Eye Contact Acute Exposure Effects:

This material is an eye irritant. May cause irritation; burns; conjunctivitis of eyes; and corneal ulcerations of the eye. Vapors may irritate eyes.

Ingestion Acute Exposure Effects:

Harmful or fatal if swallowed. May cause nausea; weakness; muscle twitches; gastrointestinal irritation; and diarrhea. Severe overexposure may cause convulsions; unconsciousness; and death.

Chronic Exposure Effects:

Reports have associated repeated and prolonged overexposure to solvents with neurological and other physiological damage. Prolonged or repeated contact may cause dermatitis. May cause jaundice; bone marrow damage; liver damage; anemia; and skin irritation.

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M d Diseases of the skin, eyes, liver, kidneys, central nervous system and respiratory system.

3 M RM RD

64742-47-8	Hydrotreated light distillate (petroleum)	<=100.0 %	OA5504000
64742-82-1	Naphtha (petroleum), hydrodesulfurized heavy	<=100.0 %	NA
8052-41-3	Stoddard solvent {Mineral spirits; Aliphatic Petroleum Distillates; White spirits}	<=100.0 %	WJ8925000
25550-14-5	Benzene, Ethylmethyl-	<=5.0 %	NA
25551-13-7	Benzene, Trimethyl-	<=1.5 %	DC3220000
95-63-6	1,2,4-Trimethylbenzene {Pseudocumene}	<=1.0 %	DC3325000
103-65-1	Benzene, Propyl- {N-Propylbenzene}	<=1.0 %	DA8750000
1330-20-7	Xylene (mixed isomers) {Benzene, dimethyl-}	<=1.0 %	ZE2100000

Ingredients vary due to multiple blends and/or raw material suppliers

RD MR

Inhalation:
If user experiences breathing difficulty, move to air free of vapors, Administer oxygen or artificial medical assistance can be rendered.

Skin Contact:
Wash with soap and large quantities of water and seek medical attention if irritation from contact persists.

Eye Contact:
Flush with large quantities of water for at least 15 minutes and seek immediate medical attention.

Ingestion:
Do not induce vomiting. Call your local poison control center, hospital emergency room or physician immediately for instructions to induce vomiting.

If spontaneous vomiting is about to occur, place victim's head below knees. If victim is drowsy or unconscious, place on the left side with head down. Never give anything by mouth to a person who is not fully conscious. Do not leave victim unattended. Seek medical attention immediately.

Inhalation, ingestion, and dermal are possible routes of exposure.

Call your local poison control center for further information.

Inhalation: Inhalation overexposure can produce toxic effects. Monitor for respiratory distress. If cough or difficulty in breathing develops, evaluate for upper respiratory tract inflammation, bronchitis, and pneumonitis. Administer supplemental oxygen with assisted ventilation as required.

Ingestion: If ingested, this material presents a significant aspiration and chemical pneumonitis hazard. Induction of emesis is not recommended. Consider activated charcoal and/or gastric lavage. If patient is obtunded, protect the airway by cuffed

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endotracheal intubation or by placement of the body in a Trendelenburg and left lateral decubitus position.

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Use carbon dioxide, dry chemical powder, or foam.

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Self-contained respiratory protection should be provided for fire fighters fighting fires in buildings or confined areas. Storage containers exposed to fire should be kept cool with water spray to prevent pressure build-up. Stay away from heads of containers that have been exposed to intense heat or flame.

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Combustible Liquid.

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Clean up:

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Keep unnecessary people away; isolate hazard area and deny entry. Stay upwind, out of low areas, and ventilate closed spaces before entering. Shut off ignition sources; keep flares, smoking or flames out of hazard area.

Small spills:

Take up with sand, earth or other noncombustible absorbent material and place in a plastic container where applicable.

Large spills:

Dike far ahead of spill for later disposal.

Waste Disposal:

Dispose in accordance with applicable local, state and federal regulations.

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Read carefully all cautions and directions on product label before use. Since empty container retains residue, follow all label warnings even after container is empty. Dispose of empty container according to all regulations. Do not reuse this container.

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A static electrical charge can accumulate when this material is flowing through pipes, nozzles or filters, and when it is agitated. A static spark discharge can ignite accumulated vapors particularly during dry weather conditions. Always use proper bonding and grounding procedures.

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Keep container tightly closed when not in use. Store in a cool, dry place. Do not store near flames or at elevated temperatures.

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64742-47-8	Hydrotreated light distillate (petroleum)	No data.	TLV: 200 mg/m3	No data.
64742-82-1	Naphtha (petroleum), hydrodesulfurized heavy	No data.	No data.	No data.
8052-41-3	Stoddard solvent {Mineral spirits; Aliphatic Petroleum Distillates; White spirits}	PEL: 500 ppm	TLV: 100 ppm	No data.
25550-14-5	Benzene, Ethylmethyl-	No data.	No data.	No data.
25551-13-7	Benzene, Trimethyl-	No data.	TLV: 25 ppm	No data.
95-63-6	1,2,4-Trimethylbenzene {Pseudocumene}	No data.	No data.	No data.
103-65-1	Benzene, Propyl- {N-Propylbenzene}	No data.	No data.	No data.
1330-20-7	Xylene (mixed isomers) {Benzene, dimethyl-}	PEL: 100 ppm	TLV: 100 ppm STEL: 150 ppm	No data.

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For OSHA controlled work place and other regular users. Use only with adequate ventilation under engineered air control systems designed to prevent exceeding appropriate TLV. For occasional use, where engineered air control is not feasible, use properly maintained and properly fitted NIOSH approved respirator for organic solvent vapors. A dust mask does not provide protection against vapors.

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Safety glasses, goggles or face shields are recommended to safeguard against potential eye contact, irritation, or injury. Contact lenses should not be worn while working with chemicals.

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Wear impermeable gloves. Gloves contaminated with product should be discarded. Promptly remove clothing that becomes soiled with product.

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Various application methods can dictate use of additional protective safety equipment, such as impermeable aprons, etc., to minimize exposure. Before reuse, thoroughly clean any clothing or protective equipment that has been contaminated by prior use. Discard any clothing or other protective equipment that cannot be decontaminated, such as gloves or shoes.

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Use only with adequate ventilation to prevent build-up of vapors. Open all windows and doors. Use only with a cross ventilation of moving fresh air across the work area. If strong odor is noticed or you experience slight dizziness, headache, nausea, or eye-watering - Stop - ventilation is inadequate. Leave area immediately.

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A source of clean water should be available in the work area for flushing eyes and skin. Do not eat, drink, or smoke in the work area. Wash hands thoroughly after use.

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11 □□□□□□□□□□ □□□□□□□□□□ **RM** □□□□□□□□□□

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CAS# 25551-13-7:

Standard Draize Test, Skin, Species: Rabbit, 500.0 MG, 24 H, Moderate.

Result:

Kidney, Ureter, Bladder: Changes in liver weight.

Endocrine: Changes in thymus weight.

Immunological Including Allergic: Decreased immune response.

- "Sbornik Vysledku Toxilogickeho Vysetreni Latek A Pripravku," , Institut Pro Vychovu Vedoucicn P, Marhold, J.V., Institut Pro Vychovu Vedoucicn, Pracovniku Chemickeho, Prumyclu Praha Czechoslovakia, Vol/p/yr: -,24, 1972

Standard Draize Test, Eyes, Species: Rabbit, 500.0 MG, 24 H, Mild.

Result:

Kidney, Ureter, Bladder: Changes in liver weight.

Kidney, Ureter, Bladder: Changes in bladder weight.

Nutritional and Gross Metabolic: Weight loss or decreased weight gain.

- "Sbornik Vysledku Toxilogickeho Vysetreni Latek A Pripravku," , Institut Pro Vychovu Vedoucicn P, Marhold, J.V., Institut Pro Vychovu Vedoucicn, Pracovniku Chemickeho,

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 Revision: 04/21/2015
 Supersedes Revision: 09/08/2014

Prumyclu Praha Czechoslovakia, Vol/p/yr: -,24, 1972

CAS# 1330-20-7:

Acute toxicity, LC50, Inhalation, Rat, 5000. PPM, 4 H.

Result:

Behavioral: Muscle contraction or spasticity.

Lungs, Thorax, or Respiration: Other changes.

- Raw Material Data Handbook, Vol.1: Organic Solvents, 1974., National Assoc. of Printing Ink Research Institute, Francis McDonald Sinclair Memorial Labor, Lehigh Univ., Bethlehem, PA 18015, Vol/p/yr: 1,123, 1974

Standard Draize Test, Eyes, Species: Rabbit, 5.000 MG, 24 H, Severe.

Result:

Behavioral: General anesthetic.

Behavioral: Somnolence (general depressed activity).

Behavioral: Irritability.

- "Sbornik Vysledku Toxixologickeho Vysetreni Latek A Pripravku," , Institut Pro Vychovu Vedoucicn P, Marhold, J.V., Institut Pro Vychovu Vedoucicn, Pracovniku Chemickeho, Prumyclu Praha Czechoslovakia, Vol/p/yr: -,24, 1972

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64742-47-8	Hydrotreated light distillate (petroleum)	n.a.	n.a.	A4	n.a.
64742-82-1	Naphtha (petroleum), hydrodesulfurized heavy	n.a.	n.a.	n.a.	n.a.
8052-41-3	Stoddard solvent {Mineral spirits; Aliphatic Petroleum Distillates; White spirits}	n.a.	n.a.	n.a.	n.a.
25550-14-5	Benzene, Ethylmethyl-	n.a.	n.a.	n.a.	n.a.
25551-13-7	Benzene, Trimethyl-	n.a.	n.a.	n.a.	n.a.
95-63-6	1,2,4-Trimethylbenzene {Pseudocumene}	n.a.	n.a.	n.a.	n.a.
103-65-1	Benzene, Propyl- {N-Propylbenzene}	n.a.	n.a.	n.a.	n.a.
1330-20-7	Xylene (mixed isomers) {Benzene, dimethyl-}	n.a.	3	A4	n.a.

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No data available.

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□ □□□ D □□□□□□ M □□□□ d □ Dispose in accordance with federal, state, and local regulations.

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Revision: 04/21/2015

Supersedes Revision: 09/08/2014

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D □□ □ r □□□ r □□□□□□□ □□□ □□ Paint Related Material, Exempt Combustible Liquid per 49 CFR 173.150(f)

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The supplier may apply one of the following exceptions: Combustible Liquid, Consumer Commodity, Limited Quantity, Viscous Liquid, Does Not Sustain Combustion, or others, as allowed under 49CFR Hazmat Regulations. Please consult 49CFR Subchapter C to ensure that subsequent shipments comply with these exceptions.

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64742-47-8	Hydrotreated light distillate (petroleum)	No	No	No
64742-82-1	Naphtha (petroleum), hydrodesulfurized heavy	No	No	No
8052-41-3	Stoddard solvent {Mineral spirits; Aliphatic Petroleum Distillates; White spirits}	No	No	No
25550-14-5	Benzene, Ethylmethyl-	No	No	No
25551-13-7	Benzene, Trimethyl-	No	No	No
95-63-6	1,2,4-Trimethylbenzene {Pseudocumene}	No	No	Yes
103-65-1	Benzene, Propyl- {N-Propylbenzene}	No	No	No
1330-20-7	Xylene (mixed isomers) {Benzene, dimethyl-}	No	Yes 100 LB	Yes

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□□□ r □□ R □ □□□□ □□□□□□□□□□□ □□□□□ [X] Yes [] No Fire Hazard

311 31 □ □□□ d □□□□□□□□ □□□□□ [] Yes [X] No Sudden Release of Pressure Hazard

[] Yes [X] No Reactive Hazard

64742-47-8	Hydrotreated light distillate (petroleum)	CAA HAP,ODC: No; CWA NPDES: No; TSCA: Yes - Inventory; CA PROP.65: No
64742-82-1	Naphtha (petroleum), hydrodesulfurized heavy	CAA HAP,ODC: No; CWA NPDES: No; TSCA: Yes - Inventory; CA PROP.65: No
8052-41-3	Stoddard solvent {Mineral spirits; Aliphatic Petroleum Distillates; White spirits}	CAA HAP,ODC: No; CWA NPDES: No; TSCA: Yes - Inventory; CA PROP.65: No
25550-14-5	Benzene, Ethylmethyl-	CAA HAP,ODC: No; CWA NPDES: No; TSCA: Yes - Inventory, 4 Test; CA PROP.65: No
25551-13-7	Benzene, Trimethyl-	CAA HAP,ODC: No; CWA NPDES: No; TSCA: Yes - Inventory; CA PROP.65: No
95-63-6	1,2,4-Trimethylbenzene {Pseudocumene}	CAA HAP,ODC: No; CWA NPDES: No; TSCA: Yes - Inventory; CA PROP.65: No
103-65-1	Benzene, Propyl- {N-Propylbenzene}	CAA HAP,ODC: No; CWA NPDES: No; TSCA: Yes - Inventory, 12(b); CA PROP.65: No
1330-20-7	Xylene (mixed isomers) {Benzene, dimethyl-}	CAA HAP,ODC: HAP; CWA NPDES: Yes; TSCA: Yes - Inventory; CA PROP.65: No

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Supersedes Revision: 09/08/2014

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All components of this material are listed on the TSCA Inventory or are exempt.

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04/21/2015

W.M. Barr and Company, Inc. (901)775-0100

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No data available.

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This SDS conforms to REACH SDS CLP regulation 2015/830.

Issuing Date 10-Nov-2011

Revision Date 01-Feb-2019

Revision Number 4



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Section 1: Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier

Product Code(s) 155
(M)SDS Number WPS-JLI-013
Product Name JET-LUBE® 550®
Chemical name
Synonyms 550®

1.2. Relevant identified uses of the substance or mixture and uses advised against

Recommended Use No information available.
Uses advised against No information available.

1.3. Details of the supplier of the safety data sheet

Supplier Address Jet Lube LLC
930 Whitmore Drive
Rockwall, Texas USA 75087
Supplier Phone Number US Office: Phone:+1-972-771-1000 Fax:+1-972-722-2108
Supplier Email Sales@jetlube.com

Importer	Manufacturer
Jet-Lube (UK) Ltd City Park, Watchmead Welwyn Garden City, Hertfordshire AL7 1LT United Kingdom	Jet Lube LLC 930 Whitmore Drive Rockwall, Texas USA 75087

For further information, please contact.

Responsible Persons Regulatory & Laboratory Team Member(s)
E-mail Address regulatory@jetlube.com
Non-Emergency Telephone +44-1628-631913 (JL UK Office)



Number +1-972-771-1000 (USA Office)

1.4. Emergency telephone number

Emergency Telephone Number 44 1628-631913

Emergency telephone §45 - (EC)1272/2008	
Europe	112
Austria	Poison Information Center (AT): +43-(0)1-406 43 43
Belgium	Poison Center (BE): +32 70 245 245
Denmark	Poison Control Hotline (DK): +45 82 12 12 12
Finland	Poison Information Centre (FI): +358 9 471 977
France	ORFILA (FR): + 01 45 42 59 59
Germany	Poison Center Berlin (DE): +49 030 30686 790 (24 h service, Advice in German and English)
Ireland	National Poisons Information Centre (IE): +353 1 8379964
Italy	Poison Center, Milan (IT): +39 02 6610 1029
Netherlands	National Poisons Information Center (NL): +31 30 274 88 88 (NB: this service is only available to health professionals)
Norway	Poisons Information (NO): + 47 22 591300
Poland	Poison Control and Information Centre, Warsaw (PL): +48 22 619 66 54; +48 22 619 08 97
Portugal	Poison Information Center (PT): +351 21 330 3284
Spain	Poison Information Service (ES): +34 91 562 04 20
Sweden	Poisons Information Center (SV): +46 8 33 12 31
Switzerland	Poison Center (CH): Tel 145: +41 44 251 51 51
United Kingdom	NHS Direct (UK): +44 0845 46 47

Section 2: Hazards Identification

2.1. Classification of the substance or mixture

Regulation (EC) No 1272/2008

Chronic aquatic toxicity	Category 2 - (H411)
--------------------------	---------------------

2.2. Label elements



Signal word None

Hazard Statements

H411 - Toxic to aquatic life with long lasting effects

Precautionary Statements - EU (§28, 1272/2008)

P201 - Obtain special instructions before use

P280 - Wear protective gloves/protective clothing/eye protection/face protection
 P308 + P313 - IF exposed or concerned: Get medical advice/attention
 P273 - Avoid release to the environment
 P391 - Collect spillage
 P501 - Dispose of contents/container to an approved waste disposal plant

2.3. Other hazards

No information available

Section 3: Composition/Information

3.1 Substances

Not applicable.

3.2 Mixtures

Chemical Name	EC No	CAS-No	Weight-%	Classification according to Regulation (EC) No. 1272/2008 [CLP]	REACH Reg. No.
Lubricating greases A complex combination of hydrocarbons having carbon numbers predominantly in the range of C12 through C50. may contain organic salts of alkali metals, alkaline earth metals, etc.	278-011-7	74869-21-9	65-70	No data available	No data available
Zinc oxide	215-222-5	1314-13-2	10-15	Aquatic Acute 1 (H400) Aquatic Chronic 1 (H410)	05-2116793307-35-XXXX 01-2114620034-66-0000 05-2114620034-66-0000
Limestone	215-279-6	1317-65-3	7-10	No data available	EXEMPT Article 2 (7)(B)
Graphite	231-955-3	7782-42-5	7-10	No data available	01-2119486977-12
Molybdenum (IV) sulfide	215-263-9	1317-33-5	1-5	No data available	EXEMPT Article 2 (7)(B)

Full text of H- and EUH-phrases: see section 16

Note

The producer of "74869-21-9" declares that it contains less than 3% DMSO extractable material by IP-346 The classification as a carcinogen need not apply if it can be shown that the substance contains less than 3 % DMSO extract as measured by IP 346. This note applies only to certain complex oil derived substances in Annex I

This product does not contain candidate substances of very high concern at a concentration $\geq 0.1\%$ (Regulation (EC) No. 1907/2006 (REACH), Article 59)

Section 4: First aid measures



4.1. Description of first aid measures

General advice	IF exposed or concerned: Get medical advice/attention.
Inhalation	Remove to fresh air.
Skin contact	Wash skin with soap and water. In the case of skin irritation or allergic reactions see a physician.
Eye contact	Rinse thoroughly with plenty of water for at least 15 minutes, lifting lower and upper eyelids. Consult a physician.
Ingestion	Clean mouth with water and drink afterwards plenty of water.

4.2. Most important symptoms and effects, both acute and delayed

Symptoms No information available.

4.3. Indication of any immediate medical attention and special treatment needed

Note to physicians Treat symptomatically.

Section 5: FIRE FIGHTING MEASURES**5.1. Extinguishing media**

Suitable Extinguishing Media Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

Unsuitable extinguishing media No information available.

5.2. Special hazards arising from the substance or mixture**Specific hazards arising from the chemical**

Thermal decomposition can lead to release of irritating and toxic gases and vapors.

Hazardous Combustion Products

Carbon oxides.

5.3. Advice for firefighters**Special protective equipment for fire-fighters**

Firefighters should wear self-contained breathing apparatus and full firefighting turnout gear. Use personal protection equipment.

Section 6: Accidental release measures**6.1. Personal precautions, protective equipment and emergency procedures**

Personal precautions	Ensure adequate ventilation.
Other Information	Refer to protective measures listed in Sections 7 and 8.
For emergency responders	Use personal protection recommended in Section 8.

6.2. Environmental precautions

Environmental precautions Should not be released into the environment. See Section 12 for additional Ecological Information.

6.3. Methods and material for containment and cleaning up

Methods for containment Prevent further leakage or spillage if safe to do so.

Methods for cleaning up Take up mechanically, placing in appropriate containers for disposal.

6.4. Reference to other sections

Reference to other sections See section 8 for more information. See section 13 for more information.

Section 7: HANDLING AND STORAGE**7.1. Precautions for safe handling**

Advice on safe handling Handle in accordance with good industrial hygiene and safety practice. Avoid contact with skin, eyes or clothing.

General Hygiene Considerations Do not eat, drink or smoke when using this product. Wash hands before breaks and immediately after handling the product.

7.2. Conditions for safe storage, including any incompatibilities

Storage Conditions Keep container tightly closed in a dry and well-ventilated place.

7.3. Specific end use(s)

Risk Management Methods (RMM) The information required is contained in this Material Safety Data Sheet.

Section 8: Exposure control/personal protection equipment**8.1. Control parameters****Exposure Limits**

Chemical Name	EU	United Kingdom	France	Spain	Germany
Zinc oxide 1314-13-2	-	-	TWA: 5 mg/m ³ TWA: 10 mg/m ³	TWA: 2 mg/m ³ STEL: 10 mg/m ³	-
Limestone 1317-65-3	-	TWA: 10 mg/m ³ TWA: 4 mg/m ³ STEL: 30 mg/m ³ STEL: 12 mg/m ³	-	-	-
Graphite 7782-42-5	-	STEL: 30 mg/m ³ STEL: 12 mg/m ³ TWA: 10 mg/m ³ TWA: 4 mg/m ³	TWA: 2 mg/m ³	TWA: 2 mg/m ³	-
Molybdenum (IV) sulfide 1317-33-5	-	STEL: 20 mg/m ³ TWA: 10 mg/m ³	-	TWA: 10 mg/m ³ TWA: 3 mg/m ³	-
Chemical Name	Italy	Portugal	Netherlands	Finland	Denmark

Zinc oxide 1314-13-2	TWA: 2 mg/m ³ STEL: 10 mg/m ³	TWA: 2 mg/m ³ STEL: 10 mg/m ³	-	TWA: 2 mg/m ³ STEL: 10 mg/m ³	TWA: 4 mg/m ³
Graphite 7782-42-5	-	TWA: 2 mg/m ³	-	TWA: 2 mg/m ³	TWA: 2.5 mg/m ³
Molybdenum (IV) sulfide 1317-33-5	-	TWA: 10 mg/m ³ TWA: 3 mg/m ³	-	-	TWA: 10 mg/m ³
Chemical Name	Austria	Switzerland	Poland	Norway	Ireland
Zinc oxide 1314-13-2	TWA: 5 mg/m ³	STEL: 3 mg/m ³ TWA: 3 mg/m ³	TWA: 5 mg/m ³ STEL: 10 mg/m ³	TWA: 5 mg/m ³ STEL: 10 mg/m ³	TWA: 2 mg/m ³ STEL: 10 mg/m ³
Limestone 1317-65-3	-	-	-	-	TWA: 10 mg/m ³ TWA: 4 mg/m ³ STEL: 30 mg/m ³ STEL: 12 mg/m ³
Graphite 7782-42-5	STEL 10 mg/m ³ TWA: 5 mg/m ³	TWA: 2.5 mg/m ³ TWA: 5 mg/m ³	TWA: 4.0 mg/m ³ TWA: 1.0 mg/m ³ TWA: 6.0 mg/m ³	TWA: 5 mg/m ³ TWA: 2 mg/m ³ TWA: 10 mg/m ³ TWA: 4 mg/m ³ STEL: 10 mg/m ³ STEL: 4 mg/m ³ STEL: 15 mg/m ³ STEL: 8 mg/m ³	TWA: 10 mg/m ³ TWA: 4 mg/m ³ STEL: 30 mg/m ³ STEL: 12 mg/m ³
Molybdenum (IV) sulfide 1317-33-5	STEL 20 mg/m ³ TWA: 10 mg/m ³	TWA: 10 mg/m ³	STEL: 10 mg/m ³ TWA: 4 mg/m ³	TWA: 10 mg/m ³ STEL: 15 mg/m ³	TWA: 3 mg/m ³ TWA: 0.5 mg/m ³ STEL: 9 mg/m ³ STEL: 1.5 mg/m ³
Chemical name	Romania	Ukraine TLVs	Sweden TLVs	Hungary	Turkey TLVs
Zinc oxide 1314-13-2	TWA: 5 mg/m ³ STEL: 10 mg/m ³		LLV: 5 mg/m ³	STEL: 20 mg/m ³ TWA: 5 mg/m ³	
Limestone 1317-65-3	TWA: 10 mg/m ³			TWA: 10 mg/m ³	
Graphite 7782-42-5	TWA: 2 mg/m ³		LLV: 5 mg/m ³		
Molybdenum (IV) sulfide 1317-33-5	TWA: 5 mg/m ³ STEL: 10 mg/m ³			STEL: 60 mg/m ³ TWA: 15 mg/m ³	

Derived No Effect Level (DNEL) No information available

Predicted No Effect Concentration (PNEC) No information available

8.2. Exposure controls

Personal protective equipment

- Eye/face protection** Tight sealing safety goggles.
- Hand Protection** Wear suitable gloves. Nitrile rubber. Neoprene gloves. Rubber gloves.
- Skin and body protection** Wear suitable protective clothing.

Environmental exposure controls No information available.

Section 9: Physical and chemical properties

Hazardous Polymerization Hazardous polymerization does not occur.

10.4. Conditions to avoid

None known.

10.5. Incompatible materials

No information available.

10.6. Hazardous decomposition products

Carbon oxides.

Section 11: Toxicological information

11.1. Information on toxicological effects

Information on likely routes of exposure

Product Information

- Inhalation** No known effect. No known hazard by inhalation. Not an expected route of exposure.
- Eye contact** Specific test data for the substance or mixture is not available. May cause slight eye irritation.
- Skin contact** Specific test data for the substance or mixture is not available. Non-irritating during normal use.
- Ingestion** Specific test data for the substance or mixture is not available.

Information on toxicological effects

Symptoms No information available.

Numerical measures of toxicity

Acute Toxicity

The following values are calculated based on chapter 3.1 of the GHS document

ATEmix (oral) 2,287.00 mg/kg

Unknown acute toxicity

Component Information

Chemical Name	LD50 Oral	LD50 Dermal	Inhalation LC50
Lubricating greases A complex combination of hydrocarbons having carbon numbers predominantly in the range of C12 through C50. may contain organic salts of alkali metals, alkaline	= 2280 mg/kg (Rat)		



earth metals, etc.			
Zinc oxide	> 5000 mg/kg (Rat)		
Molybdenum (IV) sulfide			> 2820 mg/m ³ (Rat) 4 h

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Skin corrosion/irritation	No information available.
Serious eye damage/eye irritation	No information available.
Respiratory or skin sensitization	No information available.
Germ cell mutagenicity	No information available.
Carcinogenicity	No information available.
Reproductive Toxicity	No information available.
STOT - single exposure	No information available.
STOT - repeated exposure	No information available.
Aspiration hazard	No information available.

Section 12: Ecological information

12.1. Toxicity

Ecotoxicity Toxic to aquatic life with long lasting effects. .

Chemical Name	Toxicity to Algae	Toxicity to Fish	Toxicity to Microorganisms	Daphnia Magna (Water Flea)
Lubricating greases A complex combination of hydrocarbons having carbon numbers predominantly in the range of C12 through C50. may contain organic salts of alkali metals, alkaline earth metals, etc.	>1001 mg/l	96h LC50: > 2000 mg/L (Salmo gairdneri)	-	
Zinc oxide	Selenastrum capricornutum 72-hour EC50: 0.14 mg/l	Oncorhynchus mykiss 96-hour LC50: 0.14 mg/l	-	Daphnia magna 48-hour EC50: 0.07 mg/l

12.2. Persistence and degradability

Persistence and Degradability No information available.

12.3. Bioaccumulative potential

Bioaccumulation No information available.

12.4. Mobility in soil

Mobility in soil No information available.

12.5. Results of PBT and vPvB assessment

PBT and vPvB assessment No information available.

Chemical Name	PBT and vPvB assessment
Zinc oxide	The substance is not PBT / vPvB PBT assessment does not apply
Graphite	The substance is not PBT / vPvB PBT assessment does not apply

12.6. Other adverse effects

Other adverse effects No information available.

Section 13: Disposal considerations

13.1. Waste treatment methods

Waste from residues/unused products Dispose of in accordance with local regulations. Dispose of waste in accordance with environmental legislation.

Contaminated packaging No information available.

Section 14: Transport information

Notes: As per UN3082 Limited Quantity Exemption criteria, non-bulk packages of this product are not subject to dangerous goods regulations when packaged in sizes ≤5 Liters unless transported by inland waterway.

IMDG

14.1 UN Number UN3082

14.2 Proper Shipping Name Description Environmentally hazardous substance, liquid, n.o.s.
UN3082, Environmentally hazardous substance, liquid, n.o.s.(Zinc Oxide), 9, III,Marine Pollutant

14.3 Hazard Class 9

14.4 Packing Group III

14.5 Marine Pollutant Product is a marine pollutant according to the criteria set by IMDG/IMO

14.6 Special Provisions None

EmS-No. F-A, S-F

14.7 Transport in bulk according to Annex II of No information available

MARPOL and the IBC Code**RID**

14.1 UN-No.	UN3082
14.2 Proper Shipping Name	Environmentally hazardous substance, liquid, n.o.s.
Description	UN3082 Environmentally hazardous substance, liquid, n.o.s.(Zinc Oxide),9,III
14.3 Hazard Class	9
14.4 Packing Group	III
14.5 Environmental hazard	Not applicable
14.6 Special Provisions	None
Classification code	M6

ADR

14.1 UN-No.	UN3082
14.2 Proper Shipping Name	Environmentally hazardous substance, liquid, n.o.s.
Description	UN3082 Environmentally hazardous substance, liquid, n.o.s.(Zinc Oxide), 9, III(E)
14.3 Hazard Class	9
14.4 Packing Group	III
14.5 Environmental hazard	Not applicable
14.6 Special Provisions	None
Classification code	M6
Tunnel restriction code	(E)

IATA

14.1 UN Number	UN3082
14.2 Proper Shipping Name	Environmentally hazardous substance, liquid, n.o.s.
Description	UN3082, Environmentally hazardous substance, liquid, n.o.s.(Zinc Oxide), 9, III
14.3 Hazard Class	9
14.4 Packing Group	III
14.5 Environmental hazard	Not applicable
14.6 Special Provisions	None

Section 15: Regulatory information**15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture****National regulations****France****Occupational Illnesses (R-463-3, France)**

Chemical Name	French RG number	Title
Graphite 7782-42-5	RG 16 RG 25	-

European Union

Take note of Directive 98/24/EC on the protection of the health and safety of workers from the risks related to chemical agents at work .

Authorizations and/or restrictions on use:

This product does not contain substances subject to authorization (Regulation (EC) No. 1907/2006 (REACH), Annex XIV).

Persistent Organic Pollutants

Not applicable.

Dangerous substance category per Seveso Directive (2012/18/EU)

E2 - Hazardous to the Aquatic Environment in Category Chronic 2

Ozone-depleting substances (ODS) regulation (EC) 1005/2009

Not applicable.

International Inventories

TSCA	Contact supplier for inventory compliance status.
DSL/NDSL	Complies.
EINECS/ELINCS	Complies.
ENCS	Contact supplier for inventory compliance status.
IECSC	Contact supplier for inventory compliance status.
KECL	Not determined.
PICCS	Complies.
AICS	Not determined.

Legend**TSCA** - United States Toxic Substances Control Act Section 8(b) Inventory**DSL/NDSL** - Canadian Domestic Substances List/Non-Domestic Substances List**EINECS/ELINCS** - European Inventory of Existing Chemical Substances/European List of Notified Chemical Substances**ENCS** - Japan Existing and New Chemical Substances**IECSC** - China Inventory of Existing Chemical Substances**KECL** - Korean Existing and Evaluated Chemical Substances**PICCS** - Philippines Inventory of Chemicals and Chemical Substances**AICS** - Australian Inventory of Chemical Substances**15.2. Chemical safety assessment**

No information available.

Section 16: Other Information**Key or legend to abbreviations and acronyms used in the safety data sheet****Full text of H-Statements referred to under sections 2 and 3**

H400 - Very toxic to aquatic life

H410 - Very toxic to aquatic life with long lasting effects

H411 - Toxic to aquatic life with long lasting effects

Legend

SVHC: Substances of Very High Concern for Authorization:

Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

TWA	TWA (time-weighted average)	STEL	STEL (Short Term Exposure Limit)
Ceiling	Maximum limit value	-	Skin designation

Key literature references and sources for data

www.ChemADVISOR.com/

Issuing Date 10-Nov-2011

Revision Date 01-Feb-2019

Disclaimer

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

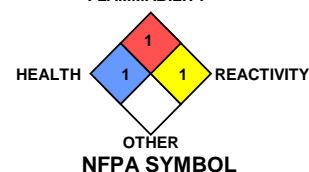
End of Safety Data Sheet

Health	1
Flammability	1
Reactivity	1
PPI	G

MATERIAL SAFETY DATA SHEET

KOPR-KOTE® AEROSOL

FLAMMABILITY



HMIS SYMBOL

SECTION 1 - PRODUCT AND COMPANY IDENTIFICATION

Product Name: **Kopr-Kote Aerosol**
 Chemical Family: Mixture
 Use: Lubricating anti-seize product
 Manufacturer/Supplier: Jet-Lube of Canada Ltd.
 3820 – 97 Street NW
 Edmonton, Alberta
 Canada T6E 5S8
 Phone: (780) 463-7441 Fax: (780) 463-7454
 CCOHS: 1-800-668-4284

Emergency:

CANUTEC PH: (613) 996-6666 Cell: *666 TTY/TDD: 1-888-675-6863

SECTION 2 - COMPOSITION/INFORMATION ON INGREDIENTS

Hazardous Components	Graphite	Copper	Propellant	Molybdenum Disulphide
CAS NO.	7782-42-5	7440-50-8	14807-96-6	1317-33-5
WT %	10 - 30	5 - 10	5 - 10	1 - 5
OSHA PEL	2.5 mg/m ³	1 mg/m ³	15 mg/m ³	15 mg/m ³
ACGIH TLV	2.0 mg/m ³	1 mg/m ³	10 mg/m ³	15 mg/m ³
LD50	10000 mg/kg (oral, rat)	3 mg/kg (mouse)	>16 g/kg (rat)	>6 g/kg (rat, oral)
LC50	64400 mg/m ³ (rat)	Not Available	Not Available	Not Available

SECTION 3 - HAZARDS IDENTIFICATION

Route of Entry: Eyes, Inhalation, Ingestion, Skin
 Eyes: May cause irritation to eyes.
 Inhalation: If inhaled product may block breathing passages.
 Ingestion: May cause diarrhea if ingested.
 Skin: May cause irritation after prolonged skin exposure, especially for persons with hyper sensitivity.

SECTION 4 - FIRST AID MEASURES

Eyes: Flush with water until all residual material is gone 15min. If irritation persists, seek medical help.
 Ingestion: Do not induce vomiting. Wash out mouth. Contact a physician immediately.
 Skin: Remove by wiping or with a waterless hand cleaner, followed by washing with soap and water.
 Inhalation: Clear air passage. If breathing difficulty continues seek medical help.

SECTION 5 - FIRE FIGHTING MEASURES

Flammability: Nil at ambient temperature
 Extinguishing Media: Use dry chemicals, foam, halon, CO₂
 Flash Point (OC): >60°C (140°F) / -60°C (-76°F) propellant
 Flammable Limit: Upper – 0.9% Lower – 7%
 Auto-ignition Temp: >260°C (500°F)
 Explosive Properties: LEL 0.9% – UEL 7%
 Sensitivity to Impact: Not Available
 Sensitivity to Static Discharge: Not Available
 Hazardous Combustion Products: Oxides of carbon, smoke and irritating vapors as products of incomplete combustion.
 Protective Equipment: Self-contained breathing apparatus.

SECTION 6 - ACCIDENTAL RELEASE MEASURES

Spillage: Scoop up excess, then wipes down the affected area and pick up residue with diatomaceous earth to avoid a walking hazard.
 Environmental Precautions: Do not allow product to enter into drains.

SECTION 7 - HANDLING AND STORAGE

Handling Procedures: No special handling precautions necessary. Do not pressurize, cut, heat or weld empty containers.
 Storage Requirements: Store in a cool, well ventilated place.

SECTION 8 - EXPOSURE CONTROLS/PERSONAL PROTECTION

Engineering Controls: If user's operation generates vapors or mists, use ventilation to keep exposure to airborne contaminants below the exposure limit. Make up air should always be supplied to balance air removed by exhaust ventilation. Ensure eyewash station and safety shower are close to work station.

Exposure Limits:	ACGIH TLV	OSHA PEL
Graphite	2.0 mg/m ³	2.5mg/m ³
Copper	1 mg/m ³	1 mg/m ³
Propellant	10 mg/m ³	15 mg/m ³
Molybdenum Disulphide	15 mg/m ³	15 mg/m ³

Personal Protective Equipment (PPE's):

Respiratory Protection: None required.
 Hand Protection: Protective gloves for hypersensitive persons.
 Eye Protection: Protective glasses if applied to moving parts.
 Body Protection: Protective overalls.

SECTION 9 - PHYSICAL AND CHEMICAL PROPERTIES

Physical State: Fluid
 Odor/Appearance: Light Petroleum/Brown Odor Threshold: Not Available
 Vapor Pressure: <0.01 kPa Vapor Density: Not Available
 Boiling Point: Not Available Freezing Point: Not Available
 pH: Neutral %VOC
 Density (Typical): 1.10 g/cm³ Melting Point: 91°C (195°F)
 Evaporation Rate (Butyl Acetate = 1.0): <0.01
 Coefficient of Water/Oil Distribution: Not Available

SECTION 10 - STABILITY AND REACTIVITY

Stability: Chemically stable under normal conditions.
 Conditions to Avoid: Powerful sources of ignition and extreme temperatures.
 Materials to Avoid: Strong acids and oxidizing agents.
 Hazardous Decomposition Products: May release CO_x, smoke and irritating vapors when heated to decomposition.

SECTION 11 - TOXICOLOGICAL INFORMATION

Effects of Short-Term (Acute) Exposure: No short term toxic effects known.
 Effects of Long-Term (Chronic) Exposure: Long term dermal application may produce possible skin irritation. Elevated temperatures or mechanical action may form vapors or fumes. Inhalation of oil mists or vapors may cause irritation of the upper respiratory tract.

Irritancy of Product: Product is not a known irritant. Mild irritation may occur in hyper sensitive individuals.

Skin Sensitization: Product is not a known skin sensitizer.

Respiratory Sensitization: No data available

Teratogenicity, Embryotoxicity and/or Fetotoxicity: Not Available

Mutagenicity: Not Available

Carcinogen: IARC: Not Available OSHA: Not Available

Name of Synergistic Products/Effects: Not Available

SECTION 12 - ECOLOGICAL INFORMATION

Possible Effects: May generate oil fractions that could act as a marine pollutant, but is highly unlikely.

Behavior: Bioaccumulation potential almost nil.

Environmental Fate: Highly unlikely to cause widespread contamination.

SECTION 13 - DISPOSAL CONSIDERATIONS

Consult federal, provincial and local regulations for disposal of petroleum products. Do not incinerate.

SECTION 14 - TRANSPORT INFORMATION

TDG (Canada): The mixture is not specifically listed in the Canadian Transportation of Dangerous Goods regulations.
 Shipping Name: AEROSOLS, Flammable
 UN No.: 1950
 Packing Group: III
 Classification: 2.1 Flammable Aerosols
 Labeling Requirements: Limited Quantities label for containment less than LQI of 6L net contents per containment. Class 2.1 label of >6L net contents per containment or large containment – Class 2.1
 Placard Requirements: Not required for limited quantities.

SECTION 15 - REGULATORY INFORMATION

WHMIS: A, B5, D2B
 DSL: All components listed
 CPR Compliance: This product has been classified in accordance with the hazard criteria of the Controlled Product Regulations and the MSDS contains all of the information required by those regulations.

SECTION 16 - OTHER INFORMATION

CPR - Controlled Product Regulations
 DSL - Domestic Substance List

As of issue date, the information contained herein is accurate and reliable to the best of Jet-Lube of Canada Ltd.'s knowledge. Jet-Lube of Canada Ltd. does not warrant or guarantee its accuracy or reliability and shall not be liable for any loss or damage arising out of the use thereof. It is the users' responsibility to satisfy themselves that the information offered for their consideration is suitable for their particular use.

Prepared by: **Jet-Lube of Canada Ltd. – Laboratory**
 Last Date of Revision: **July 3, 2013**

SAFETY DATA SHEET

4290

Section 1. Identification

Product name : KRYLON® Camouflage Paint
Black

Product code : 4290

Other means of identification : Not available.

Product type : Aerosol.

Relevant identified uses of the substance or mixture and uses advised against

Paint or paint related material.

Manufacturer : Krylon Products Group
101 W. Prospect Avenue
Cleveland, OH 44115

Emergency telephone number of the company : US / Canada: (216) 566-2917
Mexico: SETIQ 800-00-214-00 / 55-5559-1588 Available 24 hours and 365 days a year

Product Information Telephone Number : US / Canada: (800) 457-9566
Mexico: Not Available

Regulatory Information Telephone Number : US / Canada: (216) 566-2902
Mexico: Not Available

Transportation Emergency Telephone Number : US / Canada: (216) 566-2917
Mexico: SETIQ 800-00-214-00 / 55-5559-1588 Available 24 hours and 365 days a year

Section 2. Hazards identification

OSHA/HCS status : This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).

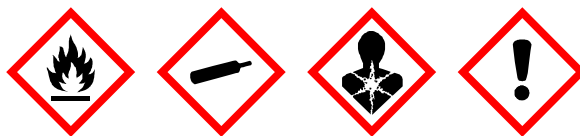
Classification of the substance or mixture : FLAMMABLE AEROSOLS - Category 1
GASES UNDER PRESSURE - Compressed gas
SKIN CORROSION/IRRITATION - Category 2
SERIOUS EYE DAMAGE/ EYE IRRITATION - Category 2A
SKIN SENSITIZATION - Category 1
CARCINOGENICITY - Category 2
TOXIC TO REPRODUCTION - Category 2
SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Respiratory tract irritation) - Category 3
SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Narcotic effects) - Category 3
SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) - Category 2
ASPIRATION HAZARD - Category 1
Percentage of the mixture consisting of ingredient(s) of unknown acute toxicity: 18% (oral), 18% (dermal), 20.5% (inhalation)

GHS label elements

Date of issue/Date of revision : 1/30/2023	Date of previous issue : 11/23/2022	Version : 23.01	1/19
4290	KRYLON® Camouflage Paint Black	SHW-85-NA-GHS-US	

Section 2. Hazards identification

Hazard pictograms



Signal word

: Danger

Hazard statements

: Extremely flammable aerosol.
Contains gas under pressure; may explode if heated.
May be fatal if swallowed and enters airways.
Causes skin irritation.
May cause an allergic skin reaction.
Causes serious eye irritation.
May cause respiratory irritation.
May cause drowsiness or dizziness.
Suspected of causing cancer.
Suspected of damaging fertility or the unborn child.
May cause damage to organs through prolonged or repeated exposure.

Precautionary statements

General

: Read label before use. Keep out of reach of children. If medical advice is needed, have product container or label at hand.

Prevention

: Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Wear protective gloves, protective clothing and eye or face protection. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Do not spray on an open flame or other ignition source. Use only outdoors or in a well-ventilated area. Do not breathe dust or mist. Wash thoroughly after handling. Contaminated work clothing must not be allowed out of the workplace. Pressurized container: Do not pierce or burn, even after use.

Response

: IF exposed or concerned: Get medical advice or attention. IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER or doctor if you feel unwell. IF SWALLOWED: Immediately call a POISON CENTER or doctor. Do NOT induce vomiting. Take off contaminated clothing and wash it before reuse. Wash contaminated clothing before reuse. IF ON SKIN: Wash with plenty of water. If skin irritation or rash occurs: Get medical advice or attention. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice or attention.

Storage

: Store locked up. Protect from sunlight. Do not expose to temperatures exceeding 50 °C/122 °F. Store in a well-ventilated place. Keep container tightly closed.

Disposal

: Dispose of contents and container in accordance with all local, regional, national and international regulations.

Supplemental label elements

DELAYED EFFECTS FROM LONG TERM OVEREXPOSURE. Contains solvents which can cause permanent brain and nervous system damage. Intentional misuse by deliberately concentrating and inhaling the contents can be harmful or fatal. WARNING: This product contains chemicals known to the State of California to cause cancer and birth defects or other reproductive harm.

Please refer to the SDS for additional information. Keep out of reach of children. Keep upright in a cool, dry place. Do not discard empty can in trash compactor.

Hazards not otherwise classified

: DANGER: Rags, steel wool, other waste soaked with this product, and sanding residue may spontaneously catch fire if improperly discarded. Immediately place rags, steel wool, other waste soaked with this product, and sanding residue in a sealed, water-filled, metal container. Dispose of in accordance with local fire regulations.

Section 3. Composition/information on ingredients

Substance/mixture : Mixture
Other means of identification : Not available.

CAS number/other identifiers

Ingredient name	% by weight	CAS number
Acetone	≥25 - ≤50	67-64-1
Propane	≥10 - ≤25	74-98-6
n-Butyl Acetate	≥10 - ≤25	123-86-4
Butane	≤10	106-97-8
2-Propoxyethanol	≤3	2807-30-9
Amorphous Precipitated Silica	≤3	112926-00-8
Carbon Black	≤1	1333-86-4
Xylene, mixed isomers	<1	1330-20-7
Zirconium 2-Ethylhexanoate	≤0.3	22464-99-9
Methyl Ethyl Ketoxime	≤0.3	96-29-7
Light Aromatic Hydrocarbons	≤0.3	64742-95-6

Any concentration shown as a range is to protect confidentiality or is due to batch variation.

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified and hence require reporting in this section.

Occupational exposure limits, if available, are listed in Section 8.

Section 4. First aid measures

Description of necessary first aid measures

- Eye contact** : Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for at least 10 minutes. Get medical attention.
- Inhalation** : Remove victim to fresh air and keep at rest in a position comfortable for breathing. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Get medical attention. If necessary, call a poison center or physician. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband. In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.
- Skin contact** : Wash with plenty of soap and water. Remove contaminated clothing and shoes. Wash contaminated clothing thoroughly with water before removing it, or wear gloves. Continue to rinse for at least 10 minutes. Get medical attention. In the event of any complaints or symptoms, avoid further exposure. Wash clothing before reuse. Clean shoes thoroughly before reuse.
- Ingestion** : Get medical attention immediately. Call a poison center or physician. Wash out mouth with water. Remove dentures if any. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Stop if the exposed person feels sick as vomiting may be dangerous. Aspiration hazard if swallowed. Can enter lungs and cause damage. Do not induce vomiting. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.

Most important symptoms/effects. acute and delayed

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4290	KRYLON® Camouflage Paint Black	SHW-85-NA-GHS-US	

Section 4. First aid measures

Potential acute health effects

- Eye contact** : Causes serious eye irritation.
- Inhalation** : Can cause central nervous system (CNS) depression. May cause drowsiness or dizziness. May cause respiratory irritation.
- Skin contact** : Causes skin irritation. May cause an allergic skin reaction.
- Ingestion** : Can cause central nervous system (CNS) depression. May be fatal if swallowed and enters airways.

Over-exposure signs/symptoms

- Eye contact** : Adverse symptoms may include the following:
 - pain or irritation
 - watering
 - redness
- Inhalation** : Adverse symptoms may include the following:
 - respiratory tract irritation
 - coughing
 - nausea or vomiting
 - headache
 - drowsiness/fatigue
 - dizziness/vertigo
 - unconsciousness
 - reduced fetal weight
 - increase in fetal deaths
 - skeletal malformations
- Skin contact** : Adverse symptoms may include the following:
 - irritation
 - redness
 - reduced fetal weight
 - increase in fetal deaths
 - skeletal malformations
- Ingestion** : Adverse symptoms may include the following:
 - nausea or vomiting
 - reduced fetal weight
 - increase in fetal deaths
 - skeletal malformations

Indication of immediate medical attention and special treatment needed, if necessary

- Notes to physician** : In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.
- Specific treatments** : No specific treatment.
- Protection of first-aiders** : No action shall be taken involving any personal risk or without suitable training. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Wash contaminated clothing thoroughly with water before removing it, or wear gloves.

See toxicological information (Section 11)

Section 5. Fire-fighting measures

Extinguishing media

- Suitable extinguishing media** : Use an extinguishing agent suitable for the surrounding fire.
- Unsuitable extinguishing media** : None known.

Specific hazards arising from the chemical : Extremely flammable aerosol. Runoff to sewer may create fire or explosion hazard. In a fire or if heated, a pressure increase will occur and the container may burst, with the risk of a subsequent explosion. Gas may accumulate in low or confined areas or travel a considerable distance to a source of ignition and flash back, causing fire or explosion. Bursting aerosol containers may be propelled from a fire at high speed.

Hazardous thermal decomposition products : Decomposition products may include the following materials:
carbon dioxide
carbon monoxide
nitrogen oxides
metal oxide/oxides

Special protective actions for fire-fighters : Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training. Move containers from fire area if this can be done without risk. Use water spray to keep fire-exposed containers cool.

Special protective equipment for fire-fighters : Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

Remark : Flammable aerosol.

Section 6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

For non-emergency personnel : No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. In the case of aerosols being ruptured, care should be taken due to the rapid escape of the pressurized contents and propellant. If a large number of containers are ruptured, treat as a bulk material spillage according to the instructions in the clean-up section. Do not touch or walk through spilled material. Shut off all ignition sources. No flares, smoking or flames in hazard area. Avoid breathing vapor or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.

For emergency responders : If specialized clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".

Environmental precautions : Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).

Methods and materials for containment and cleaning up

Small spill : Stop leak if without risk. Move containers from spill area. Use spark-proof tools and explosion-proof equipment. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.

Section 6. Accidental release measures

Large spill : Stop leak if without risk. Move containers from spill area. Use spark-proof tools and explosion-proof equipment. Approach release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Wash spillages into an effluent treatment plant or proceed as follows. Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations (see Section 13). Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spilled product. Note: see Section 1 for emergency contact information and Section 13 for waste disposal.

Section 7. Handling and storage

Precautions for safe handling

Protective measures : Put on appropriate personal protective equipment (see Section 8). Persons with a history of skin sensitization problems should not be employed in any process in which this product is used. Pressurized container: protect from sunlight and do not expose to temperatures exceeding 50°C. Do not pierce or burn, even after use. Avoid exposure - obtain special instructions before use. Avoid exposure during pregnancy. Do not handle until all safety precautions have been read and understood. Do not get in eyes or on skin or clothing. Do not breathe vapor or mist. Do not swallow. Avoid breathing gas. Use only with adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Store and use away from heat, sparks, open flame or any other ignition source. Use explosion-proof electrical (ventilating, lighting and material handling) equipment. Use only non-sparking tools. Empty containers retain product residue and can be hazardous.

Advice on general occupational hygiene : Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.

Conditions for safe storage, including any incompatibilities : Store in accordance with local regulations. Store away from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Protect from sunlight. Store locked up. Eliminate all ignition sources. Use appropriate containment to avoid environmental contamination. See Section 10 for incompatible materials before handling or use.

Section 8. Exposure controls/personal protection

Control parameters

Occupational exposure limits (OSHA United States)

Ingredient name	CAS #	Exposure limits
Acetone	67-64-1	ACGIH TLV (United States, 1/2022). TWA: 250 ppm 8 hours. STEL: 500 ppm 15 minutes. NIOSH REL (United States, 10/2020). TWA: 250 ppm 10 hours. TWA: 590 mg/m ³ 10 hours. OSHA PEL (United States, 5/2018). TWA: 1000 ppm 8 hours. TWA: 2400 mg/m ³ 8 hours.
Propane	74-98-6	NIOSH REL (United States, 10/2020). TWA: 1000 ppm 10 hours. TWA: 1800 mg/m ³ 10 hours. OSHA PEL (United States, 5/2018). TWA: 1000 ppm 8 hours. TWA: 1800 mg/m ³ 8 hours.

Section 8. Exposure controls/personal protection

n-Butyl Acetate	123-86-4	<p>ACGIH TLV (United States, 1/2022). Oxygen Depletion [Asphyxiant]. Explosive potential.</p> <p>NIOSH REL (United States, 10/2020). TWA: 150 ppm 10 hours. TWA: 710 mg/m³ 10 hours. STEL: 200 ppm 15 minutes. STEL: 950 mg/m³ 15 minutes.</p> <p>OSHA PEL (United States, 5/2018). TWA: 150 ppm 8 hours. TWA: 710 mg/m³ 8 hours.</p> <p>ACGIH TLV (United States, 1/2022). [Butyl acetates] STEL: 150 ppm 15 minutes. TWA: 50 ppm 8 hours.</p>
Butane	106-97-8	<p>NIOSH REL (United States, 10/2020). TWA: 800 ppm 10 hours. TWA: 1900 mg/m³ 10 hours.</p> <p>ACGIH TLV (United States, 1/2022). [Butane] Explosive potential. STEL: 1000 ppm 15 minutes.</p>
2-Propoxyethanol Amorphous Precipitated Silica	2807-30-9 112926-00-8	<p>None.</p> <p>NIOSH REL (United States, 10/2020). [SILICA, AMORPHOUS] TWA: 6 mg/m³ 10 hours.</p>
Carbon Black	1333-86-4	<p>ACGIH TLV (United States, 1/2022). TWA: 3 mg/m³ 8 hours. Form: Inhalable fraction</p> <p>NIOSH REL (United States, 10/2020). TWA: 3.5 mg/m³ 10 hours. TWA: 0.1 mg of PAHs/cm³ 10 hours.</p> <p>OSHA PEL (United States, 5/2018). TWA: 3.5 mg/m³ 8 hours.</p>
Xylene, mixed isomers	1330-20-7	<p>ACGIH TLV (United States, 1/2022). [xylene] TWA: 20 ppm 8 hours. TWA: 434 mg/m³ 8 hours. STEL: 651 mg/m³ 15 minutes.</p> <p>OSHA PEL (United States, 5/2018). [Xylenes] TWA: 100 ppm 8 hours. TWA: 435 mg/m³ 8 hours.</p>
Zirconium 2-Ethylhexanoate	22464-99-9	<p>ACGIH TLV (United States, 1/2022). [Zirconium and compounds] TWA: 5 mg/m³, (as Zr) 8 hours. STEL: 10 mg/m³, (as Zr) 15 minutes.</p> <p>NIOSH REL (United States, 10/2020). [zirconium compounds] TWA: 5 mg/m³, (as Zr) 10 hours. STEL: 10 mg/m³, (as Zr) 15 minutes.</p> <p>OSHA PEL (United States, 5/2018). [Zirconium compounds] TWA: 5 mg/m³, (as Zr) 8 hours.</p>
Methyl Ethyl Ketoxime	96-29-7	<p>OARS WEEL (United States, 1/2021). Skin sensitizer. TWA: 10 ppm 8 hours.</p>
Light Aromatic Hydrocarbons	64742-95-6	None.

[Occupational exposure limits \(Canada\)](#)

Section 8. Exposure controls/personal protection

Ingredient name	CAS #	Exposure limits
acetone	67-64-1	<p>CA Alberta Provincial (Canada, 6/2018). 8 hrs OEL: 1200 mg/m³ 8 hours. 15 min OEL: 1800 mg/m³ 15 minutes. 8 hrs OEL: 500 ppm 8 hours. 15 min OEL: 750 ppm 15 minutes.</p> <p>CA British Columbia Provincial (Canada, 3/2022). TWA: 250 ppm 8 hours. STEL: 500 ppm 15 minutes.</p> <p>CA Ontario Provincial (Canada, 6/2019). TWA: 250 ppm 8 hours. STEL: 500 ppm 15 minutes.</p> <p>CA Quebec Provincial (Canada, 6/2021). TWAEV: 500 ppm 8 hours. TWAEV: 1190 mg/m³ 8 hours. STEV: 1000 ppm 15 minutes. STEV: 2380 mg/m³ 15 minutes.</p> <p>CA Saskatchewan Provincial (Canada, 7/2013). STEL: 750 ppm 15 minutes. TWA: 500 ppm 8 hours.</p>
Normal propane	74-98-6	<p>CA Alberta Provincial (Canada, 6/2018). 8 hrs OEL: 1000 ppm 8 hours.</p> <p>CA Quebec Provincial (Canada, 6/2021). TWAEV: 1000 ppm 8 hours. TWAEV: 1800 mg/m³ 8 hours.</p> <p>CA Saskatchewan Provincial (Canada, 7/2013). STEL: 1250 ppm 15 minutes. TWA: 1000 ppm 8 hours.</p> <p>CA British Columbia Provincial (Canada, 3/2022). Oxygen Depletion [Asphyxiant]. Explosive potential.</p> <p>CA Ontario Provincial (Canada, 6/2019). Oxygen Depletion [Asphyxiant]. Explosive potential.</p>
n-butyl acetate	123-86-4	<p>CA Alberta Provincial (Canada, 6/2018). 15 min OEL: 200 ppm 15 minutes. 15 min OEL: 950 mg/m³ 15 minutes. 8 hrs OEL: 150 ppm 8 hours. 8 hrs OEL: 713 mg/m³ 8 hours.</p> <p>CA Saskatchewan Provincial (Canada, 7/2013). STEL: 200 ppm 15 minutes. TWA: 150 ppm 8 hours.</p> <p>CA Ontario Provincial (Canada, 6/2019). [butyl acetates, all isomers] STEL: 150 ppm 15 minutes. TWA: 50 ppm 8 hours.</p> <p>CA British Columbia Provincial (Canada, 3/2022). [butyl acetate, all isomers] STEL: 150 ppm 15 minutes. TWA: 50 ppm 8 hours.</p> <p>CA Quebec Provincial (Canada, 6/2021).</p>

Section 8. Exposure controls/personal protection

Zirconium 2-Ethylhexanoate	22464-99-9	<p>TWA: 100 ppm 8 hours. CA Saskatchewan Provincial (Canada, 7/2013). [Xylene] STEL: 150 ppm 15 minutes. TWA: 100 ppm 8 hours.</p> <p>CA Alberta Provincial (Canada, 6/2018). [Zirconium and compounds] 8 hrs OEL: 5 mg/m³, (as Zr) 8 hours. 15 min OEL: 10 mg/m³, (as Zr) 15 minutes.</p> <p>CA British Columbia Provincial (Canada, 3/2022). [Zirconium and compounds] TWA: 5 mg/m³, (as Zr) 8 hours. STEL: 10 mg/m³, (as Zr) 15 minutes.</p> <p>CA Quebec Provincial (Canada, 6/2021). [Zirconium and compounds] TWAEV: 5 mg/m³, (as Zr) 8 hours. STEV: 10 mg/m³, (as Zr) 15 minutes.</p> <p>CA Ontario Provincial (Canada, 6/2019). [Zirconium and compounds] STEL: 10 mg/m³, (as Zr) 15 minutes. TWA: 5 mg/m³, (as Zr) 8 hours.</p> <p>OARS WEEL (United States, 1/2021). Skin sensitizer. TWA: 10 ppm 8 hours.</p>
Methyl Ethyl Ketoxime	96-29-7	<p>OARS WEEL (United States, 1/2021). Skin sensitizer. TWA: 10 ppm 8 hours.</p>

Occupational exposure limits (Mexico)

	CAS #	Exposure limits
Acetone	67-64-1	<p>NOM-010-STPS-2014 (Mexico, 4/2016). TWA: 500 ppm 8 hours. STEL: 750 ppm 15 minutes.</p>
Propane	74-98-6	<p>NOM-010-STPS-2014 (Mexico, 4/2016). TWA: 1000 ppm 8 hours.</p>
n-Butyl Acetate	123-86-4	<p>NOM-010-STPS-2014 (Mexico, 4/2016). TWA: 150 ppm 8 hours. STEL: 200 ppm 15 minutes.</p>
Butane	106-97-8	<p>NOM-010-STPS-2014 (Mexico, 4/2016). TWA: 1000 ppm 8 hours.</p>
Zirconium 2-Ethylhexanoate	22464-99-9	<p>NOM-010-STPS-2014 (Mexico, 4/2016). [Zirconium compounds] TWA: 5 mg/m³, (as Zr) 8 hours. STEL: 10 mg/m³, (as Zr) 15 minutes.</p>

Appropriate engineering controls

: Use only with adequate ventilation. Use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits. The engineering controls also need to keep gas, vapor or dust concentrations below any lower explosive limits. Use explosion-proof ventilation equipment.

Environmental exposure controls

: Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

Individual protection measures

Section 8. Exposure controls/personal protection

- Hygiene measures** : Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Contaminated work clothing should not be allowed out of the workplace. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.
- Eye/face protection** : Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: chemical splash goggles.
- Skin protection**
- Hand protection** : Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. Considering the parameters specified by the glove manufacturer, check during use that the gloves are still retaining their protective properties. It should be noted that the time to breakthrough for any glove material may be different for different glove manufacturers. In the case of mixtures, consisting of several substances, the protection time of the gloves cannot be accurately estimated.
- Body protection** : Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product. When there is a risk of ignition from static electricity, wear anti-static protective clothing. For the greatest protection from static discharges, clothing should include anti-static overalls, boots and gloves.
- Other skin protection** : Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.
- Respiratory protection** : Based on the hazard and potential for exposure, select a respirator that meets the appropriate standard or certification. Respirators must be used according to a respiratory protection program to ensure proper fitting, training, and other important aspects of use.

Section 9. Physical and chemical properties

The conditions of measurement of all properties are at standard temperature and pressure unless otherwise indicated.

Appearance

- Physical state** : Liquid.
- Color** : Not available.
- Odor** : Not available.
- Odor threshold** : Not available.
- pH** : Not applicable.
- Melting point/freezing point** : Not available.
- Boiling point, initial boiling point, and boiling range** : Not available.
- Flash point** : Closed cup: -29°C (-20.2°F) [Pensky-Martens Closed Cup]
- Evaporation rate** : 5.6 (butyl acetate = 1)
- Flammability** : Flammable aerosol.
- Lower and upper explosion limit/flammability limit** : Lower: 1.26%
Upper: 15.8%
- Vapor pressure** : 101.3 kPa (760 mm Hg)
- Relative vapor density** : 1.55 [Air = 1]
- Relative density** : 0.74
- Solubility(ies)** :

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Date of previous issue : 11/23/2022

Version : 23.01

11/19

4290 KRYLON® Camouflage Paint
Black

SHW-85-NA-GHS-US

Section 9. Physical and chemical properties

Media	Result
cold water	Not soluble

- Partition coefficient: n-octanol/water** : Not applicable.
- Auto-ignition temperature** : Not available.
- Decomposition temperature** : Not available.
- Viscosity** : Kinematic (40°C (104°F)): <20.5 mm²/s (<20.5 cSt)
- Molecular weight** : Not applicable.
- Aerosol product**
- Type of aerosol** : Spray
- Heat of combustion** : 28.124 kJ/g

Section 10. Stability and reactivity

- Reactivity** : No specific test data related to reactivity available for this product or its ingredients.
- Chemical stability** : The product is stable.
- Possibility of hazardous reactions** : Under normal conditions of storage and use, hazardous reactions will not occur.
- Conditions to avoid** : Avoid all possible sources of ignition (spark or flame).
- Incompatible materials** : No specific data.
- Hazardous decomposition products** : Under normal conditions of storage and use, hazardous decomposition products should not be produced.

Section 11. Toxicological information

Information on toxicological effects

Acute toxicity

Product/ingredient name	Result	Species	Dose	Exposure
Acetone	LD50 Oral	Rat	5800 mg/kg	-
n-Butyl Acetate	LD50 Dermal	Rabbit	>17600 mg/kg	-
	LD50 Oral	Rat	10768 mg/kg	-
Butane	LC50 Inhalation Vapor	Rat	658000 mg/m ³	4 hours
2-Propoxyethanol	LD50 Oral	Rat	3089 mg/kg	-
Carbon Black	LD50 Oral	Rat	>15400 mg/kg	-
Xylene, mixed isomers	LC50 Inhalation Gas.	Rat	6700 ppm	4 hours
	LD50 Oral	Rat	4300 mg/kg	-
Zirconium 2-Ethylhexanoate	LD50 Dermal	Rabbit	>5 g/kg	-
	LD50 Oral	Rat	>5 g/kg	-
Methyl Ethyl Ketoxime	LD50 Oral	Rat	930 mg/kg	-
Light Aromatic Hydrocarbons	LD50 Oral	Rat	8400 mg/kg	-

Irritation/Corrosion

Section 11. Toxicological information

Product/ingredient name	Result	Species	Score	Exposure	Observation
Acetone	Eyes - Mild irritant	Human	-	186300 ppm	-
	Eyes - Mild irritant	Rabbit	-	10 uL	-
	Eyes - Moderate irritant	Rabbit	-	24 hours 20 mg	-
	Eyes - Severe irritant	Rabbit	-	20 mg	-
	Skin - Mild irritant	Rabbit	-	395 mg	-
	Skin - Mild irritant	Rabbit	-	24 hours 500 mg	-
n-Butyl Acetate	Eyes - Moderate irritant	Rabbit	-	100 mg	-
	Skin - Moderate irritant	Rabbit	-	24 hours 500 mg	-
2-Propoxyethanol	Eyes - Severe irritant	Rabbit	-	100 mg	-
	Eyes - Severe irritant	Rabbit	-	24 hours 750 ug	-
	Skin - Mild irritant	Guinea pig	-	500 mg	-
	Skin - Mild irritant	Rabbit	-	24 hours 500 mg	-
Xylene, mixed isomers	Eyes - Mild irritant	Rabbit	-	87 mg	-
	Eyes - Severe irritant	Rabbit	-	24 hours 5 mg	-
	Skin - Mild irritant	Rat	-	8 hours 60 uL	-
	Skin - Moderate irritant	Rabbit	-	100 %	-
	Skin - Moderate irritant	Rabbit	-	24 hours 500 mg	-
	Methyl Ethyl Ketoxime	Eyes - Severe irritant	Rabbit	-	100 uL
Light Aromatic Hydrocarbons	Eyes - Mild irritant	Rabbit	-	24 hours 100 uL	-

Sensitization

Not available.

Mutagenicity

Not available.

Carcinogenicity

Not available.

Classification

Product/ingredient name	OSHA	IARC	NTP
Amorphous Precipitated Silica	-	3	-
Carbon Black	-	2B	-
Xylene, mixed isomers	-	3	-

Reproductive toxicity

Not available.

Teratogenicity

Not available.

Specific target organ toxicity (single exposure)

Section 11. Toxicological information

Name	Category	Route of exposure	Target organs
Acetone	Category 3	-	Respiratory tract irritation
Propane	Category 3 Category 3	-	Narcotic effects Respiratory tract irritation
n-Butyl Acetate	Category 3	-	Narcotic effects
Butane	Category 3	-	Respiratory tract irritation
2-Propoxyethanol	Category 3 Category 3	-	Narcotic effects Respiratory tract irritation
Xylene, mixed isomers	Category 3 Category 3	-	Narcotic effects Respiratory tract irritation
Methyl Ethyl Ketoxime	Category 1	-	upper respiratory tract
Light Aromatic Hydrocarbons	Category 3 Category 3	-	Narcotic effects Respiratory tract irritation
	Category 3	-	Narcotic effects

Specific target organ toxicity (repeated exposure)

Name	Category	Route of exposure	Target organs
Acetone	Category 2	-	-
Propane	Category 2	-	-
Butane	Category 2	-	-
2-Propoxyethanol	Category 2	-	-
Xylene, mixed isomers	Category 2	-	-
Methyl Ethyl Ketoxime	Category 2	-	blood system
Light Aromatic Hydrocarbons	Category 2	-	-

Aspiration hazard

Name	Result
Propane	ASPIRATION HAZARD - Category 1
Butane	ASPIRATION HAZARD - Category 1
Xylene, mixed isomers	ASPIRATION HAZARD - Category 1
Light Aromatic Hydrocarbons	ASPIRATION HAZARD - Category 1

Information on the likely routes of exposure : Not available.

Potential acute health effects

Eye contact : Causes serious eye irritation.

Inhalation : Can cause central nervous system (CNS) depression. May cause drowsiness or dizziness. May cause respiratory irritation.

Skin contact : Causes skin irritation. May cause an allergic skin reaction.

Ingestion : Can cause central nervous system (CNS) depression. May be fatal if swallowed and enters airways.

Symptoms related to the physical, chemical and toxicological characteristics

Section 11. Toxicological information

Eye contact : Adverse symptoms may include the following:
pain or irritation
watering
redness

Inhalation : Adverse symptoms may include the following:
respiratory tract irritation
coughing
nausea or vomiting
headache
drowsiness/fatigue
dizziness/vertigo
unconsciousness
reduced fetal weight
increase in fetal deaths
skeletal malformations

Skin contact : Adverse symptoms may include the following:
irritation
redness
reduced fetal weight
increase in fetal deaths
skeletal malformations

Ingestion : Adverse symptoms may include the following:
nausea or vomiting
reduced fetal weight
increase in fetal deaths
skeletal malformations

Delayed and immediate effects and also chronic effects from short and long term exposure

Short term exposure

Potential immediate effects : Not available.

Potential delayed effects : Not available.

Long term exposure

Potential immediate effects : Not available.

Potential delayed effects : Not available.

Potential chronic health effects

Not available.

General : May cause damage to organs through prolonged or repeated exposure. Once sensitized, a severe allergic reaction may occur when subsequently exposed to very low levels.

Carcinogenicity : Suspected of causing cancer. Risk of cancer depends on duration and level of exposure.

Mutagenicity : No known significant effects or critical hazards.

Teratogenicity : Suspected of damaging the unborn child.

Developmental effects : No known significant effects or critical hazards.

Fertility effects : No known significant effects or critical hazards.

Numerical measures of toxicity

Acute toxicity estimates

Section 11. Toxicological information

Route	ATE value
Oral	101495.85 mg/kg
Dermal	36142.9 mg/kg

Section 12. Ecological information

Toxicity

Product/ingredient name	Result	Species	Exposure
Acetone	Acute EC50 7200000 µg/l Fresh water	Algae - Selenastrum sp.	96 hours
	Acute LC50 4.42589 ml/L Marine water	Crustaceans - Acartia tonsa - Copepodid	48 hours
	Acute LC50 7460000 µg/l Fresh water	Daphnia - Daphnia cucullata	48 hours
	Acute LC50 5600 ppm Fresh water	Fish - Poecilia reticulata	96 hours
	Chronic NOEC 4.95 mg/l Marine water	Algae - Ulva pertusa	96 hours
	Chronic NOEC 0.016 ml/L Fresh water	Crustaceans - Daphniidae	21 days
	Chronic NOEC 0.1 ml/L Fresh water	Daphnia - Daphnia magna - Neonate	21 days
n-Butyl Acetate	Chronic NOEC 5 µg/l Marine water	Fish - Gasterosteus aculeatus - Larvae	42 days
	Acute LC50 32 mg/l Marine water	Crustaceans - Artemia salina	48 hours
Xylene, mixed isomers	Acute LC50 18000 µg/l Fresh water	Fish - Pimephales promelas	96 hours
	Acute LC50 8500 µg/l Marine water	Crustaceans - Palaemonetes pugio	48 hours
Methyl Ethyl Ketoxime	Acute LC50 13400 µg/l Fresh water	Fish - Pimephales promelas	96 hours
	Acute LC50 843000 µg/l Fresh water	Fish - Pimephales promelas	96 hours

Persistence and degradability

Product/ingredient name	Aquatic half-life	Photolysis	Biodegradability
Acetone	-	-	Readily
n-Butyl Acetate	-	-	Readily
Xylene, mixed isomers	-	-	Readily
Light Aromatic Hydrocarbons	-	-	Readily

Bioaccumulative potential

Product/ingredient name	LogP _{ow}	BCF	Potential
Xylene, mixed isomers	-	8.1 to 25.9	low
Zirconium 2-Ethylhexanoate	-	2.96	low
Methyl Ethyl Ketoxime	-	2.5 to 5.8	low
Light Aromatic Hydrocarbons	-	10 to 2500	high

Mobility in soil






Soil/water partition coefficient (K_{oc}) : Not available.

Other adverse effects : No known significant effects or critical hazards.

Section 13. Disposal considerations

Disposal methods : The generation of waste should be avoided or minimized wherever possible. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. This material and its container must be disposed of in a safe way. Empty containers or liners may retain some product residues. Do not puncture or incinerate container.

Section 14. Transport information

	DOT Classification	TDG Classification	Mexico Classification	IATA	IMDG
UN number	UN1950	UN1950	UN1950	UN1950	UN1950
UN proper shipping name	AEROSOLS	AEROSOLS	AEROSOLS	AEROSOLS, flammable	AEROSOLS
Transport hazard class(es)	2.1 	2.1 	2.1 	2.1 	2.1 
Packing group	-	-	-	-	-
Environmental hazards	No.	No.	No.	No.	No.
Additional information	<p style="text-align: center;">- ERG No. 126</p> <p>Dependent upon container size, this product may ship under the Limited Quantity shipping exception.</p>	<p>Product classified as per the following sections of the Transportation of Dangerous Goods Regulations: 2.13-2.17 (Class 2).</p> <p style="text-align: center;">ERG No. 126</p> <p>Dependent upon container size, this product may ship under the Limited Quantity shipping exception.</p>	<p style="text-align: center;">- ERG No. 126</p> <p>Dependent upon container size, this product may ship under the Limited Quantity shipping exception.</p>	<p style="text-align: center;">- ERG No. 126</p> <p>Dependent upon container size, this product may ship under the Limited Quantity shipping exception.</p>	<p style="text-align: center;">Emergency schedules F-D, S-U</p> <p>Dependent upon container size, this product may ship under the Limited Quantity shipping exception.</p>

Special precautions for user : Multi-modal shipping descriptions are provided for informational purposes and do not consider container sizes. The presence of a shipping description for a particular mode of transport (sea, air, etc.), does not indicate that the product is packaged suitably for that mode of transport. All packaging must be reviewed for suitability prior to shipment, and compliance with the applicable regulations is the sole responsibility of the person offering the product for transport. People loading and unloading dangerous goods must be trained on all of the risks deriving from the substances and on all actions in case of emergency situations.

Section 14. Transport information

Transport in bulk according to IMO instruments : Not available.

Proper shipping name : Not available.

Section 15. Regulatory information

SARA 313

SARA 313 (40 CFR 372.45) supplier notification can be found on the Environmental Data Sheet.

California Prop. 65

WARNING: This product contains chemicals known to the State of California to cause cancer and birth defects or other reproductive harm.

International regulations

- International lists : Australia inventory (AIIIC): Not determined.
- China inventory (IECSC): Not determined.
- Japan inventory (CSCL): Not determined.
- Japan inventory (ISHL): Not determined.
- Korea inventory (KECI): Not determined.
- New Zealand Inventory of Chemicals (NZIoC): Not determined.
- Philippines inventory (PICCS): Not determined.
- Taiwan Chemical Substances Inventory (TCSI): Not determined.
- Thailand inventory: Not determined.
- Turkey inventory: Not determined.
- Vietnam inventory: Not determined.

Section 16. Other information

Hazardous Material Information System (U.S.A.)

Health	*	3
Flammability		4
Physical hazards		3

The customer is responsible for determining the PPE code for this material. For more information on HMIS® Personal Protective Equipment (PPE) codes, consult the HMIS® Implementation Manual.

Caution: HMIS® ratings are based on a 0-4 rating scale, with 0 representing minimal hazards or risks, and 4 representing significant hazards or risks. Although HMIS® ratings and the associated label are not required on SDSs or products leaving a facility under 29 CFR 1910.1200, the preparer may choose to provide them. HMIS® ratings are to be used with a fully implemented HMIS® program. HMIS® is a registered trademark and service mark of the American Coatings Association, Inc.

Procedure used to derive the classification

Classification	Justification
FLAMMABLE AEROSOLS - Category 1	On basis of test data
GASES UNDER PRESSURE - Compressed gas	Calculation method
SKIN CORROSION/IRRITATION - Category 2	Calculation method
SERIOUS EYE DAMAGE/ EYE IRRITATION - Category 2A	Calculation method
SKIN SENSITIZATION - Category 1	Calculation method
CARCINOGENICITY - Category 2	Calculation method
TOXIC TO REPRODUCTION - Category 2	Calculation method
SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Respiratory tract irritation) - Category 3	Calculation method
SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Narcotic effects) - Category 3	Calculation method
SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) - Category 2	Calculation method
ASPIRATION HAZARD - Category 1	Calculation method

Section 16. Other information

History

- Date of printing** : 1/30/2023
- Date of issue/Date of revision** : 1/30/2023
- Date of previous issue** : 11/23/2022
- Version** : 23.01
- Key to abbreviations** : ATE = Acute Toxicity Estimate
BCF = Bioconcentration Factor
GHS = Globally Harmonized System of Classification and Labelling of Chemicals
IATA = International Air Transport Association
IBC = Intermediate Bulk Container
IMDG = International Maritime Dangerous Goods
LogPow = logarithm of the octanol/water partition coefficient
MARPOL = International Convention for the Prevention of Pollution From Ships, 1973 as modified by the Protocol of 1978. ("Marpol" = marine pollution)
N/A = Not available
SGG = Segregation Group
UN = United Nations

✔ Indicates information that has changed from previously issued version.

Notice to reader

It is recommended that each customer or recipient of this Safety Data Sheet (SDS) study it carefully and consult resources, as necessary or appropriate, to become aware of and understand the data contained in this SDS and any hazards associated with the product. This information is provided in good faith and believed to be accurate as of the effective date herein. However, no warranty, express or implied, is given. The information presented here applies only to the product as shipped. The addition of any material can change the composition, hazards and risks of the product. Products shall not be repackaged, modified, or tinted except as specifically instructed by the manufacturer, including but not limited to the incorporation of products not specified by the manufacturer, or the use or addition of products in proportions not specified by the manufacturer. Regulatory requirements are subject to change and may differ between various locations and jurisdictions. The customer/buyer/user is responsible to ensure that his activities comply with all country, federal, state, provincial or local laws. The conditions for use of the product are not under the control of the manufacturer; the customer/buyer/user is responsible to determine the conditions necessary for the safe use of this product. The customer/buyer/user should not use the product for any purpose other than the purpose shown in the applicable section of this SDS without first referring to the supplier and obtaining written handling instructions. Due to the proliferation of sources for information such as manufacturer-specific SDS, the manufacturer cannot be responsible for SDSs obtained from any other source.

SAFETY DATA SHEET

1303A

Section 1. Identification

Product name : KRYLON® Crystal Clear Acrylic Coating
Clear

Product code : 1303A

Other means of identification : Not available.

Product type : Aerosol.

Relevant identified uses of the substance or mixture and uses advised against

Paint or paint related material.

Manufacturer : Krylon Products Group
101 W. Prospect Avenue
Cleveland, OH 44115

Emergency telephone number of the company : US / Canada: (216) 566-2917
Mexico: SETIQ 800-00-214-00 / 55-5559-1588 Available 24 hours and 365 days a year

Product Information Telephone Number : US / Canada: (800) 457-9566
Mexico: Not Available

Regulatory Information Telephone Number : US / Canada: (216) 566-2902
Mexico: Not Available

Transportation Emergency Telephone Number : US / Canada: (216) 566-2917
Mexico: SETIQ 800-00-214-00 / 55-5559-1588 Available 24 hours and 365 days a year

Section 2. Hazards identification

OSHA/HCS status : This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).

Classification of the substance or mixture : FLAMMABLE AEROSOLS - Category 1
GASES UNDER PRESSURE - Compressed gas
SKIN CORROSION/IRRITATION - Category 2
SERIOUS EYE DAMAGE/ EYE IRRITATION - Category 2A
CARCINOGENICITY - Category 2
SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Respiratory tract irritation) - Category 3
SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Narcotic effects) - Category 3
SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) - Category 2
ASPIRATION HAZARD - Category 1

Percentage of the mixture consisting of ingredient(s) of unknown acute toxicity: 12.7% (oral), 16.7% (dermal), 16.7% (inhalation)

GHS label elements

Hazard pictograms :



Signal word : Danger

Date of issue/Date of revision : 11/25/2022 **Date of previous issue** : 6/21/2022

Version : 18 **1/17**

1303A KRYLON® Crystal Clear Acrylic Coating
Clear

SHW-85-NA-GHS-US

Section 2. Hazards identification

Hazard statements : Extremely flammable aerosol.
 Contains gas under pressure; may explode if heated.
 May be fatal if swallowed and enters airways.
 Causes skin irritation.
 Causes serious eye irritation.
 May cause respiratory irritation.
 May cause drowsiness or dizziness.
 Suspected of causing cancer.
 May cause damage to organs through prolonged or repeated exposure.

Precautionary statements

General : Read label before use. Keep out of reach of children. If medical advice is needed, have product container or label at hand.

Prevention : Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Wear protective gloves, protective clothing and eye or face protection. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Do not spray on an open flame or other ignition source. Use only outdoors or in a well-ventilated area. Do not breathe dust or mist. Wash thoroughly after handling. Pressurized container: Do not pierce or burn, even after use.

Response : IF exposed or concerned: Get medical advice or attention. IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER or doctor if you feel unwell. IF SWALLOWED: Immediately call a POISON CENTER or doctor. Do NOT induce vomiting. Take off contaminated clothing and wash it before reuse. IF ON SKIN: Wash with plenty of water. If skin irritation occurs: Get medical advice or attention. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice or attention.

Storage : Store locked up. Protect from sunlight. Do not expose to temperatures exceeding 50 °C/122 °F. Store in a well-ventilated place. Keep container tightly closed.

Disposal : Dispose of contents and container in accordance with all local, regional, national and international regulations.

Supplemental label elements DELAYED EFFECTS FROM LONG TERM OVEREXPOSURE. Contains solvents which can cause permanent brain and nervous system damage. Intentional misuse by deliberately concentrating and inhaling the contents can be harmful or fatal. WARNING: This product contains chemicals known to the State of California to cause cancer and birth defects or other reproductive harm.
 Please refer to the SDS for additional information. Keep out of reach of children. Keep upright in a cool, dry place. Do not discard empty can in trash compactor.

Hazards not otherwise classified : None known.

Section 3. Composition/information on ingredients

Substance/mixture : Mixture

Other means of identification : Not available.

CAS number/other identifiers

Ingredient name	% by weight	CAS number
Acetone	≥25 - ≤50	67-64-1
n-Butyl Acetate	≥10 - ≤25	123-86-4
Propane	≥10 - ≤25	74-98-6
Butane	≥10 - ≤25	106-97-8
Ethyl 3-Ethoxypropionate	≤5	763-69-9
Xylene, mixed isomers	≤3	1330-20-7
Ethylbenzene	<1	100-41-4

Section 3. Composition/information on ingredients

Any concentration shown as a range is to protect confidentiality or is due to batch variation.

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified and hence require reporting in this section.

Occupational exposure limits, if available, are listed in Section 8.

Section 4. First aid measures

Description of necessary first aid measures

- Eye contact** : Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for at least 10 minutes. Get medical attention.
- Inhalation** : Remove victim to fresh air and keep at rest in a position comfortable for breathing. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Get medical attention. If necessary, call a poison center or physician. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.
- Skin contact** : Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Continue to rinse for at least 10 minutes. Get medical attention. Wash clothing before reuse. Clean shoes thoroughly before reuse.
- Ingestion** : Get medical attention immediately. Call a poison center or physician. Wash out mouth with water. Remove dentures if any. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Stop if the exposed person feels sick as vomiting may be dangerous. Aspiration hazard if swallowed. Can enter lungs and cause damage. Do not induce vomiting. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.

Most important symptoms/effects, acute and delayed

Potential acute health effects

- Eye contact** : Causes serious eye irritation.
- Inhalation** : Can cause central nervous system (CNS) depression. May cause drowsiness or dizziness. May cause respiratory irritation.
- Skin contact** : Causes skin irritation.
- Ingestion** : Can cause central nervous system (CNS) depression. May be fatal if swallowed and enters airways.

Over-exposure signs/symptoms

- Eye contact** : Adverse symptoms may include the following:
pain or irritation
watering
redness
- Inhalation** : Adverse symptoms may include the following:
respiratory tract irritation
coughing
nausea or vomiting
headache
drowsiness/fatigue
dizziness/vertigo
unconsciousness

Section 4. First aid measures

- Skin contact** : Adverse symptoms may include the following:
irritation
redness
- Ingestion** : Adverse symptoms may include the following:
nausea or vomiting

Indication of immediate medical attention and special treatment needed, if necessary

- Notes to physician** : Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
- Specific treatments** : No specific treatment.
- Protection of first-aiders** : No action shall be taken involving any personal risk or without suitable training. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation.

See toxicological information (Section 11)

Section 5. Fire-fighting measures

Extinguishing media

- Suitable extinguishing media** : Use an extinguishing agent suitable for the surrounding fire.
- Unsuitable extinguishing media** : None known.

- Specific hazards arising from the chemical** : Extremely flammable aerosol. Runoff to sewer may create fire or explosion hazard. In a fire or if heated, a pressure increase will occur and the container may burst, with the risk of a subsequent explosion. Gas may accumulate in low or confined areas or travel a considerable distance to a source of ignition and flash back, causing fire or explosion. Bursting aerosol containers may be propelled from a fire at high speed.

- Hazardous thermal decomposition products** : Decomposition products may include the following materials:
carbon dioxide
carbon monoxide

- Special protective actions for fire-fighters** : Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training. Move containers from fire area if this can be done without risk. Use water spray to keep fire-exposed containers cool.

- Special protective equipment for fire-fighters** : Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

Section 6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

- For non-emergency personnel** : No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. In the case of aerosols being ruptured, care should be taken due to the rapid escape of the pressurized contents and propellant. If a large number of containers are ruptured, treat as a bulk material spillage according to the instructions in the clean-up section. Do not touch or walk through spilled material. Shut off all ignition sources. No flares, smoking or flames in hazard area. Avoid breathing vapor or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.

Section 6. Accidental release measures

For emergency responders : If specialized clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".

Environmental precautions : Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).

Methods and materials for containment and cleaning up

Small spill : Stop leak if without risk. Move containers from spill area. Use spark-proof tools and explosion-proof equipment. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.

Large spill : Stop leak if without risk. Move containers from spill area. Use spark-proof tools and explosion-proof equipment. Approach release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Wash spillages into an effluent treatment plant or proceed as follows. Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations (see Section 13). Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spilled product. Note: see Section 1 for emergency contact information and Section 13 for waste disposal.

Section 7. Handling and storage

Precautions for safe handling

Protective measures : Put on appropriate personal protective equipment (see Section 8). Pressurized container: protect from sunlight and do not expose to temperatures exceeding 50°C. Do not pierce or burn, even after use. Avoid exposure - obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Do not get in eyes or on skin or clothing. Do not breathe vapor or mist. Do not swallow. Avoid breathing gas. Use only with adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Store and use away from heat, sparks, open flame or any other ignition source. Use explosion-proof electrical (ventilating, lighting and material handling) equipment. Use only non-sparking tools. Empty containers retain product residue and can be hazardous.

Advice on general occupational hygiene : Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.

Conditions for safe storage, including any incompatibilities : Store in accordance with local regulations. Store away from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Protect from sunlight. Store locked up. Eliminate all ignition sources. Use appropriate containment to avoid environmental contamination. See Section 10 for incompatible materials before handling or use.

Section 8. Exposure controls/personal protection

Control parameters

Occupational exposure limits (OSHA United States)

Section 8. Exposure controls/personal protection

Ingredient name	CAS #	Exposure limits
Acetone	67-64-1	ACGIH TLV (United States, 1/2022). TWA: 250 ppm 8 hours. STEL: 500 ppm 15 minutes. NIOSH REL (United States, 10/2020). TWA: 250 ppm 10 hours. TWA: 590 mg/m ³ 10 hours. OSHA PEL (United States, 5/2018). TWA: 1000 ppm 8 hours. TWA: 2400 mg/m ³ 8 hours.
n-Butyl Acetate	123-86-4	NIOSH REL (United States, 10/2020). TWA: 150 ppm 10 hours. TWA: 710 mg/m ³ 10 hours. STEL: 200 ppm 15 minutes. STEL: 950 mg/m ³ 15 minutes. OSHA PEL (United States, 5/2018). TWA: 150 ppm 8 hours. TWA: 710 mg/m ³ 8 hours. ACGIH TLV (United States, 1/2022). [Butyl acetates] STEL: 150 ppm 15 minutes. TWA: 50 ppm 8 hours.
Propane	74-98-6	NIOSH REL (United States, 10/2020). TWA: 1000 ppm 10 hours. TWA: 1800 mg/m ³ 10 hours. OSHA PEL (United States, 5/2018). TWA: 1000 ppm 8 hours. TWA: 1800 mg/m ³ 8 hours. ACGIH TLV (United States, 1/2022). Oxygen Depletion [Asphyxiant]. Explosive potential.
Butane	106-97-8	NIOSH REL (United States, 10/2020). TWA: 800 ppm 10 hours. TWA: 1900 mg/m ³ 10 hours. ACGIH TLV (United States, 1/2022). [Butane] Explosive potential. STEL: 1000 ppm 15 minutes.
Ethyl 3-Ethoxypropionate Xylene, mixed isomers	763-69-9 1330-20-7	None. ACGIH TLV (United States, 1/2022). [xylene] TWA: 20 ppm 8 hours. TWA: 434 mg/m ³ 8 hours. STEL: 651 mg/m ³ 15 minutes. OSHA PEL (United States, 5/2018). [Xylenes] TWA: 100 ppm 8 hours. TWA: 435 mg/m ³ 8 hours.
Ethylbenzene	100-41-4	ACGIH TLV (United States, 1/2022). Ototoxicant. TWA: 20 ppm 8 hours. NIOSH REL (United States, 10/2020). TWA: 100 ppm 10 hours. TWA: 435 mg/m ³ 10 hours. STEL: 125 ppm 15 minutes. STEL: 545 mg/m ³ 15 minutes. OSHA PEL (United States, 5/2018). TWA: 100 ppm 8 hours. TWA: 435 mg/m ³ 8 hours.

Section 8. Exposure controls/personal protection

Occupational exposure limits (Canada)

Ingredient name	CAS #	Exposure limits
acetone	67-64-1	<p>CA Alberta Provincial (Canada, 6/2018). 8 hrs OEL: 1200 mg/m³ 8 hours. 15 min OEL: 1800 mg/m³ 15 minutes. 8 hrs OEL: 500 ppm 8 hours. 15 min OEL: 750 ppm 15 minutes.</p> <p>CA British Columbia Provincial (Canada, 3/2022). TWA: 250 ppm 8 hours. STEL: 500 ppm 15 minutes.</p> <p>CA Ontario Provincial (Canada, 6/2019). TWA: 250 ppm 8 hours. STEL: 500 ppm 15 minutes.</p> <p>CA Quebec Provincial (Canada, 6/2021). TWAEV: 500 ppm 8 hours. TWAEV: 1190 mg/m³ 8 hours. STEV: 1000 ppm 15 minutes. STEV: 2380 mg/m³ 15 minutes.</p> <p>CA Saskatchewan Provincial (Canada, 7/2013). STEL: 750 ppm 15 minutes. TWA: 500 ppm 8 hours.</p>
n-butyl acetate	123-86-4	<p>CA Alberta Provincial (Canada, 6/2018). 15 min OEL: 200 ppm 15 minutes. 15 min OEL: 950 mg/m³ 15 minutes. 8 hrs OEL: 150 ppm 8 hours. 8 hrs OEL: 713 mg/m³ 8 hours.</p> <p>CA Saskatchewan Provincial (Canada, 7/2013). STEL: 200 ppm 15 minutes. TWA: 150 ppm 8 hours.</p> <p>CA Ontario Provincial (Canada, 6/2019). [butyl acetates, all isomers] STEL: 150 ppm 15 minutes. TWA: 50 ppm 8 hours.</p> <p>CA British Columbia Provincial (Canada, 3/2022). [butyl acetate, all isomers] STEL: 150 ppm 15 minutes. TWA: 50 ppm 8 hours.</p> <p>CA Quebec Provincial (Canada, 6/2021). [butyl acetates] STEV: 150 ppm 15 minutes. TWAEV: 50 ppm 8 hours.</p>
Normal propane	74-98-6	<p>CA Alberta Provincial (Canada, 6/2018). 8 hrs OEL: 1000 ppm 8 hours.</p> <p>CA Quebec Provincial (Canada, 6/2021). TWAEV: 1000 ppm 8 hours. TWAEV: 1800 mg/m³ 8 hours.</p> <p>CA Saskatchewan Provincial (Canada, 7/2013). STEL: 1250 ppm 15 minutes. TWA: 1000 ppm 8 hours.</p> <p>CA British Columbia Provincial (Canada, 3/2022). Oxygen Depletion [Asphyxiant]. Explosive potential.</p>

Section 8. Exposure controls/personal protection

Butane	106-97-8	<p>CA Ontario Provincial (Canada, 6/2019). Oxygen Depletion [Asphyxiant]. Explosive potential.</p> <p>CA Alberta Provincial (Canada, 6/2018). 8 hrs OEL: 1000 ppm 8 hours.</p> <p>CA Quebec Provincial (Canada, 6/2021). TWAEV: 800 ppm 8 hours. TWAEV: 1900 mg/m³ 8 hours.</p> <p>CA Saskatchewan Provincial (Canada, 7/2013). [Butane] STEL: 1250 ppm 15 minutes. TWA: 1000 ppm 8 hours.</p> <p>CA British Columbia Provincial (Canada, 3/2022). [butane, all isomers] Explosive potential. STEL: 1000 ppm 15 minutes.</p> <p>CA Ontario Provincial (Canada, 6/2019). [Butane, All isomers] Explosive potential. STEL: 1000 ppm 15 minutes.</p>
Xylene	1330-20-7	<p>CA Alberta Provincial (Canada, 6/2018). [Dimethylbenzene] 8 hrs OEL: 100 ppm 8 hours. 15 min OEL: 651 mg/m³ 15 minutes. 15 min OEL: 150 ppm 15 minutes. 8 hrs OEL: 434 mg/m³ 8 hours.</p> <p>CA British Columbia Provincial (Canada, 3/2022). [Xylene (o, m & p isomers)] TWA: 100 ppm 8 hours. STEL: 150 ppm 15 minutes.</p> <p>CA Quebec Provincial (Canada, 6/2021). [Xylene] TWAEV: 100 ppm 8 hours. TWAEV: 434 mg/m³ 8 hours. STEV: 150 ppm 15 minutes. STEV: 651 mg/m³ 15 minutes.</p> <p>CA Ontario Provincial (Canada, 6/2019). [Xylene (o-, m-, p-isomers)] STEL: 150 ppm 15 minutes. TWA: 100 ppm 8 hours.</p> <p>CA Saskatchewan Provincial (Canada, 7/2013). [Xylene] STEL: 150 ppm 15 minutes. TWA: 100 ppm 8 hours.</p>
Ethylbenzene	100-41-4	<p>CA Alberta Provincial (Canada, 6/2018). 8 hrs OEL: 100 ppm 8 hours. 8 hrs OEL: 434 mg/m³ 8 hours. 15 min OEL: 543 mg/m³ 15 minutes. 15 min OEL: 125 ppm 15 minutes.</p> <p>CA British Columbia Provincial (Canada, 3/2022). TWA: 20 ppm 8 hours.</p> <p>CA Ontario Provincial (Canada, 6/2019). TWA: 20 ppm 8 hours.</p> <p>CA Quebec Provincial (Canada, 6/2021). TWAEV: 20 ppm 8 hours.</p> <p>CA Saskatchewan Provincial (Canada,</p>

Section 8. Exposure controls/personal protection

7/2013).
 STEL: 125 ppm 15 minutes.
 TWA: 100 ppm 8 hours.

Occupational exposure limits (Mexico)

	CAS #	Exposure limits
Acetone	67-64-1	NOM-010-STPS-2014 (Mexico, 4/2016). TWA: 500 ppm 8 hours. STEL: 750 ppm 15 minutes.
n-Butyl Acetate	123-86-4	NOM-010-STPS-2014 (Mexico, 4/2016). TWA: 150 ppm 8 hours. STEL: 200 ppm 15 minutes.
Propane	74-98-6	NOM-010-STPS-2014 (Mexico, 4/2016). TWA: 1000 ppm 8 hours.
Butane	106-97-8	NOM-010-STPS-2014 (Mexico, 4/2016). TWA: 1000 ppm 8 hours.
Xylene, mixed isomers	1330-20-7	NOM-010-STPS-2014 (Mexico, 4/2016). [Xylenes (mixed)] STEL: 150 ppm 15 minutes. TWA: 100 ppm 8 hours.

Appropriate engineering controls : Use only with adequate ventilation. Use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits. The engineering controls also need to keep gas, vapor or dust concentrations below any lower explosive limits. Use explosion-proof ventilation equipment.

Environmental exposure controls : Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

Individual protection measures

Hygiene measures : Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

Eye/face protection : Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: chemical splash goggles.

Skin protection

Hand protection : Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. Considering the parameters specified by the glove manufacturer, check during use that the gloves are still retaining their protective properties. It should be noted that the time to breakthrough for any glove material may be different for different glove manufacturers. In the case of mixtures, consisting of several substances, the protection time of the gloves cannot be accurately estimated.

Body protection : Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product. When there is a risk of ignition from static electricity, wear anti-static protective clothing. For the greatest protection from static discharges, clothing should include anti-static overalls, boots and gloves.

Section 8. Exposure controls/personal protection

- Other skin protection** : Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.
- Respiratory protection** : Based on the hazard and potential for exposure, select a respirator that meets the appropriate standard or certification. Respirators must be used according to a respiratory protection program to ensure proper fitting, training, and other important aspects of use.

Section 9. Physical and chemical properties

The conditions of measurement of all properties are at standard temperature and pressure unless otherwise indicated.

Appearance

- Physical state** : Liquid.
- Color** : Not available.
- Odor** : Not available.
- Odor threshold** : Not available.
- pH** : 7
- Melting point/freezing point** : Not available.
- Boiling point, initial boiling point, and boiling range** : Not available.
- Flash point** : Closed cup: -29°C (-20.2°F) [Pensky-Martens Closed Cup]
- Evaporation rate** : 5.6 (butyl acetate = 1)
- Flammability** : Not available.
- Lower and upper explosion limit/flammability limit** : Lower: 1%
Upper: 12.8%
- Vapor pressure** : 101.3 kPa (760 mm Hg)
- Relative vapor density** : 1.55 [Air = 1]
- Relative density** : 0.74
- Solubility(ies)** :
Not available.
- Partition coefficient: n-octanol/water** : Not applicable.
- Auto-ignition temperature** : Not available.
- Decomposition temperature** : Not available.
- Viscosity** : Kinematic (40°C (104°F)): <20.5 mm²/s (<20.5 cSt)
- Molecular weight** : Not applicable.
- Aerosol product**
- Type of aerosol** : Spray
- Heat of combustion** : 29.287 kJ/g

Section 10. Stability and reactivity

- Reactivity** : No specific test data related to reactivity available for this product or its ingredients.
- Chemical stability** : The product is stable.
- Possibility of hazardous reactions** : Under normal conditions of storage and use, hazardous reactions will not occur.

Section 10. Stability and reactivity

Conditions to avoid : Avoid all possible sources of ignition (spark or flame).

Incompatible materials : No specific data.

Hazardous decomposition products : Under normal conditions of storage and use, hazardous decomposition products should not be produced.

Section 11. Toxicological information

Information on toxicological effects

Acute toxicity

Product/ingredient name	Result	Species	Dose	Exposure
Acetone	LD50 Oral	Rat	5800 mg/kg	-
	LD50 Dermal	Rabbit	>17600 mg/kg	-
	LD50 Oral	Rat	10768 mg/kg	-
n-Butyl Acetate	LC50 Inhalation Vapor	Rat	658000 mg/m ³	4 hours
	LD50 Oral	Rat	3200 mg/kg	-
Butane	LC50 Inhalation Vapor	Rat	658000 mg/m ³	4 hours
	LD50 Oral	Rat	3200 mg/kg	-
Ethyl 3-Ethoxypropionate	LC50 Inhalation Gas.	Rat	6700 ppm	4 hours
	LD50 Oral	Rat	4300 mg/kg	-
Xylene, mixed isomers	LD50 Oral	Rat	4300 mg/kg	-
	LD50 Dermal	Rabbit	>5000 mg/kg	-
Ethylbenzene	LD50 Oral	Rat	3500 mg/kg	-
	LD50 Oral	Rat	3500 mg/kg	-

Irritation/Corrosion

Product/ingredient name	Result	Species	Score	Exposure	Observation
Acetone	Eyes - Mild irritant	Human	-	186300 ppm	-
	Eyes - Mild irritant	Rabbit	-	10 uL	-
	Eyes - Moderate irritant	Rabbit	-	24 hours 20 mg	-
	Eyes - Severe irritant	Rabbit	-	20 mg	-
	Skin - Mild irritant	Rabbit	-	395 mg	-
	Skin - Mild irritant	Rabbit	-	24 hours 500 mg	-
n-Butyl Acetate	Eyes - Moderate irritant	Rabbit	-	100 mg	-
	Skin - Moderate irritant	Rabbit	-	24 hours 500 mg	-
Ethyl 3-Ethoxypropionate	Skin - Mild irritant	Rabbit	-	24 hours 500 mg	-
Xylene, mixed isomers	Eyes - Mild irritant	Rabbit	-	87 mg	-
	Eyes - Severe irritant	Rabbit	-	24 hours 5 mg	-
	Skin - Mild irritant	Rat	-	8 hours 60 uL	-
Ethylbenzene	Skin - Moderate irritant	Rabbit	-	100 %	-
	Skin - Moderate irritant	Rabbit	-	24 hours 500 mg	-
	Eyes - Severe irritant	Rabbit	-	500 mg	-
	Skin - Mild irritant	Rabbit	-	24 hours 15 mg	-

Sensitization

Not available.

Mutagenicity

Not available.

Carcinogenicity

Section 11. Toxicological information

Not available.

Classification

Product/ingredient name	OSHA	IARC	NTP
Xylene, mixed isomers	-	3	-
Ethylbenzene	-	2B	-

Reproductive toxicity

Not available.

Teratogenicity

Not available.

Specific target organ toxicity (single exposure)

Name	Category	Route of exposure	Target organs
Acetone	Category 3	-	Respiratory tract irritation
n-Butyl Acetate	Category 3	-	Narcotic effects
Propane	Category 3	-	Narcotic effects
Butane	Category 3	-	Respiratory tract irritation
Xylene, mixed isomers	Category 3	-	Narcotic effects
Ethylbenzene	Category 3	-	Respiratory tract irritation
	Category 3	-	Narcotic effects

Specific target organ toxicity (repeated exposure)

Name	Category	Route of exposure	Target organs
Acetone	Category 2	-	-
Propane	Category 2	-	-
Butane	Category 2	-	-
Xylene, mixed isomers	Category 2	-	-
Ethylbenzene	Category 2	-	-

Aspiration hazard

Name	Result
Propane	ASPIRATION HAZARD - Category 1
Butane	ASPIRATION HAZARD - Category 1
Xylene, mixed isomers	ASPIRATION HAZARD - Category 1
Ethylbenzene	ASPIRATION HAZARD - Category 1

Information on the likely routes of exposure : Not available.

Potential acute health effects

Eye contact : Causes serious eye irritation.

Inhalation : Can cause central nervous system (CNS) depression. May cause drowsiness or dizziness. May cause respiratory irritation.

Skin contact : Causes skin irritation.

Section 11. Toxicological information

Ingestion : Can cause central nervous system (CNS) depression. May be fatal if swallowed and enters airways.

Symptoms related to the physical, chemical and toxicological characteristics

Eye contact : Adverse symptoms may include the following:
pain or irritation
watering
redness

Inhalation : Adverse symptoms may include the following:
respiratory tract irritation
coughing
nausea or vomiting
headache
drowsiness/fatigue
dizziness/vertigo
unconsciousness

Skin contact : Adverse symptoms may include the following:
irritation
redness

Ingestion : Adverse symptoms may include the following:
nausea or vomiting

Delayed and immediate effects and also chronic effects from short and long term exposure

Short term exposure

Potential immediate effects : Not available.

Potential delayed effects : Not available.

Long term exposure

Potential immediate effects : Not available.

Potential delayed effects : Not available.

Potential chronic health effects

Not available.

General : May cause damage to organs through prolonged or repeated exposure.

Carcinogenicity : Suspected of causing cancer. Risk of cancer depends on duration and level of exposure.

Mutagenicity : No known significant effects or critical hazards.

Teratogenicity : No known significant effects or critical hazards.

Developmental effects : No known significant effects or critical hazards.

Fertility effects : No known significant effects or critical hazards.

Numerical measures of toxicity

Acute toxicity estimates

Route	ATE value
Oral	49261.48 mg/kg
Dermal	40862.17 mg/kg
Inhalation (gases)	248887.77 ppm

Section 12. Ecological information

Toxicity

Product/ingredient name	Result	Species	Exposure
Acetone	Acute EC50 7200000 µg/l Fresh water	Algae - Selenastrum sp.	96 hours
	Acute LC50 4.42589 ml/L Marine water	Crustaceans - Acartia tonsa - Copepodid	48 hours
	Acute LC50 7460000 µg/l Fresh water	Daphnia - Daphnia cucullata	48 hours
	Acute LC50 5600 ppm Fresh water	Fish - Poecilia reticulata	96 hours
	Chronic NOEC 4.95 mg/l Marine water	Algae - Ulva pertusa	96 hours
	Chronic NOEC 0.016 ml/L Fresh water	Crustaceans - Daphniidae	21 days
	Chronic NOEC 0.1 ml/L Fresh water	Daphnia - Daphnia magna - Neonate	21 days
n-Butyl Acetate	Chronic NOEC 5 µg/l Marine water	Fish - Gasterosteus aculeatus - Larvae	42 days
	Acute LC50 32 mg/l Marine water	Crustaceans - Artemia salina	48 hours
Xylene, mixed isomers	Acute LC50 18000 µg/l Fresh water	Fish - Pimephales promelas	96 hours
	Acute LC50 8500 µg/l Marine water	Crustaceans - Palaemonetes pugio	48 hours
Ethylbenzene	Acute LC50 13400 µg/l Fresh water	Fish - Pimephales promelas	96 hours
	Acute EC50 4900 µg/l Marine water	Algae - Skeletonema costatum	72 hours
	Acute EC50 7700 µg/l Marine water	Algae - Skeletonema costatum	96 hours
	Acute EC50 6.53 mg/l Marine water	Crustaceans - Artemia sp. - Nauplii	48 hours
	Acute EC50 2.93 mg/l Fresh water	Daphnia - Daphnia magna - Neonate	48 hours
	Acute LC50 4200 µg/l Fresh water	Fish - Oncorhynchus mykiss	96 hours

Persistence and degradability

Product/ingredient name	Aquatic half-life	Photolysis	Biodegradability
Acetone	-	-	Readily
n-Butyl Acetate	-	-	Readily
Xylene, mixed isomers	-	-	Readily
Ethylbenzene	-	-	Readily

Bioaccumulative potential

Product/ingredient name	LogP _{ow}	BCF	Potential
Xylene, mixed isomers	-	8.1 to 25.9	low

Mobility in soil

Soil/water partition coefficient (K_{oc}) : Not available.

Other adverse effects : No known significant effects or critical hazards.






Section 13. Disposal considerations

Disposal methods : The generation of waste should be avoided or minimized wherever possible. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction. Waste packaging should be recycled. Incineration or landfill should only be considered

Section 13. Disposal considerations

when recycling is not feasible. This material and its container must be disposed of in a safe way. Empty containers or liners may retain some product residues. Do not puncture or incinerate container.

Section 14. Transport information

	DOT Classification	TDG Classification	Mexico Classification	IATA	IMDG
UN number	UN1950	UN1950	UN1950	UN1950	UN1950
UN proper shipping name	AEROSOLS	AEROSOLS	AEROSOLS	AEROSOLS, flammable	AEROSOLS
Transport hazard class(es)	2.1 	2.1 	2.1 	2.1 	2.1 
Packing group	-	-	-	-	-
Environmental hazards	No.	No.	No.	No.	No.
Additional information	- Dependent upon container size, this product may ship under the Limited Quantity shipping exception.	Product classified as per the following sections of the Transportation of Dangerous Goods Regulations: 2.13-2.17 (Class 2). Dependent upon container size, this product may ship under the Limited Quantity shipping exception.	- Dependent upon container size, this product may ship under the Limited Quantity shipping exception.	- Dependent upon container size, this product may ship under the Limited Quantity shipping exception.	- Dependent upon container size, this product may ship under the Limited Quantity shipping exception.

Special precautions for user : Multi-modal shipping descriptions are provided for informational purposes and do not consider container sizes. The presence of a shipping description for a particular mode of transport (sea, air, etc.), does not indicate that the product is packaged suitably for that mode of transport. All packaging must be reviewed for suitability prior to shipment, and compliance with the applicable regulations is the sole responsibility of the person offering the product for transport. People loading and unloading dangerous goods must be trained on all of the risks deriving from the substances and on all actions in case of emergency situations.

Transport in bulk according to IMO instruments : Not available.

Proper shipping name : Not available.

Section 15. Regulatory information

[SARA 313](#)

SARA 313 (40 CFR 372.45) supplier notification can be found on the Environmental Data Sheet.

[California Prop. 65](#)

WARNING: This product contains chemicals known to the State of California to cause cancer and birth defects or other reproductive harm.

[International regulations](#)

International lists

- : **Australia inventory (AIIIC):** Not determined.
- China inventory (IECSC):** Not determined.
- Japan inventory (CSCL):** Not determined.
- Japan inventory (ISHL):** Not determined.
- Korea inventory (KECI):** Not determined.
- New Zealand Inventory of Chemicals (NZIoC):** Not determined.
- Philippines inventory (PICCS):** Not determined.
- Taiwan Chemical Substances Inventory (TCSI):** Not determined.
- Thailand inventory:** Not determined.
- Turkey inventory:** Not determined.
- Vietnam inventory:** Not determined.

Section 16. Other information

[Hazardous Material Information System \(U.S.A.\)](#)

Health	*	3
Flammability		4
Physical hazards		3

The customer is responsible for determining the PPE code for this material. For more information on HMIS® Personal Protective Equipment (PPE) codes, consult the HMIS® Implementation Manual.

Caution: HMIS® ratings are based on a 0-4 rating scale, with 0 representing minimal hazards or risks, and 4 representing significant hazards or risks. Although HMIS® ratings and the associated label are not required on SDSs or products leaving a facility under 29 CFR 1910.1200, the preparer may choose to provide them. HMIS® ratings are to be used with a fully implemented HMIS® program. HMIS® is a registered trademark and service mark of the American Coatings Association, Inc.

[Procedure used to derive the classification](#)

Classification	Justification
FLAMMABLE AEROSOLS - Category 1	On basis of test data
GASES UNDER PRESSURE - Compressed gas	Calculation method
SKIN CORROSION/IRRITATION - Category 2	Calculation method
SERIOUS EYE DAMAGE/ EYE IRRITATION - Category 2A	Calculation method
CARCINOGENICITY - Category 2	Calculation method
SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Respiratory tract irritation) - Category 3	Calculation method
SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Narcotic effects) - Category 3	Calculation method
SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) - Category 2	Calculation method
ASPIRATION HAZARD - Category 1	Calculation method

[History](#)

Date of printing : 11/25/2022

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Version : 18

Date of issue/Date of revision : 11/25/2022	Date of previous issue : 6/21/2022	Version : 18	16/17
1303A	KRYLON® Crystal Clear Acrylic Coating Clear	SHW-85-NA-GHS-US	

Section 16. Other information

Key to abbreviations

: ATE = Acute Toxicity Estimate
BCF = Bioconcentration Factor
GHS = Globally Harmonized System of Classification and Labelling of Chemicals
IATA = International Air Transport Association
IBC = Intermediate Bulk Container
IMDG = International Maritime Dangerous Goods
LogPow = logarithm of the octanol/water partition coefficient
MARPOL = International Convention for the Prevention of Pollution From Ships, 1973 as modified by the Protocol of 1978. ("Marpol" = marine pollution)
N/A = Not available
SGG = Segregation Group
UN = United Nations

✔ Indicates information that has changed from previously issued version.

Notice to reader

It is recommended that each customer or recipient of this Safety Data Sheet (SDS) study it carefully and consult resources, as necessary or appropriate, to become aware of and understand the data contained in this SDS and any hazards associated with the product. This information is provided in good faith and believed to be accurate as of the effective date herein. However, no warranty, express or implied, is given. The information presented here applies only to the product as shipped. The addition of any material can change the composition, hazards and risks of the product. Products shall not be repackaged, modified, or tinted except as specifically instructed by the manufacturer, including but not limited to the incorporation of products not specified by the manufacturer, or the use or addition of products in proportions not specified by the manufacturer. Regulatory requirements are subject to change and may differ between various locations and jurisdictions. The customer/buyer/user is responsible to ensure that his activities comply with all country, federal, state, provincial or local laws. The conditions for use of the product are not under the control of the manufacturer; the customer/buyer/user is responsible to determine the conditions necessary for the safe use of this product. The customer/buyer/user should not use the product for any purpose other than the purpose shown in the applicable section of this SDS without first referring to the supplier and obtaining written handling instructions. Due to the proliferation of sources for information such as manufacturer-specific SDS, the manufacturer cannot be responsible for SDSs obtained from any other source.

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SECTION 1. PRODUCT AND COMPANY IDENTIFICATION

Product name : Lock Cylinder Spray 50mL

Product code : 893.052

Manufacturer or supplier's details

Company name of supplier : Würth Canada Limited

Address : 345 Hanlon Creek Blvd
GUELPH, ON N1C 0A1

Telephone : +1 (905) 564 6225

Telefax : +1 (905) 564 3671

Emergency telephone : +1 (613) 996 6666

E-mail address of person responsible for the SDS : prodsafe@wuerth.com

Recommended use of the chemical and restrictions on use

Recommended use : Polishing agent and lubricant

Prepared by : prodsafe@wuerth.com

SECTION 2. HAZARDS IDENTIFICATION**Emergency Overview**

DANGER	
Appearance	Aerosol containing a liquefied gas
Color	red brown
Odor	bitter almond
Hazard Summary	Extremely flammable aerosol. Irritant Possible reproductive hazard Possible birth defect hazard Specific Target Organ Toxicity Potential for suffocation

WHMIS Regulatory status : This product, material or substance is a WHMIS controlled product per Sections 33 - 66, Part IV of the CPR.

Potential Health Effects

Target Organs : Central nervous system
Reproductive organs

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Inhalation : Gas reduces oxygen available for breathing.
May cause drowsiness or dizziness.

Skin : Causes skin irritation.

Eyes : No significant irritation expected from a single exposure.

Ingestion : Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea.

Chronic Exposure : May cause adverse reproductive effects.
May cause birth defects.

Aggravated Medical Condition : None known.

Carcinogenicity:**IARC**

No ingredient of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

ACGIH

No ingredient of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by ACGIH.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance / Mixture : Mixture

Hazardous ingredients

Chemical name	CAS-No.	Concentration (% w/w)
Isobutane	75-28-5	>= 20 - < 30
Hydrocarbons, C6-C7, n-alkanes, isoalkanes, cyclics, <5% n-hexane	64742-49-0	>= 10 - < 20
Propane	74-98-6	>= 1 - < 5
Butane	106-97-8	>= 1 - < 5
n-Hexane	110-54-3	>= 0.1 - < 1

SECTION 4. FIRST AID MEASURES

General advice : In the case of accident or if you feel unwell, seek medical advice immediately.
When symptoms persist or in all cases of doubt seek medical advice.

If inhaled : If inhaled, remove to fresh air.
Get medical attention.

In case of skin contact : In case of contact, immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing

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- and shoes.
Get medical attention.
Wash clothing before reuse.
Thoroughly clean shoes before reuse.
- In case of eye contact : Flush eyes with water as a precaution.
Get medical attention if irritation develops and persists.
- If swallowed : If swallowed, DO NOT induce vomiting.
Get medical attention.
Rinse mouth thoroughly with water.
- Protection of first-aiders : First Aid responders should pay attention to self-protection,
and use the recommended personal protective equipment
when the potential for exposure exists.
- Notes to physician : Treat symptomatically and supportively.
-

SECTION 5. FIRE-FIGHTING MEASURES

- Suitable extinguishing media : Water spray
Alcohol-resistant foam
Carbon dioxide (CO₂)
Dry chemical
- Unsuitable extinguishing media : None known.
- Specific hazards during fire fighting : Flash back possible over considerable distance.
Vapors may form explosive mixtures with air.
Exposure to combustion products may be a hazard to health.
If the temperature rises there is danger of the vessels bursting due to the high vapor pressure.
- Hazardous combustion products : Carbon oxides
- Specific extinguishing methods : Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
Use water spray to cool unopened containers.
Remove undamaged containers from fire area if it is safe to do so.
Evacuate area.
- Special protective equipment for fire-fighters : In the event of fire, wear self-contained breathing apparatus.
Use personal protective equipment.
-

SECTION 6. ACCIDENTAL RELEASE MEASURES

- Personal precautions, protective equipment and emergency procedures : Remove all sources of ignition.
Use personal protective equipment.
Follow safe handling advice and personal protective equipment recommendations.

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Environmental precautions : Discharge into the environment must be avoided.
Prevent further leakage or spillage if safe to do so.
Prevent spreading over a wide area (e.g. by containment or oil barriers).
Retain and dispose of contaminated wash water.
Local authorities should be advised if significant spillages cannot be contained.

Methods and materials for containment and cleaning up : Non-sparking tools should be used.
Soak up with inert absorbent material.
Suppress (knock down) gases/vapors/mists with a water spray jet.
For large spills, provide diking or other appropriate containment to keep material from spreading. If diked material can be pumped, store recovered material in appropriate container.
Clean up remaining materials from spill with suitable absorbent.
Local or national regulations may apply to releases and disposal of this material, as well as those materials and items employed in the cleanup of releases. You will need to determine which regulations are applicable.
Sections 13 and 15 of this SDS provide information regarding certain local or national requirements.

SECTION 7. HANDLING AND STORAGE

Technical measures : See Engineering measures under EXPOSURE CONTROLS/PERSONAL PROTECTION section.

Local/Total ventilation : Use only with adequate ventilation.
Use only in an area equipped with explosion proof exhaust ventilation.

Advice on safe handling : Do not get on skin or clothing.
Do not breathe vapors or spray mist.
Do not swallow.
Avoid contact with eyes.
Handle in accordance with good industrial hygiene and safety practice.
Keep away from heat and sources of ignition.
Take precautionary measures against static discharges.
Take care to prevent spills, waste and minimize release to the environment.

Conditions for safe storage : Keep in properly labeled containers.
Keep in a cool, well-ventilated place.
Store in accordance with the particular national regulations.
Do not pierce or burn, even after use.
Keep cool. Protect from sunlight.

Materials to avoid : Do not store with the following product types:
Self-reactive substances and mixtures
Organic peroxides

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Oxidizing agents
 Flammable solids
 Pyrophoric liquids
 Pyrophoric solids
 Self-heating substances and mixtures
 Substances and mixtures which in contact with water emit flammable gases
 Explosives

Recommended storage temperature : 10 - 30 °C

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Ingredients with workplace control parameters

Ingredients	CAS-No.	Value type (Form of exposure)	Control parameters / Permissible concentration	Basis
Distillates (petroleum), hydrotreated heavy paraffinic	64742-54-7	TWA (Mist)	1 mg/m ³	CA BC OEL
		TWA (Mist)	5 mg/m ³	CA AB OEL
		STEL (Mist)	10 mg/m ³	CA AB OEL
		TWAEV (Mist)	5 mg/m ³	CA QC OEL
Isobutane	75-28-5	STEV (Mist)	10 mg/m ³	CA QC OEL
		TWA	1,000 ppm	CA BC OEL
		TWA	1,000 ppm	CA AB OEL
		TWA	800 ppm	CA ON OEL
Hydrocarbons, C6-C7, n-alkanes, isoalkanes, cyclics, <5% n-hexane	64742-49-0	STEL	1,000 ppm	ACGIH
		TWA (Mist)	5 mg/m ³	CA AB OEL
		STEL (Mist)	10 mg/m ³	CA AB OEL
		TWAEV (Mist)	5 mg/m ³	CA QC OEL
Propane	74-98-6	STEV (Mist)	10 mg/m ³	CA QC OEL
		TWA	1,000 ppm	CA AB OEL
		TWA	1,000 ppm	CA BC OEL
		TWAEV	1,000 ppm 1,800 mg/m ³	CA QC OEL
Butane	106-97-8	TWA	1,000 ppm	CA ON OEL
		TWA	1,000 ppm	CA AB OEL
		TWA	600 ppm	CA BC OEL
		STEL	750 ppm	CA BC OEL
		TWAEV	800 ppm 1,900 mg/m ³	CA QC OEL
n-Hexane	110-54-3	TWA	800 ppm	CA ON OEL
		STEL	1,000 ppm	ACGIH
		TWA	50 ppm 176 mg/m ³	CA AB OEL
		TWA	20 ppm	CA BC OEL

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		TWAEV	50 ppm 176 mg/m ³	CA QC OEL
		TWA	50 ppm	ACGIH

Biological occupational exposure limits

Ingredients	CAS-No.	Control parameters	Biological specimen	Sam-pling time	Permissible concentra-tion	Basis
n-Hexane	110-54-3	2,5-Hexanedio- ne	Urine	End of shift at end of work-week	0.4 mg/l	ACGIH BEI

Engineering measures : Ensure adequate ventilation, especially in confined areas. Minimize workplace exposure concentrations. Use only in an area equipped with explosion proof exhaust ventilation.

Personal protective equipment

Respiratory protection : Use respiratory protection unless adequate local exhaust ventilation is provided or exposure assessment demonstrates that exposures are within recommended exposure guidelines.

Filter type : Self-contained breathing apparatus

Hand protection

Material : Nitrile rubber
 Break through time : < 480 min
 Glove thickness : 0.45 mm

Remarks : Choose gloves to protect hands against chemicals depending on the concentration specific to place of work. For special applications, we recommend clarifying the resistance to chemicals of the aforementioned protective gloves with the glove manufacturer. Wash hands before breaks and at the end of workday.

Eye protection : Wear the following personal protective equipment: Safety glasses

Skin and body protection : Select appropriate protective clothing based on chemical resistance data and an assessment of the local exposure potential. Wear the following personal protective equipment: Flame retardant antistatic protective clothing. Skin contact must be avoided by using impervious protective clothing (gloves, aprons, boots, etc).

Hygiene measures : Ensure that eye flushing systems and safety showers are located close to the working place. When using do not eat, drink or smoke. Wash contaminated clothing before re-use.

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SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	: Aerosol containing a liquefied gas
Propellant	: Isobutane, Propane, Butane
Color	: red brown
Odor	: bitter almond
Odor Threshold	: No data available
pH	: No data available
Melting point/freezing point	: No data available
Initial boiling point and boiling range	: 80 °C
Flash point	: Not applicable
Evaporation rate	: Not applicable
Flammability (solid, gas)	: Extremely flammable aerosol.
Upper explosion limit	: 11 %(V)
Lower explosion limit	: 1 %(V)
Vapor pressure	: Not applicable
Relative vapor density	: Not applicable
Density	: 0.83 g/cm ³ (20 °C)
Solubility(ies)	
Water solubility	: insoluble
Partition coefficient: n-octanol/water	: Not applicable
Autoignition temperature	: No data available
Decomposition temperature	: No data available
Viscosity	
Viscosity, dynamic	: Not applicable
Viscosity, kinematic	: < 7 mm ² /s (40 °C)
Explosive properties	: Not explosive
Oxidizing properties	: The substance or mixture is not classified as oxidizing.

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SECTION 10. STABILITY AND REACTIVITY

- Reactivity : Not classified as a reactivity hazard.
- Chemical stability : Stable under normal conditions.
- Possibility of hazardous reactions : Extremely flammable aerosol.
Vapors may form explosive mixture with air.
If the temperature rises there is danger of the vessels bursting due to the high vapor pressure.
Can react with strong oxidizing agents.
- Conditions to avoid : Heat, flames and sparks.
- Incompatible materials : Oxidizing agents
- Hazardous decomposition products : No hazardous decomposition products are known.
-

SECTION 11. TOXICOLOGICAL INFORMATION**Acute toxicity**

Not classified based on available information.

Ingredients:**Isobutane:**

Acute inhalation toxicity : LC50 (Mouse): 260200 ppm
Exposure time: 4 h
Test atmosphere: gas

Hydrocarbons, C6-C7, n-alkanes, isoalkanes, cyclics, <5% n-hexane:

Acute oral toxicity : LD50 (Rat): > 5,000 mg/kg

Acute inhalation toxicity : LC50 (Rat): > 5.61 mg/l
Exposure time: 4 h
Test atmosphere: vapor

Acute dermal toxicity : LD50 (Rabbit): > 2,000 mg/kg

Propane:

Acute inhalation toxicity : LC50 (Rat): 241.8 mg/l
Exposure time: 4 h
Test atmosphere: vapor

Butane:

Acute inhalation toxicity : LC50 (Rat): 658 mg/l
Exposure time: 4 h
Test atmosphere: vapor

n-Hexane:

Acute oral toxicity : LD50 (Rat): > 5,000 mg/kg
Method: OECD Test Guideline 401

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Acute inhalation toxicity : LC50 (Rat): > 31.86 mg/l
Exposure time: 4 h
Test atmosphere: vapor
Method: OECD Test Guideline 403
Assessment: The substance or mixture has no acute inhalation toxicity

Acute dermal toxicity : LD50 (Rabbit): > 2,000 mg/kg

Skin corrosion/irritation

Causes skin irritation.

Ingredients:

Hydrocarbons, C6-C7, n-alkanes, isoalkanes, cyclics, <5% n-hexane:

Species: Rabbit

Method: OECD Test Guideline 404

Result: Skin irritation

n-Hexane:

Species: Rabbit

Result: Skin irritation

Serious eye damage/eye irritation

Not classified based on available information.

Ingredients:

Hydrocarbons, C6-C7, n-alkanes, isoalkanes, cyclics, <5% n-hexane:

Species: Rabbit

Result: No eye irritation

n-Hexane:

Species: Rabbit

Result: No eye irritation

Respiratory or skin sensitization

Skin sensitization: Not classified based on available information.

Respiratory sensitization: Not classified based on available information.

Ingredients:

Hydrocarbons, C6-C7, n-alkanes, isoalkanes, cyclics, <5% n-hexane:

Test Type: Buehler Test

Routes of exposure: Skin contact

Species: Guinea pig

Result: negative

n-Hexane:

Test Type: Local lymph node assay (LLNA)

Routes of exposure: Skin contact

Species: Mouse

Result: negative

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Germ cell mutagenicity

Not classified based on available information.

Ingredients:**Isobutane:**

Genotoxicity in vitro : Test Type: Chromosome aberration test in vitro
Method: OECD Test Guideline 473
Result: negative
Remarks: Based on data from similar materials

Genotoxicity in vivo : Test Type: Mammalian erythrocyte micronucleus test (in vivo cytogenetic assay)
Species: Rat
Application Route: inhalation (gas)
Method: OECD Test Guideline 474
Result: negative
Remarks: Based on data from similar materials

Hydrocarbons, C6-C7, n-alkanes, isoalkanes, cyclics, <5% n-hexane:

Genotoxicity in vitro : Test Type: Bacterial reverse mutation assay (AMES)
Result: negative

Genotoxicity in vivo : Test Type: Mammalian erythrocyte micronucleus test (in vivo cytogenetic assay)
Species: Rat
Application Route: inhalation (vapor)
Method: OPPTS 870.5395
Result: negative

Propane:

Genotoxicity in vitro : Test Type: Bacterial reverse mutation assay (AMES)
Result: negative

: Test Type: Chromosome aberration test in vitro
Method: OECD Test Guideline 473
Result: negative

Genotoxicity in vivo : Test Type: Mammalian erythrocyte micronucleus test (in vivo cytogenetic assay)
Species: Rat
Application Route: inhalation (gas)
Method: OECD Test Guideline 474
Result: negative

Butane:

Genotoxicity in vitro : Test Type: Bacterial reverse mutation assay (AMES)
Result: negative

Genotoxicity in vivo : Test Type: Mammalian erythrocyte micronucleus test (in vivo cytogenetic assay)
Species: Rat
Application Route: inhalation (gas)
Method: OECD Test Guideline 474
Result: negative
Remarks: Based on data from similar materials

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n-Hexane:

- Genotoxicity in vitro : Test Type: Bacterial reverse mutation assay (AMES)
Result: negative
- : Test Type: In vitro mammalian cell gene mutation test
Result: positive
- Genotoxicity in vivo : Test Type: Rodent dominant lethal test (germ cell) (in vivo)
Species: Mouse
Application Route: inhalation (vapor)
Result: negative
- Germ cell mutagenicity - Assessment : Weight of evidence does not support classification as a germ cell mutagen.

Carcinogenicity

Not classified based on available information.

Ingredients:**Hydrocarbons, C6-C7, n-alkanes, isoalkanes, cyclics, <5% n-hexane:**

Species: Mouse
Application Route: Skin contact
Exposure time: 102 weeks
Result: negative

n-Hexane:

Species: Rat
Application Route: inhalation (vapor)
Exposure time: 2 Years
Method: OECD Test Guideline 451
Result: negative

Reproductive toxicity

May cause birth defects.
May cause adverse reproductive effects.

Ingredients:**Isobutane:**

- Effects on fertility : Test Type: Combined repeated dose toxicity study with the reproduction/developmental toxicity screening test
Species: Rat
Application Route: Inhalation
Method: OECD Test Guideline 422
Result: negative
- Effects on fetal development : Test Type: Combined repeated dose toxicity study with the reproduction/developmental toxicity screening test
Species: Rat
Application Route: inhalation (gas)
Method: OECD Test Guideline 422
Result: negative

Hydrocarbons, C6-C7, n-alkanes, isoalkanes, cyclics, <5% n-hexane:

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Effects on fertility : Test Type: Two-generation reproduction toxicity study
Species: Rat
Application Route: inhalation (vapor)
Result: negative

Effects on fetal development : Test Type: Embryo-fetal development
Species: Rat
Application Route: inhalation (vapor)
Result: negative

Propane:

Effects on fertility : Test Type: Combined repeated dose toxicity study with the reproduction/developmental toxicity screening test
Species: Rat
Application Route: inhalation (gas)
Method: OECD Test Guideline 422
Result: negative

Effects on fetal development : Test Type: Combined repeated dose toxicity study with the reproduction/developmental toxicity screening test
Species: Rat
Application Route: inhalation (gas)
Method: OECD Test Guideline 422
Result: negative

Butane:

Effects on fertility : Test Type: Combined repeated dose toxicity study with the reproduction/developmental toxicity screening test
Species: Rat
Application Route: inhalation (gas)
Method: OECD Test Guideline 422
Result: negative

Effects on fetal development : Test Type: Combined repeated dose toxicity study with the reproduction/developmental toxicity screening test
Application Route: inhalation (gas)
Method: OECD Test Guideline 422
Result: negative

n-Hexane:

Reproductive toxicity - Assessment : Some evidence of adverse effects on sexual function and fertility, and/or on development, based on animal experiments.

STOT-single exposure

Short-term exposure may cause target organ effects

Ingredients:**Isobutane:**

Assessment: May cause drowsiness or dizziness.

Hydrocarbons, C6-C7, n-alkanes, isoalkanes, cyclics, <5% n-hexane:

Assessment: May cause drowsiness or dizziness.

n-Hexane:

Assessment: May cause drowsiness or dizziness.

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STOT-repeated exposure

Not classified based on available information.

Ingredients:

n-Hexane:

Target Organs: Central nervous system

Assessment: May cause damage to organs through prolonged or repeated exposure.

Repeated dose toxicity

Ingredients:

Isobutane:

Species: Rat

NOAEL: 9000 ppm

Application Route: inhalation (gas)

Exposure time: 6 Weeks

Method: OECD Test Guideline 422

Hydrocarbons, C6-C7, n-alkanes, isoalkanes, cyclics, <5% n-hexane:

Species: Rat

NOAEL: > 20 mg/l

Application Route: inhalation (vapor)

Exposure time: 13 w

Propane:

Species: Rat

NOAEL: 9000 ppm

Application Route: inhalation (gas)

Exposure time: 6 Weeks

Method: OECD Test Guideline 422

Butane:

Species: Rat

NOAEL: 9000 ppm

Application Route: inhalation (gas)

Exposure time: 6 Weeks

Method: OECD Test Guideline 422

n-Hexane:

Species: Rat

LOAEL: 10.6 mg/l

Application Route: inhalation (vapor)

Exposure time: 16 Weeks

Aspiration toxicity

Not classified based on available information.

Ingredients:

Hydrocarbons, C6-C7, n-alkanes, isoalkanes, cyclics, <5% n-hexane:

The substance or mixture is known to cause human aspiration toxicity hazards or has to be regarded as if it causes a human aspiration toxicity hazard.

Lock Cylinder Spray 50mL

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n-Hexane:

The substance or mixture is known to cause human aspiration toxicity hazards or has to be regarded as if it causes a human aspiration toxicity hazard.

Experience with human exposure**Ingredients:****n-Hexane:**

Inhalation : Target Organs: Central nervous system

SECTION 12. ECOLOGICAL INFORMATION**Ecotoxicity****Ingredients:****Hydrocarbons, C6-C7, n-alkanes, isoalkanes, cyclics, <5% n-hexane:**

Toxicity to fish : LL50 (Pimephales promelas (fathead minnow)): 8.2 mg/l
Exposure time: 96 h
Test substance: Water Accommodated Fraction

Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna (Water flea)): 4.5 mg/l
Exposure time: 48 h
Test substance: Water Accommodated Fraction
Method: OECD Test Guideline 202
Remarks: Based on data from similar materials

Toxicity to algae : EL50 (Pseudokirchneriella subcapitata (green algae)): 3.1 mg/l
Exposure time: 72 h
Test substance: Water Accommodated Fraction
Method: OECD Test Guideline 201
Remarks: Based on data from similar materials

NOELR (Pseudokirchneriella subcapitata (green algae)): 0.5 mg/l
Exposure time: 72 h
Test substance: Water Accommodated Fraction
Method: OECD Test Guideline 201
Remarks: Based on data from similar materials

Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) : NOELR (Daphnia magna (Water flea)): 2.6 mg/l
Exposure time: 21 d
Method: OECD Test Guideline 211

n-Hexane:

Toxicity to fish : LC50 (Pimephales promelas (fathead minnow)): 2.5 mg/l
Exposure time: 96 h

Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna (Water flea)): 3.88 mg/l
Exposure time: 48 h

Toxicity to algae : EC50 (Pseudokirchneriella subcapitata (green algae)): 55 mg/l
Exposure time: 72 h

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Method: OECD Test Guideline 201
Remarks: Based on data from similar materials

Persistence and degradability**Ingredients:****Isobutane:**

Biodegradability : Result: Readily biodegradable.
Biodegradation: 100 %
Exposure time: 385.5 h
Remarks: Based on data from similar materials

Hydrocarbons, C6-C7, n-alkanes, isoalkanes, cyclics, <5% n-hexane:

Biodegradability : Result: Readily biodegradable.
Biodegradation: 77.05 %
Exposure time: 28 d
Method: OECD Test Guideline 301F

Propane:

Biodegradability : Result: Readily biodegradable.
Biodegradation: 100 %
Exposure time: 385.5 h
Remarks: Based on data from similar materials

Butane:

Biodegradability : Result: Readily biodegradable.
Biodegradation: 100 %
Exposure time: 385.5 h
Remarks: Based on data from similar materials

n-Hexane:

Biodegradability : Result: Readily biodegradable.
Biodegradation: 98 %
Exposure time: 28 d
Remarks: Based on data from similar materials

Bioaccumulative potential**Ingredients:****Isobutane:**

Partition coefficient: n-octanol/water : log Pow: 2.8

Hydrocarbons, C6-C7, n-alkanes, isoalkanes, cyclics, <5% n-hexane:

Partition coefficient: n-octanol/water : log Pow: 4
Remarks: Based on data from similar materials

Propane:

Partition coefficient: n-octanol/water : log Pow: 2.31

Butane:

Partition coefficient: n-octanol/water : log Pow: 2.31

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n-Hexane:

Partition coefficient: n-octanol/water : log Pow: 4

Mobility in soil

No data available

Other adverse effects

No data available

SECTION 13. DISPOSAL CONSIDERATIONS**Disposal methods**

Waste from residues : Dispose of in accordance with local regulations.

Contaminated packaging : Empty containers should be taken to an approved waste handling site for recycling or disposal.
Do not burn.
If not otherwise specified: Dispose of as unused product.
Please ensure aerosol cans are sprayed completely empty (including propellant)

SECTION 14. TRANSPORT INFORMATION**International Regulation****UNRTDG**

UN number : UN 1950
Proper shipping name : AEROSOLS
Class : 2.1
Packing group : Not assigned by regulation
Labels : 2.1

IATA-DGR

UN/ID No. : UN 1950
Proper shipping name : Aerosols, flammable
Class : 2.1
Packing group : Not assigned by regulation
Labels : Flammable Gas
Packing instruction (cargo aircraft) : 203
Packing instruction (passenger aircraft) : 203

IMDG-Code

UN number : UN 1950
Proper shipping name : AEROSOLS

Class : 2.1
Packing group : Not assigned by regulation

Lock Cylinder Spray 50mL

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Labels	: 2.1
EmS Code	: F-D, S-U
Marine pollutant	: no

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Not applicable for product as supplied.

Domestic regulation**TDG**

UN number	: UN 1950
Proper shipping name	: AEROSOLS

Class	: 2.1
Packing group	: Not assigned by regulation
Labels	: 2.1
ERG Code	: 126
Marine pollutant	: no

SECTION 15. REGULATORY INFORMATION

WHMIS Classification	: A: Compressed Gas B5: Flammable Aerosol D2A: Very Toxic Material Causing Other Toxic Effects D2B: Toxic Material Causing Other Toxic Effects
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Volatile organic compounds (VOC) content

VOC content: 47.9 % / 399.5 g/l

This product has been classified according to the hazard criteria of the CPR and the MSDS contains all of the information required by the CPR.

The ingredients of this product are reported in the following inventories:

DSL	: This product contains one or several components listed in the Canadian NDSL.
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SECTION 16. OTHER INFORMATION**Full text of other abbreviations**

ACGIH	: USA. ACGIH Threshold Limit Values (TLV)
ACGIH BEI	: ACGIH - Biological Exposure Indices (BEI)
CA AB OEL	: Canada. Alberta, Occupational Health and Safety Code (table 2: OEL)
CA BC OEL	: Canada. British Columbia OEL
CA ON OEL	: Ontario Table of Occupational Exposure Limits made under the Occupational Health and Safety Act.
CA QC OEL	: Québec. Regulation respecting occupational health and safety, Schedule 1, Part 1: Permissible exposure values for airborne contaminants
ACGIH / TWA	: 8-hour, time-weighted average

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ACGIH / STEL	: Short-term exposure limit
CA AB OEL / TWA	: 8-hour Occupational exposure limit
CA AB OEL / STEL	: 15-minute occupational exposure limit
CA BC OEL / TWA	: 8-hour time weighted average
CA BC OEL / STEL	: short-term exposure limit
CA ON OEL / TWA	: Time-Weighted Average Limit (TWA)
CA QC OEL / TWA/EV	: Time-weighted average exposure value
CA QC OEL / STEV	: Short-term exposure value

AICS - Australian Inventory of Chemical Substances; ANTT - National Agency for Transport by Land of Brazil; ASTM - American Society for the Testing of Materials; bw - Body weight; CMR - Carcinogen, Mutagen or Reproductive Toxicant; CPR - Controlled Products Regulations; DIN - Standard of the German Institute for Standardisation; DSL - Domestic Substances List (Canada); ECx - Concentration associated with x% response; ELx - Loading rate associated with x% response; EmS - Emergency Schedule; ENCS - Existing and New Chemical Substances (Japan); ErCx - Concentration associated with x% growth rate response; ERG - Emergency Response Guide; GHS - Globally Harmonized System; GLP - Good Laboratory Practice; IARC - International Agency for Research on Cancer; IATA - International Air Transport Association; IBC - International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk; IC50 - Half maximal inhibitory concentration; ICAO - International Civil Aviation Organization; IECSC - Inventory of Existing Chemical Substances in China; IMDG - International Maritime Dangerous Goods; IMO - International Maritime Organization; ISHL - Industrial Safety and Health Law (Japan); ISO - International Organisation for Standardization; KECI - Korea Existing Chemicals Inventory; LC50 - Lethal Concentration to 50 % of a test population; LD50 - Lethal Dose to 50% of a test population (Median Lethal Dose); MARPOL - International Convention for the Prevention of Pollution from Ships; n.o.s. - Not Otherwise Specified; Nch - Chilean Norm; NO(A)EC - No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NOELR - No Observable Effect Loading Rate; NOM - Official Mexican Norm; NTP - National Toxicology Program; NZIoC - New Zealand Inventory of Chemicals; OECD - Organization for Economic Co-operation and Development; OPPTS - Office of Chemical Safety and Pollution Prevention; PBT - Persistent, Bioaccumulative and Toxic substance; PICCS - Philippines Inventory of Chemicals and Chemical Substances; (Q)SAR - (Quantitative) Structure Activity Relationship; REACH - Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals; SADT - Self-Accelerating Decomposition Temperature; SDS - Safety Data Sheet; TCSI - Taiwan Chemical Substance Inventory; TDG - Transportation of Dangerous Goods; TSCA - Toxic Substances Control Act (United States); UN - United Nations; UNRTDG - United Nations Recommendations on the Transport of Dangerous Goods; vPvB - Very Persistent and Very Bioaccumulative; WHMIS - Workplace Hazardous Materials Information System

Sources of key data used to compile the Material Safety Data Sheet	: Internal technical data, data from raw material SDSs, OECD eChem Portal search results and European Chemicals Agency, http://echa.europa.eu/
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Items where changes have been made to the previous version are highlighted in the body of this document by two vertical lines.

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and shall not be considered a warranty or quality specification of any type. The information provided relates only to the specific material identified at the top of this SDS and may not be valid when the SDS material is used in combination with any other materials or in any process, un-

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less specified in the text. Material users should review the information and recommendations in the specific context of their intended manner of handling, use, processing and storage, including an assessment of the appropriateness of the SDS material in the user's end product, if applicable.

CA / Z8



Revision Number: 004.0

Issue date: 12/07/2020

1. PRODUCT AND COMPANY IDENTIFICATION

Product name:	LOCTITE 248 TL 9G STICK	IDH number:	826034
Product type/use:	Anaerobic Adhesive	Item number:	37684PR
Restriction of Use:	None identified	Region:	United States
Company address:	Contact information:		
Henkel Corporation	Telephone: +1 (860) 571-5100		
One Henkel Way	MEDICAL EMERGENCY Phone: Poison Control Center		
Rocky Hill, Connecticut 06067	1-877-671-4608 (toll free) or 1-303-592-1711		
	TRANSPORT EMERGENCY Phone: CHEMTREC		
	1-800-424-9300 (toll free) or 1-703-527-3887		
	Internet: www.henkeln.com		

2. HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW

WARNING: CAUSES SKIN IRRITATION.
MAY CAUSE AN ALLERGIC SKIN REACTION.
CAUSES SERIOUS EYE IRRITATION.
SUSPECTED OF CAUSING CANCER.

HAZARD CLASS	HAZARD CATEGORY
SKIN IRRITATION	2
EYE IRRITATION	2A
SKIN SENSITIZATION	1
CARCINOGENICITY	2

PICTOGRAM(S)



Precautionary Statements

Prevention:	Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Avoid breathing dust or fumes. Wash affected area thoroughly after handling. Contaminated work clothing should not be allowed out of the workplace. Wear protective gloves, clothing, eye and face protection.
Response:	IF ON SKIN: Wash with plenty of water. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. IF exposed or concerned: Get medical attention. If skin irritation or rash occurs: Get medical attention. If eye irritation persists: Get medical attention. Take off contaminated clothing.
Storage:	Store locked up.
Disposal:	Dispose of contents and/or container according to Federal, State/Provincial and local governmental regulations.

Classification complies with OSHA Hazard Communication Standard (29 CFR 1910.1200) and is consistent with the provisions of the United Nations Globally Harmonized System of Classification and Labeling of Chemicals (GHS).

See Section 11 for additional toxicological information.

3. COMPOSITION / INFORMATION ON INGREDIENTS

Hazardous Component(s)	CAS Number	Percentage*
Tetramethylene dimethacrylate	2082-81-7	10 - 30
Organic derivate of castor oil~		5 - 10
Silica, amorphous, fumed, crystal-free	112945-52-5	1 - 5

IDH number: 826034

Product name: LOCTITE 248 TL 9G STICK

N,N'-Ethane-1,2-diylbis(12-hydroxyoctadecan-1-amide)	123-26-2	1 - 5
Ethene, homopolymer	9002-88-4	1 - 5
Saccharin	81-07-2	0.1 - 1
Cumene hydroperoxide	80-15-9	0.1 - 1
1-Acetyl-2-phenylhydrazine	114-83-0	0.1 - 1
Cumene	98-82-8	0.1 - 1

* Exact percentages may vary or are trade secret. Concentration range is provided to assist users in providing appropriate protections.

4. FIRST AID MEASURES

Inhalation:	Move to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention.
Skin contact:	Immediately flush skin with plenty of water (using soap, if available). Remove contaminated clothing and footwear. Wash clothing before reuse. Get medical attention.
Eye contact:	Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Get medical attention.
Ingestion:	DO NOT induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Get medical attention.
Symptoms:	See Section 11.

5. FIRE FIGHTING MEASURES

Extinguishing media:	Water spray (fog), foam, dry chemical or carbon dioxide.
Special firefighting procedures:	Wear self-contained breathing apparatus and full protective clothing, such as turn-out gear. In case of fire, keep containers cool with water spray.
Unusual fire or explosion hazards:	Uncontrolled polymerization may occur at high temperatures resulting in explosions or rupture of storage containers.
Hazardous combustion products:	Oxides of nitrogen. Oxides of carbon. Irritating organic vapours.

6. ACCIDENTAL RELEASE MEASURES

Use personal protection recommended in Section 8, isolate the hazard area and deny entry to unnecessary and unprotected personnel.

Environmental precautions:	Do not allow product to enter sewer or waterways.
Clean-up methods:	Remove all sources of ignition. Evacuate and ventilate spill area; dike spill to prevent entry into water system; wear full protective equipment during clean-up. Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust). Scrape up as much material as possible. Store in a partly filled, closed container until disposal. Refer to Section 8 "Exposure Controls / Personal Protection" prior to clean up.

7. HANDLING AND STORAGE

Handling:	Use only with adequate ventilation. Prevent contact with eyes, skin and clothing. Do not breathe vapor and mist. Wash thoroughly after handling. Keep container closed. Refer to Section 8.
Storage:	For safe storage, store at or below 38 °C (100.4 °F) Keep in a cool, well ventilated area away from heat, sparks and open flame. Keep container tightly closed until ready for use.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Employers should complete an assessment of all workplaces to determine the need for, and selection of, proper exposure controls and protective equipment for each task performed.

Hazardous Component(s)	ACGIH TLV	OSHA PEL	AIHA WEEL	OTHER
Tetramethylene dimethacrylate	None	None	None	None
Organic derivate of castor oil~	10 mg/m3 TWA Total dust. 3 mg/m3 TWA Respirable fraction.	15 mg/m3 TWA Total dust. 5 mg/m3 TWA Respirable fraction.	None	None
Silica, amorphous, fumed, crystal-free	10 mg/m3 TWA Inhalable dust. 3 mg/m3 TWA Respirable fraction.	20 MPPCF TWA 0.8 mg/m3 TWA	None	None
N,N'-Ethane-1,2-diylbis(12-hydroxyoctadecan-1-amide)	None	None	None	None
Ethene, homopolymer	10 mg/m3 TWA Inhalable particles. 3 mg/m3 TWA Respirable particles.	15 MPPCF TWA Respirable fraction. 15 mg/m3 TWA Total dust. 50 MPPCF TWA Total dust. 5 mg/m3 TWA Respirable fraction. 5 mg/m3 PEL Respirable fraction. 15 mg/m3 PEL Total dust.	None	None
Saccharin	None	None	None	None
Cumene hydroperoxide	None	None	1 ppm (6 mg/m3) TWA (SKIN)	None
1-Acetyl-2-phenylhydrazine	None	None	None	None
Cumene	50 ppm TWA	50 ppm (245 mg/m3) PEL (SKIN)	None	None

Engineering controls:	Provide adequate local exhaust ventilation to maintain worker exposure below exposure limits.
Respiratory protection:	Use NIOSH approved respirator if there is potential to exceed exposure limit(s).
Eye/face protection:	Safety goggles or safety glasses with side shields. Full face protection should be used if the potential for splashing or spraying of product exists. Safety showers and eye wash stations should be available.
Skin protection:	Use chemical resistant, impermeable clothing including gloves and either an apron or body suit to prevent skin contact. Neoprene gloves. Nitrile gloves.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical state:	Solid, Paste
Color:	Blue
Odor:	Characteristic
Odor threshold:	Not available.
pH:	Not applicable
Vapor pressure:	< 5 mm hg (80 °F (26.7 °C))
Boiling point/range:	> 300 °F (> 148.9 °C)None
Melting point/ range:	Not available.
Specific gravity:	1.1
Vapor density:	Not available.
Flash point:	Product is a solid.
Flammable/Explosive limits - lower:	Not available.
Flammable/Explosive limits - upper:	Not available.
Autoignition temperature:	Not available.
Flammability:	Not applicable
Evaporation rate:	Not available.
Solubility in water:	Slight
Partition coefficient (n-octanol/water):	Not available.

VOC content: 0.37 %; 4.08 g/l
Viscosity: Not available.
Decomposition temperature: Not available.

10. STABILITY AND REACTIVITY

Stability: Stable under normal conditions of storage and use.

Hazardous reactions: None under normal processing. Polymerization may occur at elevated temperature or in the presence of incompatible materials.

Hazardous decomposition products: Oxides of nitrogen. Oxides of carbon. Irritating organic vapours.

Incompatible materials: Strong oxidizing agents.

Reactivity: Not available.

Conditions to avoid: Elevated temperatures. Heat, flames, sparks and other sources of ignition. Store away from incompatible materials.

11. TOXICOLOGICAL INFORMATION

Relevant routes of exposure: Skin, Inhalation, Eyes, Ingestion

Potential Health Effects/Symptoms

Inhalation: Inhalation of vapors or mists of the product may be irritating to the respiratory system.
Skin contact: Causes skin irritation. May cause allergic skin reaction.
Eye contact: Causes serious eye irritation.
Ingestion: May cause gastrointestinal tract irritation if swallowed.

Hazardous Component(s)	LD50s and LC50s	Immediate and Delayed Health Effects
Tetramethylene dimethacrylate	None	Irritant, Allergen
Organic derivate of castor oil~	None	No Data
Silica, amorphous, fumed, crystal-free	None	Nuisance dust
N,N'-Ethane-1,2-diylbis(12-hydroxyoctadecan-1-amide)	None	No Data
Ethene, homopolymer	None	No Target Organs
Saccharin	Oral LD50 (Mouse) = 17 g/kg	No Target Organs
Cumene hydroperoxide	None	Allergen, Central nervous system, Corrosive, Irritant, Mutagen
1-Acetyl-2-phenylhydrazine	Oral LD50 (Mouse) = 270 mg/kg	Allergen, Blood, Kidney, Mutagen, Some evidence of carcinogenicity
Cumene	Oral LD50 (Rat) = 2.91 g/kg Oral LD50 (Rat) = 1,400 mg/kg	Central nervous system, Irritant, Lung

Hazardous Component(s)	NTP Carcinogen	IARC Carcinogen	OSHA Carcinogen (Specifically Regulated)
Tetramethylene dimethacrylate	No	No	No
Organic derivate of castor oil~	No	No	No
Silica, amorphous, fumed, crystal-free	No	No	No
N,N'-Ethane-1,2-diylbis(12-hydroxyoctadecan-1-amide)	No	No	No
Ethene, homopolymer	No	No	No
Saccharin	No	No	No
Cumene hydroperoxide	No	No	No
1-Acetyl-2-phenylhydrazine	No	No	No
Cumene	Reasonably Anticipated to be a Human Carcinogen.	Group 2B	No

12. ECOLOGICAL INFORMATION

Ecological information: Not available.

13. DISPOSAL CONSIDERATIONS

Information provided is for unused product only.

Recommended method of disposal: Follow all local, state, federal and provincial regulations for disposal.

14. TRANSPORT INFORMATION

The transport information provided in this section only applies to the material/formulation itself, and is not specific to any package/configuration.

U.S. Department of Transportation Ground (49 CFR)

Proper shipping name: RQ, Environmentally hazardous substance, solid, n.o.s.
Hazard class or division: 9
Identification number: UN 3077
Packing group: III
DOT Hazardous Substance(s): alpha,alpha-Dimethylbenzylhydroperoxide

International Air Transportation (ICAO/IATA)

Proper shipping name: RQ, Environmentally hazardous substance, solid, n.o.s.
Hazard class or division: 9
Identification number: UN 3077
Packing group: III

Water Transportation (IMO/IMDG)

Proper shipping name: RQ, ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S.
Hazard class or division: 9
Identification number: UN 3077
Packing group: III

15. REGULATORY INFORMATION

United States Regulatory Information

TSCA 8 (b) Inventory Status: All components are listed as active or are exempt from listing on the Toxic Substances Control Act (TSCA) inventory.

TSCA 12 (b) Export Notification: None above reporting de minimis

CERCLA/SARA Section 302 EHS: None above reporting de minimis.
CERCLA/SARA Section 311/312: Immediate Health, Delayed Health
CERCLA/SARA Section 313: This product contains the following toxic chemicals subject to the reporting requirements of section 313 of the Emergency Planning and Community Right-To-Know Act of 1986 (40 CFR 372). Cumene (CAS# 98-82-8).
CERCLA Reportable quantity: Cumene hydroperoxide (CAS# 80-15-9) 10 lbs. (4.54 kg)

California Proposition 65: This product contains a chemical known in the State of California to cause cancer. This product contains a chemical known to the State of California to cause birth defects or other reproductive harm.

Canada Regulatory Information

CEPA DSL/NDSL Status: Contains one or more components listed on the Non-Domestic Substances List. All other components are listed on or are exempt from listing on the Domestic Substances List. Components listed on the NDSL must be tracked by all Canadian Importers of Record as required by Environment Canada. They may be imported into Canada in limited quantities. Please contact Regulatory Affairs for additional details.

16. OTHER INFORMATION

This safety data sheet contains changes from the previous version in sections: 3, 13, 15

Prepared by: Product Safety and Regulatory Affairs

Issue date: 12/07/2020

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This Safety Data Sheet has been generated based on OSHA Hazard Communication Standard (29 CFR 1910.1200) and provides information in accordance with U.S. federal law only. No warranty or representation of any kind is given with respect to the substantive or export laws of any other jurisdiction or country. Please confirm that the information provided herein conforms to the substantive export or other law of any other jurisdiction prior to export. Please contact Henkel Product Safety and Regulatory Affairs for additional assistance.



Revision Number: 004.0

Issue date: 08/06/2014

1. PRODUCT AND COMPANY IDENTIFICATION

Product name:	LOCTITE 5113 THREAD SEALANT known as LOCTITE® THREAD SEALANT WITH P	IDH number:	1533652
Product type:	Sealant	Item number:	1533652
Restriction of Use:	None identified	Region:	United States
Company address:	Contact information:		
Henkel Corporation	Telephone: (860) 571-5100		
One Henkel Way	MEDICAL EMERGENCY Phone: Poison Control Center 1-877-671-4608 (toll free) or 1-303-592-1711		
Rocky Hill, Connecticut 06067	TRANSPORT EMERGENCY Phone: CHEMTREC 1-800-424-9300 (toll free) or 1-703-527-3887		
	Internet: www.henkelna.com		

2. HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW

WARNING: FLAMMABLE LIQUID AND VAPOR.
CAUSES SKIN IRRITATION.
MAY CAUSE AN ALLERGIC SKIN REACTION.
CAUSES SERIOUS EYE IRRITATION.
MAY CAUSE DROWSINESS OR DIZZINESS.

HAZARD CLASS	HAZARD CATEGORY
FLAMMABLE LIQUID	3
SKIN IRRITATION	2
EYE IRRITATION	2A
SKIN SENSITIZATION	1
SPECIFIC TARGET ORGAN TOXICITY - SINGLE EXPOSURE	3

PICTOGRAM(S)



Precautionary Statements

Prevention: Keep away from heat, sparks, open flames, hot surfaces - no smoking. Keep container tightly closed. No release into water. Use explosion-proof equipment. Use only non-sparking tools. Take precautionary measures against static discharge. Avoid breathing vapors, mist, or spray. Wash thoroughly after handling. Use only outdoors or in a well-ventilated area. Contaminated work clothing should not be allowed out of the workplace. Wear protective gloves, eye protection, and face protection.

Response: If on skin (or hair): Take off immediately all contaminated clothing. IF INHALED: Remove person to fresh air and keep comfortable for breathing.
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to remove. Continue rinsing. Call a poison control center or physician if you feel unwell. If skin irritation or rash occurs: Get medical attention. If eye irritation persists: Get medical attention. Take off contaminated clothing. In case of fire: Use foam, dry chemical or carbon dioxide to extinguish.

Storage: Store in a well-ventilated place. Keep container tightly closed. Store in a well-ventilated place. Keep cool. Store locked up.

Disposal: Dispose of contents and/or container according to Federal, State/Provincial and local governmental regulations.

Classification complies with OSHA Hazard Communication Standard (29 CFR 1910.1200) and is consistent with the provisions of the United Nations Globally Harmonized System of Classification and Labeling of Chemicals (GHS).

See Section 11 for additional toxicological information.

3. COMPOSITION / INFORMATION ON INGREDIENTS

Hazardous Component(s)	CAS Number	Percentage*
2-Propanol	67-63-0	30 - 60
Talc	14807-96-6	10 - 30
Glyceridic oil	Proprietary	10 - 30
Butyral resin	Proprietary	10 - 30
Titanium dioxide	13463-67-7	1 - 5
Ethene, tetrafluoro-, homopolymer	9002-84-0	1 - 5
Quartz (SiO ₂)	14808-60-7	0.1 - 1

* Exact percentage is a trade secret. Concentration range is provided to assist users in providing appropriate protections.

4. FIRST AID MEASURES

Inhalation: Move to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention.

Skin contact: Immediately flush skin with plenty of water (using soap, if available). Remove contaminated clothing and footwear. Wash clothing before reuse. Get medical attention.

Eye contact: Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Get medical attention.

Ingestion: Do not induce vomiting. Never give anything by mouth to an unconscious person. Get medical attention.

Symptoms: See Section 11.

5. FIRE FIGHTING MEASURES

Extinguishing media: Water spray (fog), foam, dry chemical or carbon dioxide.

Special firefighting procedures: Wear self-contained breathing apparatus and full protective clothing, such as turn-out gear.

Unusual fire or explosion hazards: Uncontrolled polymerization may occur at high temperatures resulting in explosions or rupture of storage containers. In case of fire, keep containers cool with water spray.

Hazardous combustion products: Oxides of carbon. Toxic fluorides. Irritating vapors.

6. ACCIDENTAL RELEASE MEASURES

Use personal protection recommended in Section 8, isolate the hazard area and deny entry to unnecessary and unprotected personnel.

Environmental precautions: Do not allow product to enter sewer or waterways.

Clean-up methods:

Remove all sources of ignition. Evacuate and ventilate spill area; dike spill to prevent entry into water system; wear full protective equipment during clean-up. Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust). Scrape up as much material as possible. Store in a partly filled, closed container until disposal. Refer to Section 8 "Exposure Controls / Personal Protection" prior to clean up.

7. HANDLING AND STORAGE

Handling:

Use only with adequate ventilation. Prevent contact with eyes, skin and clothing. Do not breathe vapor and mist. Wash thoroughly after handling. Refer to Section 8.

Storage:

Keep in a cool, well ventilated area away from heat, sparks and open flame. Keep container tightly closed until ready for use.

For information on product shelf life contact Henkel Customer Service at (800) 243-4874.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Employers should complete an assessment of all workplaces to determine the need for, and selection of, proper exposure controls and protective equipment for each task performed.

Hazardous Component(s)	ACGIH TLV	OSHA PEL	AIHA WEEL	OTHER
2-Propanol	200 ppm TWA 400 ppm STEL	400 ppm (980 mg/m ³) PEL	None	None
Talc	2 mg/m ³ TWA Respirable fraction.	20 MPPCF TWA 2.4 MPPCF TWA Respirable. 0.1 mg/m ³ TWA Respirable. 0.3 mg/m ³ TWA Total dust.	None	50 ppm
Glyceridic oil	None	None	None	None
Butyral resin	None	None	None	None
Titanium dioxide	10 mg/m ³ TWA	15 mg/m ³ PEL Total dust.	None	None
Ethene, tetrafluoro-, homopolymer	None	None	None	10 mg/m ³ TWA Total dust. 5 mg/m ³ TWA Respirable fraction.
Quartz (SiO ₂)	0.025 mg/m ³ TWA Respirable fraction.	2.4 MPPCF TWA Respirable. 0.1 mg/m ³ TWA Respirable. 0.3 mg/m ³ TWA Total dust.	None	None

Engineering controls:

Provide adequate local exhaust ventilation to maintain worker exposure below exposure limits.

Respiratory protection:

Use NIOSH approved respirator if there is potential to exceed exposure limit(s).

Eye/face protection:

Safety goggles or safety glasses with side shields. Full face protection should be used if the potential for splashing or spraying of product exists. Safety showers and eye wash stations should be available.

Skin protection:

Use chemical resistant, impermeable clothing including gloves and either an apron or body suit to prevent skin contact. Neoprene gloves.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical state:	Paste
Color:	White
Odor:	Alcoholic
Odor threshold:	Not available.
pH:	Not applicable
Vapor pressure:	33 mm hg (20 °C (68°F))
Boiling point/range:	82 °C (179.6 °F)
Melting point/ range:	Not determined
Specific gravity:	1.12 at 25 °C (77°F)
Vapor density:	2.07
Flash point:	23 °C (73.4 °F) Tagliabue closed cup
Flammable/Explosive limits - lower:	2.3 %
Flammable/Explosive limits - upper:	12.7 %
Autoignition temperature:	398.3 °C (748.94 °F) Estimated
Evaporation rate:	7.7 (Ether = 1)
Solubility in water:	Partially soluble
Partition coefficient (n-octanol/water):	Not determined
VOC content:	35.98 %; 343.43 g/l
Viscosity:	Not available.
Decomposition temperature:	Not available.

10. STABILITY AND REACTIVITY

Stability:	Stable under normal conditions of storage and use.
Hazardous reactions:	None under normal processing.
Hazardous decomposition products:	Toxic fluorides. Oxides of carbon. Irritating vapors.
Incompatible materials:	Oxidizing agents. Acids. Aldehydes. Amines.
Reactivity:	Not available.
Conditions to avoid:	Heat, flames, sparks and other sources of ignition. Store away from incompatible materials.

11. TOXICOLOGICAL INFORMATION

Relevant routes of exposure:	Skin, Inhalation, Eyes, Ingestion
-------------------------------------	-----------------------------------

Potential Health Effects/Symptoms

Inhalation: Inhalation of vapors or mists of the product may be irritating to the respiratory system. May cause dizziness, incoordination, headache, nausea, and vomiting.
Skin contact: Causes skin irritation. May cause allergic skin reaction.
Eye contact: Causes serious eye irritation.
Ingestion: Ingestion can cause gastrointestinal irritation, nausea, vomiting and diarrhea.

Hazardous Component(s)	LD50s and LC50s	Immediate and Delayed Health Effects
2-Propanol	Oral LD50 (RAT) = 5,045 mg/kg Oral LD50 (RABBIT) = 6,410 mg/kg Oral LD50 (RAT) = 4.7 g/kg Oral LD50 (RABBIT) = 8.0 g/kg Oral LD50 (RABBIT) = 5.03 g/kg Dermal LD50 (RABBIT) = 12,800 mg/kg	Allergen, Blood, Brain, Central nervous system, Irritant, Kidney, Liver, Spleen
Talc	None	Irritant, Lung, Some evidence of carcinogenicity
Glyceridic oil	None	Irritant
Butyral resin	None	No Records
Titanium dioxide	None	Irritant, Respiratory, Some evidence of carcinogenicity
Ethene, tetrafluoro-, homopolymer	None	No Target Organs
Quartz (SiO ₂)	None	Immune system, Lung, Some evidence of carcinogenicity

Hazardous Component(s)	NTP Carcinogen	IARC Carcinogen	OSHA Carcinogen (Specifically Regulated)
2-Propanol	No	No	No
Talc	No	Group 2B	No
Glyceridic oil	No	No	No
Butyral resin	No	No	No
Titanium dioxide	No	Group 2B	No
Ethene, tetrafluoro-, homopolymer	No	No	No
Quartz (SiO ₂)	Known To Be Human Carcinogen.	Group 1	No

12. ECOLOGICAL INFORMATION

Ecological information: Not available.

13. DISPOSAL CONSIDERATIONS

Information provided is for unused product only.

Recommended method of disposal: Follow all local, state, federal and provincial regulations for disposal.

Hazardous waste number: D001: Ignitable.

14. TRANSPORT INFORMATION

The transport information provided in this section only applies to the material/formulation itself, and is not specific to any package/configuration.

U.S. Department of Transportation Ground (49 CFR)

Proper shipping name: Resin solution
Hazard class or division: 3
Identification number: UN 1866
Packing group: III

International Air Transportation (ICAO/IATA)

Proper shipping name: Resin solution
Hazard class or division: 3
Identification number: UN 1866
Packing group: III
Exceptions: Consumer Commodity, ID 8000, Class 9, (Not more than 500 ml)

Water Transportation (IMO/IMDG)

Proper shipping name: RESIN SOLUTION
Hazard class or division: 3
Identification number: UN 1866
Packing group: III

15. REGULATORY INFORMATION**United States Regulatory Information**

TSCA 8 (b) Inventory Status: All components are listed or are exempt from listing on the Toxic Substances Control Act Inventory.
TSCA 12 (b) Export Notification: Ethene, tetrafluoro-, homopolymer (CAS# 9002-84-0).
CERCLA/SARA Section 302 EHS: None above reporting de minimis
CERCLA/SARA Section 311/312: Immediate Health, Delayed Health, Fire
CERCLA/SARA Section 313: None above reporting de minimis
CERCLA Reportable quantity: 2-Propanol (CAS# 67-63-0) 100 lbs. (45.4 kg)
California Proposition 65: This product contains a chemical known in the State of California to cause cancer.

Canada Regulatory Information

CEPA DSL/NDSL Status: All components are listed on or are exempt from listing on the Canadian Domestic Substances List.

16. OTHER INFORMATION

This safety data sheet contains changes from the previous version in sections: New Safety Data Sheet format.

Prepared by: Sheila Gines, Regulatory Affairs Specialist

Issue date: 08/06/2014

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rd		
Distillates (petroleum), hydrotreated middle	64742-46-7	5 - 10
Silicon dioxide	7631-86-9	5 - 10
Silicone Resin	Proprietary	1 - 5
Diiron trioxide	1309-37-1	1 - 5
Substituted Silane	Proprietary	1 - 5
Acetic acid	64-19-7	0.1 - 1
Substituted silane	Proprietary	0.1 - 1

* Exact percentage is a trade secret. Concentration range is provided to assist users in providing appropriate protections.

R D M R

- Move to fresh air. If breathing is difficult, give oxygen. If not breathing, give artificial respiration. If symptoms develop and persist, get medical attention.
- Wipe off paste with paper towel or cloth. Wash with soap and water. If skin irritation persists, call a physician.
- Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. If eye irritation persists, consult a specialist.
- Do not induce vomiting. If a person feels unwell or symptoms of skin irritation appear, consult a physician.
- See Section 11.
- Treat symptomatically.

R M R

- Foam, dry chemical or carbon dioxide.
- None
- None
- Silica mist. Formaldehyde. Acrid smoke and fumes.

6 D R M R

- Do not allow product to enter sewer or waterways.
- Maintain good ventilation for large spills. Store in a partly filled, closed container until disposal. Spilled material will solidify. Scrape up as much material as possible.

D D R

- Prevent contact with eyes, skin and clothing. Do not breathe vapor and mist. Wash thoroughly after handling.
- Keep container closed. Store in a dry area below 90° F.

rd 00 3

Caution

Use only with adequate ventilation. Use NIOSH approved respirator if there is potential to exceed exposure limit(s). Safety goggles or safety glasses with side shields. Full face protection should be used if the potential for splashing or spraying of product exists. Use impermeable gloves and protective clothing as necessary to prevent skin contact.

Chemical Name	OSHA PEL	NIOSH REL	IDLH	Health Hazard
Distillates (petroleum), hydrotreated middle	None	5 mg/m3 PEL Mist.	None	None
Silicon dioxide	6 mg/m3 TWA	20 MPPCF TWA 0.8 mg/m3 TWA	None	3 mg/m3 TWA Respirable fraction.
Silicone Resin	None	None	None	None
Diiron trioxide	5 mg/m3 TWA Respirable fraction.	10 mg/m3 PEL Fume.	None	None
Substituted Silane	None	None	None	None
Acetic acid	15 ppm STEL 10 ppm TWA	10 ppm (25 mg/m3) PEL	None	None
Substituted silane	None	None	None	None

Use only with adequate ventilation.

Use NIOSH approved respirator if there is potential to exceed exposure limit(s).

Safety goggles or safety glasses with side shields. Full face protection should be used if the potential for splashing or spraying of product exists.

Use impermeable gloves and protective clothing as necessary to prevent skin contact.

Warning

Liquid, Paste
 Red
 Acetic acid
 Not available.
 Not available.
 < 10 mm hg (68 °F (20°C))
 Not available.
 Not available.
 1.01 at 20 °C (68°F)
 Heavier than air.
 > 93 °C (> 199.4 °F)
 4 % (acetic acid)
 19.9 % (acetic acid)
 Not available.
 Not available.
 Not soluble. Polymerizes in presence of water.
 Not available.
 3.08 %; 32 g/l
 Not available.
 Not available.

Liquid, Paste
 Red
 Acetic acid
 Not available.
 Not available.
 < 10 mm hg (68 °F (20°C))
 Not available.
 Not available.
 1.01 at 20 °C (68°F)
 Heavier than air.
 > 93 °C (> 199.4 °F)
 4 % (acetic acid)
 19.9 % (acetic acid)
 Not available.
 Not available.
 Not soluble. Polymerizes in presence of water.
 Not available.
 3.08 %; 32 g/l
 Not available.
 Not available.

10 **DR**

- Stable
- Will not occur.
- Acetic acid is liberated slowly upon contact with moisture. Formaldehyde.
- Acids. Water Bases. Oxidizing agents.
- Not available.
- Exposure to moisture. Prolonged heating at temperatures above 150 °C.

11 **RM**

Skin, Inhalation, Eyes

Acetic acid produced during cure may irritate eyes, nose and throat. When heated to temperatures exceeding 300° F (150° C) in the presence of air, silicones may form formaldehyde vapors. Formaldehyde is a potential cancer hazard and a known skin and respiratory sensitizer. Vapors irritate the eyes, nose and throat. Safe handling conditions may be maintained by keeping formaldehyde vapor concentrations below the OSHA permissible limit.

Causes skin irritation. May cause allergic skin reaction.
Causes serious eye irritation.
Not expected to be harmful by ingestion.

	D	R
Distillates (petroleum), hydrotreated middle	None	Irritant
Silicon dioxide	Oral LD50 (RAT) = > 22,500 mg/kg	Nuisance dust
Silicone Resin	None	Irritant
Diiron trioxide	None	Allergen, Cardiac, Central nervous system, Irritant, Kidney, Liver, Lung
Substituted Silane	None	Irritant, Allergen
Acetic acid	Oral LD50 (RABBIT) = 1,200 mg/kg Oral LD50 (RAT) = 3.53 g/kg Oral LD50 (RAT) = 3.31 g/kg Dermal LD50 (RABBIT) = 1,060 mg/kg Inhalation LC50 (RAT, 4 h) = 11.4 mg/l	Allergen, Corrosive, Eyes, Gastrointestinal, Immune system, Irritant, Kidney
Substituted silane	None	Allergen, Irritant

	R	R	R
Distillates (petroleum), hydrotreated middle	No	No	No
Silicon dioxide	No	No	No
Silicone Resin	No	No	No
Diiron trioxide	No	No	No
Substituted Silane	No	No	No
Acetic acid	No	No	No
Substituted silane	No	No	No

1 **RM**

Not available.

13 D R

13 D R

R

Follow all local, state, federal and provincial regulations for disposal. Cured rubber can be incinerated or landfilled following EPA and local regulations.

rd

Not a RCRA hazardous waste.

1 R R RM

1 R R RM

D

Not regulated
None
None
None

D

Not regulated
None
None
None

M MD

Not regulated
None
None
None

1 R R RM

1 R R RM

R

All components are listed or are exempt from listing on the Toxic Substances Control Act Inventory.

1

None above reporting de minimis

R 30

None above reporting de minimis

R 311 312

Immediate Health

R 313

None above reporting de minimis

6

This product contains a chemical known in the State of California to cause cancer. This product contains a chemical known to the State of California to cause birth defects or other reproductive harm.

1 R R RM

D

All components are listed on or are exempt from listing on the Canadian Domestic Substances List.

16 R RM

16 R RM

rd

Catherine Bimler, Regulatory Affairs Specialist

d

08/01/2014

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Material Safety Data Sheet

Material Name: **Low Sulphur Diesel-S15**

MSDS ID: NOVA-0034

Section 1 - Product and Company Identification

Synonyms: Ultra-low sulphur diesel, diesel oil, fuel distillate, hydrodesulphurized kerosene

Chemical Name: Kerosine, petroleum, hydrodesulfurized

Chemical Family: Kerosene

Material Use: Fuel for on- and off-road diesel engines; also fuel for home heating and marine industry

Chemical Formula: Not available; complex mixture

NOVA Chemicals
P.O. Box 2518, Station M
Calgary, Alberta, Canada T2P 5C6

EMERGENCY Telephone Numbers:

1-800-561-6682, 1-403-314-8767 (NOVA Chemicals) (24 hours)
1-800-424-9300 (CHEMTREC-USA) (24 hours)
1-613-996-6666 (Canutec-Canada) (24 hours)

Product Information: 1-412-490-4063

MSDS Information Email: msdsemail@novachem.com

General Comments

This product has been assigned a CAS # of 64742-81-0.

Section 2 - Hazards Identification

HMIS Ratings: Health: 1 Fire: 2 Physical Hazard: 0 Personal Protection: chemical goggles, gloves, respirator, coveralls

*Hazard Scale: 0 = Minimal 1 = Slight 2 = Moderate 3 = Serious 4 = Severe * = Chronic hazard*

NFPA Ratings: Health: 1 Fire: 2 Reactivity: 0

Hazard Scale: 0 = Minimal 1 = Slight 2 = Moderate 3 = Serious 4 = Severe

Emergency Overview

WARNING! COMBUSTIBLE. Product is an amber oily liquid with a kerosene-like odour. This product burns readily when heated to high temperatures, giving off combustible and toxic vapours. This product is harmful and possibly fatal if swallowed. Small amounts of this product, if aspirated into the lungs, may cause mild to severe injury. This product is irritating to the eyes and skin. Ingestion or excessive inhalation of this product may result in headache, sleepiness, dizziness, nausea, loss of coordination, and in extreme conditions coma and possibly death. Contains trace components that may cause cancer. Avoid contact. Pre-existing medical conditions may be aggravated by exposure. Prevent entry into drains, ditches, sewers, and waterways.

Potential Health Effects: Eyes

This product is irritating to the eyes. Pre-existing medical conditions may be aggravated by exposure.

Potential Health Effects: Skin

Prolonged and/or repeated skin contact with this product may cause irritation, blistering and severe dermatitis. Product may be absorbed through intact skin. Prolonged or repeated contact with this product may cause allergic-like skin reactions and over time may possibly cause skin cancer. Pre-existing medical conditions may be aggravated by exposure.

Potential Health Effects: Ingestion

This product is harmful or fatal if swallowed. Ingestion may cause gastrointestinal irritation, nausea, vomiting, diarrhoea, and cramping. May also cause central nervous system effects including headache, sleepiness, dizziness, nausea, loss of coordination, and in extreme conditions coma and possibly death. Ingestion may cause kidney and liver damage and blood disorders. Small amounts of this product, if aspirated into the lungs, may cause mild to severe pulmonary injury.

Potential Health Effects: Inhalation

This product may be harmful by inhalation. Pre-existing medical conditions may be aggravated by exposure. Excessive inhalation of this product may result in heartbeat irregularities and central nervous system effects including headache, sleepiness, dizziness, nausea, loss of coordination, and in extreme conditions respiratory failure, coma and possibly death. Small amounts of this product, if aspirated into the lungs, may cause mild to severe pulmonary injury.

Material Safety Data Sheet

Material Name: **Low Sulphur Diesel-S15**

MSDS ID: NOVA-0034

Section 3 - Composition/Information on Ingredients

CAS #	Component	Percent by Wt.
64742-81-0	Kerosine, petroleum, hydrodesulfurized	≥99.5
7704-34-9	Sulphur	0-0.0015

Additional Information

This product is a complex mixture of aliphatic, olefinic, naphthenic and aromatic hydrocarbons having a variable boiling range of 161°C to 355°C (322°F to 671°F).

This product may or may not contain dye. Dye is added prior to sale to indicate product is for use in off-road applications only.

This product is hazardous under 29 CFR 1910.1200 (Hazard Communication).

This material is a controlled product under Canadian WHMIS regulations.

This material is transported within North America as a hazardous material / dangerous goods.

See Section 8 for applicable exposure limits. See Section 11 for applicable toxicity data.

Section 4 - First Aid Measures

First Aid: Eyes

Remove contact lenses, if it can be done safely. Immediately flush eyes with water for at least 15 minutes, while holding eyelids open. Seek medical attention if symptoms develop or persist.

First Aid: Skin

Remove contaminated clothing and shoes. Wash immediately with soap and water for at least 15 minutes. Seek medical attention if symptoms develop or persist. Completely decontaminate clothing, shoes and other protective equipment before reuse or discard.

First Aid: Inhalation

Move affected individual to non-contaminated air. Loosen tight clothing such as a collar, tie, belt or waistband to facilitate breathing. Seek immediate medical attention if the individual is not breathing, unconscious or if any other symptoms persist. **WARNING:** Contact through mouth-to-mouth resuscitation may pose a secondary risk to the rescuer. Avoid mouth-to-mouth contact by using a mouth shield or guard to perform artificial respiration.

First Aid: Ingestion

DO NOT INDUCE VOMITING. Loosen tight clothing such as a collar, tie, belt or waistband. Seek immediate medical attention. Small amounts which accidentally enter the mouth should be rinsed out until taste is gone.

First Aid: Notes to Physician

For more detailed medical emergency support information call 1-800-561-6682 or 1-403-314-8767 (24 hours, NOVA Chemicals Emergency Response). Ensure thorough eye and skin decontamination. Treat unconsciousness, nausea, hypotension, seizures and cardiac arrhythmias in the conventional manner. Aspiration of this material during induced emesis can result in lung injury. If evacuation of stomach contents is considered necessary, use the method least likely to cause aspiration, such as gastric lavage after protecting the airway. Observe hospitalized patients for delayed chemical pneumonia, acute tubular necrosis, encephalopathy and dysrhythmias. Monitor for urinary phenol within 72 hours of acute exposure.

Section 5 - Fire Fighting Measures

See Section 9: Physical Properties for flammability limits, flash point and auto-ignition information.

General Fire Hazards

Fire and container explosion hazards are serious when this product is exposed to heat, flame or oxidizing materials. Empty containers when heated may pose a fire risk. Vapours are heavier than air and may travel along the ground to some distant source of ignition and flash back. Consider need for immediate emergency isolation and evacuation.

Explosion Hazards

Vapours may form explosive mixture with air. Keep containers away from source of heat, fire or oxidizing materials. Containers may explode if exposed to heat.

Hazardous Combustion Products

Upon combustion, this material emits carbon monoxide, carbon dioxide, low molecular weight hydrocarbons, acidic gases, nitrogen oxides, sulphur oxides, and other toxic contaminants.

Material Safety Data Sheet

Material Name: **Low Sulphur Diesel-S15**

MSDS ID: NOVA-0034

Extinguishing Media

Dry chemical, foam, carbon dioxide, and water spray or fog. Use water to cool fire-exposed containers and to protect personnel. Water spray may be an ineffective extinguishing medium and may actually spread flames. Monitor water run-off for flammability, and prevent from entering sewers, drains, ditches or other confined or underground spaces.

Fire Fighting Equipment/Instructions

Reference 2012 Emergency Response Guidebook, Guide No. 128 for additional details and instructions. Position upwind. Keep unnecessary personnel away. Move containers from fire area if you can do so without risk. Fight fire from maximum distance or use unmanned holders or monitor nozzles. Immediately withdraw in case of fire and tank venting or heat discoloration of a tank. Fire fighters should wear full-face, self-contained breathing apparatus and thermal protective clothing. Avoid inhaling any smoke and combustion materials. Remove and clean or destroy any contaminated clothing. Cool containers with water until well after the fire is out. Control runoff waters to prevent entry into sewers, drains, ditches, underground or confined spaces and waterways.

Section 6 - Accidental Release Measures

Evacuation Procedures

Isolate area. Keep unnecessary personnel away. Alert stand-by emergency and fire fighting personnel. Monitor surrounding area for buildup of flammable concentrations in air.

Small Spills

Spill or leak area should be isolated immediately for at least 50 metres (164 feet) in all directions. Eliminate ignition sources. Keep upwind and out of low areas. Stop discharge if safe to do so. Contain discharge by booming on water or diking on ground. Remove liquid material with non-sparking approved pumps, skimmers or vacuum equipment. Absorb with DRY earth, sand or other non-combustible material and clean up with non-sparking tools. Prevent entry into sewers, drains, ditches, underground or confined spaces, water intakes and waterways. Shovel material with non-sparking tools into appropriate container for disposal.

Large Spills

Consider downwind evacuation for 300 metres (984 feet). Eliminate ignition sources. Keep upwind and out of low areas. Stop discharge if safe to do so. Contain discharge by booming on water or diking on ground. Remove liquid material with approved non-sparking pumps, skimmers or vacuum equipment. Absorb with DRY earth, sand or other non-combustible material. Soil remediation may be required. Prevent entry into sewers, drains, ditches, underground or confined spaces, water intakes and waterways.

Special Procedures

Contact local police/emergency services and appropriate emergency telephone numbers provided in Section 1. Ensure that statutory and regulatory reporting requirements in the applicable jurisdiction are met. Wear appropriate protective equipment and clothing during cleanup. Individuals without appropriate protective equipment should be excluded from area of spill until cleanup has been completed.

See Section 8 for recommended Personal Protective Equipment and see Section 13 for waste disposal considerations.

Section 7 - Handling and Storage

Handling Procedures

Keep locked up or secured. Handle in fully grounded, properly designed and approved equipment systems that are suitable for flammable liquids. Use with adequate ventilation. Do not ingest or inhale. Keep away from heat and ignition sources. No smoking or open flames permitted in storage, use or handling areas. Dissipate static electricity during transfer by grounding and bonding containers and equipment. An anti-static agent may be added to storage tanks to reduce static charge buildup during loading. Take special precautions when cold cutting or breaking into lines, or when cleaning and disposing of empty containers. Do not breathe gas, fumes, vapour or spray. In case of insufficient ventilation, wear suitable respiratory equipment. If ingested, seek medical advice immediately. Avoid contact with skin and eyes. Keep away from incompatible materials such as oxidizing agents. Oil-contaminated clothing must be removed and cleaned prior to reuse. After handling, always wash hands thoroughly with soap and water.

Storage Procedures

Storage area should be clearly identified, well-illuminated, clear of obstruction and accessible only to trained and authorized personnel. Adequate security must be provided so that unauthorized personnel do not have access to

Material Safety Data Sheet

Material Name: **Low Sulphur Diesel-S15**

MSDS ID: NOVA-0034

product. Store in grounded, properly designed and approved vessels and away from incompatible materials. Store and use away from heat, sparks, open flame, or any other ignition source. An anti-static agent may be added to storage tanks to reduce static charge buildup during loading. Store according to applicable regulations for combustible materials for storage tanks, containers, piping, buildings, rooms, cabinets, allowable quantities and minimum storage distances. Use non-sparking ventilation systems, approved explosion-proof equipment, and intrinsically safe electrical systems. Have appropriate extinguishing capability in storage area (e.g. portable fire extinguishers (dry chemical, foam or carbon dioxide)) and flammable gas detectors. Water spray is ineffective for extinguishing fires. Prevent soil contamination. Keep absorbents for leaks and spills readily available. Equip storage tank vents with a flame arrestor. Inspect vents during winter conditions for vapour ice buildup. Storage tanks should be above ground and diked to hold entire contents. Do not store at temperatures at or above product's flashpoint.

See Section 8: Exposure Controls/Personal Protection for appropriate Personal Protective Equipment. See Section 10 for information on Incompatibilities.

Section 8 - Exposure Controls / Personal Protection

Exposure Guidelines

A: General Product Information

Refer to published exposure limits - use effective control measures and PPE to maintain worker exposure to concentrations that are below these limits. Ensure that eyewash stations and safety showers are in close proximity to work locations.

B: Component Exposure Limits

ACGIH, OSHA, NIOSH, EPA, Alberta, and Ontario exposure limit lists have been checked for major components listed with CAS registry numbers. Other exposure limits may apply, check with proper authorities.

Kerosine, petroleum, hydrodesulfurized (64742-81-0)

- ACGIH: 200 mg/m³ TWA (as total hydrocarbon vapor) (application restricted to conditions in which there are negligible aerosol exposures)
Skin - potential significant contribution to overall exposure by the cutaneous route.
- Alberta: 200 mg/m³ TWA (as total hydrocarbon vapour)
Substance may be readily absorbed through intact skin
- Ontario: 200 mg/m³ TWA (as total hydrocarbon vapour) (application restricted to conditions in which there are negligible aerosol exposures)
Skin – Danger of cutaneous absorption

Sulphur (7704-34-9)

- Alberta: 10 mg/m³ TWA

ENGINEERING CONTROLS

Engineering methods to reduce hazardous exposure are preferred controls. Methods include mechanical ventilation (dilution and local exhaust) process or personal enclosure, remote and automated operation, control of process conditions, leak detection and repair systems, and other process modifications. Ensure all exhaust ventilation systems are discharged to outdoors, away from air intakes and ignition sources. Supply sufficient replacement air to make up for air removed by exhaust systems. Administrative (procedure) controls and use of personal protective equipment may also be required.

PERSONAL PROTECTIVE EQUIPMENT

Personal Protective Equipment: Eyes/Face

Wear safety glasses; chemical goggles are recommended if splashing is possible to prevent eye irritation from vapours.

Personal Protective Equipment: Skin/Hands/Feet

Use chemically resistant gloves when handling product. Wear chemical-resistant safety footwear with good traction to prevent slipping. Work clothing that sufficiently prevents skin contact should be worn, such as coveralls and/or long sleeves and pants. Fire resistant (i.e., Nomex) or natural fibre clothing (i.e., cotton or wool) is recommended. Synthetic clothing can generate static electricity and is not recommended where flammable vapour releases may occur. Static Dissipative (SD) rated footwear is recommended.

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Personal Protective Equipment: Respiratory

If engineering controls and ventilation are not sufficient to prevent buildup of aerosols or vapours, appropriate NIOSH approved air-purifying respirators or self-contained breathing apparatus (SCBA) appropriate for exposure potential should be used. Air supplied breathing apparatus must be used when oxygen concentrations are low or if airborne concentrations exceed the limits of the air-purifying respirators.

Personal Protective Equipment: General

Personal protective equipment (PPE) should not be considered a long-term solution to exposure control. Employer programs to properly select, fit, maintain, and train employees to use equipment must accompany PPE. Consult a competent industrial hygiene resource, the PPE manufacturer's recommendation, and/or applicable regulations to determine hazard potential and ensure adequate protection.

Section 9 - Physical & Chemical Properties

Physical State and Appearance:	Oily liquid	Colour:	Amber
Odour:	Kerosene-like	Odour Threshold:	Not available
pH:	Not available	Vapour Pressure:	0.20 kPa at 20°C (68°F)
Relative Vapour Density (Air=1):	8	Boiling Point:	Range: 161°C to 355°C (322°F to 671 °F)
Melting Point:	Range: -36°C to 0°C (-33°F to 32 °F)	Solubility (H2O):	Insoluble
Specific Gravity (Water=1):	Range: 0.840 to 0.855	Evaporation Rate (Ethyl Ether):	600
Viscosity (Kinematic):	Range: 2.6 to 2.9 cst	Percent Volatile:	100%
Octanol/H2O Coeff.:	Not available	Auto Ignition:	257°C (495°F)
Flash Point:	Range: 60°C to 75°C (140°F to 167°F)	Flash Point Method:	Pensky-Martens, closed cup
Upper Flammable Limit (UFL):	5%	Lower Flammable Limit (LFL):	0.7%
Flammability Classification:	Combustible		

Section 10 - Stability & Reactivity Information

Chemical Stability

This product is stable under normal use conditions for shock, vibration, pressure, or temperature.

Chemical Stability: Conditions to Avoid

Keep away from heat, sparks, or open flame.

Incompatibility

May react with oxidizing agents. Slightly reactive with metals. Heated vapours or mists may form explosive mixture with air.

Possibility of Hazardous Reactions or Hazardous Polymerization

Hazardous polymerization not likely to occur.

Corrosivity

Not corrosive to the common metals.

Hazardous Decomposition

Upon decomposition, this product emits carbon monoxide, carbon dioxide low molecular weight hydrocarbons, acidic gases, nitrogen oxides, sulphur oxides, and other toxic contaminants.

Section 11 - Toxicological Information

A: Acute Toxicity – General Product Information

Similar fuel oil mixtures have been tested under the EPA's High Production Volume (HPV) Chemical Challenge Program for the Kerosenes/Jet Fuel Category. Kerosene is not considered acutely toxic. Animal tests have produced moderate to severe skin irritation and eye irritation. Eye irritation is generally resolved within one to 7 days. Kerosenes did not produce sensitization when tested in guinea pigs.

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B: Acute Toxicity - LD50/LC50

Kerosine, petroleum, hydrodesulfurized (64742-81-0)

Inhalation LC50 Rat: >5.2 mg/L/4H; Oral LD50 Rat: >5000 mg/kg; Dermal LD50 Rabbit: >2000 mg/kg

Sulphur (7704-34-9)

Inhalation LC50 Rat: >6.23 mg/L/4H; Oral LD50 Rat: >8437 mg/kg; Dermal LD50 Rabbit: >2000 mg/kg

C: Chronic Toxicity - General Product Information

Similar fuel oil mixtures have been tested under the EPA's High Production Volume (HPV) Chemical Challenge Program for the Kerosenes/Jet Fuel Category. Chronic skin exposure causes dermatitis and slight to moderate skin irritation in rabbits. Application of hydrodesulphurized kerosene to mouse skin, twice a week for 12 months, resulted in an increased incidence of skin tumours. Hydrodesulphurized kerosene applied to the skin of female rats at 494, 330, or 165 mg/kg daily for 7 consecutive weeks (pre-mating, mating, and gestation), or for 8 consecutive weeks in males did not result in systemic, reproductive, or developmental toxicity. Some animal studies have indicated damage to the heart and spleen. No tests have shown evidence of mutagenicity or teratogenicity.

D: Chronic Toxicity - Carcinogenic Effects

ACGIH, EPA, IARC, OSHA, and NTP carcinogen lists have been checked for selected similar materials or those components with CAS registry numbers.

Kerosine, petroleum, hydrodesulfurized (64742-81-0)

ACGIH: A3 - Confirmed animal carcinogen with unknown relevance to humans (as total hydrocarbon vapor)

IARC: Monograph 45 [1989] (related to Jet Fuel) (Group 3 (not classifiable))

Section 12 - Ecological Information

Ecotoxicity

A: General Product Information

Similar fuel oil mixtures have been tested under the EPA's High Production Volume (HPV) Chemical Challenge Program for the Kerosenes/Jet Fuel Category. Product is largely insoluble in water. Under ambient conditions, this product absorbs quickly in soil. Kerosene shows moderate toxicity to aquatic organisms.

B: Component Analysis - Ecotoxicity - Aquatic/Terrestrial Toxicity

Kerosine, petroleum, hydrodesulfurized (64742-81-0)

96 Hr LC50 Pimephales promelas: 45 mg/L [flow-through]; 96 Hr LC50 Lepomis macrochirus: 1740 mg/L [static]; 96 Hr LC50

Dendronereides heteropoda: 4720 mg/L

Sulphur (7704-34-9)

96 Hr LC50 Brachydanio rerio: 866 mg/L [static]

Environmental Fate/Mobility

Kerosene is not subject to hydrolysis. Partitioning to water is <10% at equilibrium, while partitioning to sediment is 2% and to biota (fish) is 0.1%

Persistence/Degradability

This material is considered biodegradable. Some components biodegrade quickly while other higher molecular weight components will degrade more slowly. Atmospheric half-lives of 0.2 to 1.5 days have been calculated for representative C9 and C16 hydrocarbon components of kerosenes.

Bioaccumulation/Accumulation

Lower molecular-weight, normal hydrocarbons are most readily biodegraded but tend to partition to air rather than water, while more complex, higher molecular weight polynuclear aromatics and substituted aromatics tend to sorb to soil or sediment; both processes limit bioavailability and can slow biodegradation. The hydrocarbons in kerosenes are generally not inhibitory to microbial activity though changes in microbial community composition may occur in spill or impacted areas due to the proliferation of species that can biodegrade the compounds.

Section 13 - Disposal Considerations

U.S./Canadian Waste Information

A: General Product Information

This product may be known to be a hazardous waste according to US and Canadian regulations. The use, mixing or processing of this product may alter its properties or hazards. Contact federal, provincial/state and local authorities in order to generate or ship a waste material associated with this product to ensure materials are handled appropriately and meet all criteria for disposal of hazardous waste. DO NOT ATTEMPT TO DISPOSE

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OF BY UNCONTROLLED IGNITION. Since emptied containers retain product residue, follow safe handling/label warnings even after container is emptied.

See Section 7: Handling and Storage and Section 8: Exposure Controls/Personal Protection for additional handling information that may be applicable for safe handling and the protection of employees.

Waste generator is advised to carefully consider hazardous properties and control measures needed for other materials that may be found in the waste.

B: Component Waste Numbers

No EPA Waste Numbers are applicable for this product's components.

Section 14 - Transportation Information

US DOT Information

Shipping Name: DIESEL FUEL

UN#: UN1202 Hazard Class: 3 Packing Group: III

Required Label(s): FLAMMABLE LIQUID

Additional Information: 2012 Emergency Response Guidebook: Guide #128

Canadian TDG Information

Shipping Name: DIESEL FUEL

UN#: UN1202 Hazard Class: 3 Packing Group: III

Required Label(s): FLAMMABLE LIQUID

Additional Information: 2012 Emergency Response Guidebook: Guide #128

International Air Transport Association (IATA) and International Civil Aviation Organization (ICAO) Information

Shipping Name: DIESEL FUEL

UN#: UN1202 Hazard Class: 3 Packing Group: III

Required Label(s): FLAMMABLE LIQUID

International Maritime Dangerous Goods (IMDG) Code

Shipping Name: DIESEL FUEL

UN#: UN1202 Hazard Class: 3 Packing Group: III

Required Label(s): FLAMMABLE LIQUID

Additional Info.: EmS Code: F-E

Marine Pollutant: No

Section 15 - Regulatory Information

A. International Regulations

Component Analysis - International Inventory Status

Component	CAS #	US - TSCA	CANADA - DSL
Kerosine, petroleum, hydrodesulfurized	64742-81-0	Yes	Yes
Sulphur	7704-34-9	Yes	Yes

B: USA Federal & State Regulations

Ongoing occupational hygiene, medical surveillance programs, site emission or spill reporting may be required by Federal or State regulations. Check for applicable regulations.

USA OSHA Hazard Communication Class

This product/material is hazardous under 29 CFR 1910.1200 (Hazard Communication). HCS Classes:

HCS CLASS: Combustible liquid having a flash point between 37.8°C (100°F) and 93.3°C (200°F).

HCS CLASS: Irritating substance.

HCS CLASS: Target organ effects.

USA Right-to-Know - Federal

None of this product's components are listed under SARA Section 302 (40 CFR 355 Appendix A), SARA Section 313 (40 CFR 372.65), or CERCLA (40 CFR 302.4).

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USA Right-to-Know - State

The following components appear on one or more of the following state hazardous substances lists. Some components (including those present only in trace quantities, and therefore not listed in this document) may be included on the Right-To-Know lists of other U.S. states. The reader is therefore cautioned to contact his or her NOVA Chemicals' representative or NOVA Chemicals' Product Integrity group for further U.S. State Right-To-Know information.

Component	CAS #	NJ	PA
Kerosine, petroleum, hydrodesulfurized	64742-81-0	Yes	Yes
Sulphur	7704-34-9	Yes	Yes

C: Canadian Regulations - Federal and Provincial

Canadian Environmental Protection Act (CEPA): All components of this product are on the Domestic Substances List (DSL), and are acceptable for use under the provisions of CEPA.

WHMIS Ingredient Disclosure List (IDL)

No components are listed in the Canadian Hazardous Products Act - Ingredient Disclosure List (IDL).

WHMIS Classification

Workplace Hazardous Materials Information System (WHMIS): This material has been classified in accordance with the hazard criteria of the CPR (Controlled Products Regulations), and the MSDS contains all the information required by the CPR.

WHMIS CLASS B3: Combustible liquid with a flash point between 37.8°C (100°F) and 93.3°C (200°F).

WHMIS CLASS D2A: Very Toxic (Kerosine, petroleum, hydrodesulfurized)

WHMIS CLASS D2B: Toxic (skin/eye irritant)

Other Regulations

Ongoing occupational hygiene, medical surveillance programs, site emission or spill reporting may be required by Federal or Provincial regulations. Check for applicable regulations.

Section 16 - Other Information

Label Information

WARNING! COMBUSTIBLE. Product is an amber oily liquid with a kerosene-like odour. This product burns readily when heated to high temperatures, giving off combustible and toxic vapours. This product is harmful and possibly fatal if swallowed. Small amounts of this product, if aspirated into the lungs, may cause mild to severe injury. This product is irritating to the eyes and skin. Ingestion or excessive inhalation of this product may result in headache, sleepiness, dizziness, nausea, loss of coordination, and in extreme conditions coma and possibly death. Contains trace components that may cause cancer. Avoid contact. Pre-existing medical conditions are aggravated by exposure. Prevent entry into drains, ditches, sewers, and waterways.

FIRST AID:

SKIN: Remove contaminated clothing and shoes. Wash immediately with soap and water for at least 15 minutes. Seek medical attention if symptoms develop or persist. Completely decontaminate clothing, shoes and other protective equipment before reuse or discard.

EYES: Remove contact lenses, if it can be done safely. Immediately flush eyes with water for at least 15 minutes, while holding eyelids open. Seek medical attention if symptoms develop or persist.

INHALATION: Move affected individual to non-contaminated air. Loosen tight clothing such as a collar, tie, belt or waistband to facilitate breathing. Seek immediate medical attention if the individual is not breathing, is unconscious or if any other symptoms persist. **WARNING:** Contact through mouth-to-mouth resuscitation may pose a secondary risk to the rescuer. Avoid mouth-to-mouth contact by using a mouth shield or guard to perform artificial respiration.

INGESTION: DO NOT INDUCE VOMITING. Loosen tight clothing such as a collar, tie, belt or waistband. Seek immediate medical attention. Small amounts which accidentally enter the mouth should be rinsed out until taste is gone.

IN CASE OF A LARGE SPILL: Consider downwind evacuation for 300 metres (984 feet). Eliminate ignition sources. Keep upwind and out of low areas. Stop discharge if safe to do so. Contain discharge by booming on water or diking on ground. Remove liquid material with approved non-sparking pumps, skimmers or vacuum equipment. Absorb with DRY earth, sand or other non-combustible material. Soil remediation may be required. Prevent entry into sewers, drains, ditches, underground or confined spaces, water intakes and waterways.

References

Available on request.

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Material Name: **Low Sulphur Diesel-S15**

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Special Considerations

The International Agency for Research on Cancer (IARC) has categorized diesel exhaust as carcinogenic to humans (Group 1).

Diesel exhaust particulates

NTP: Reasonably Anticipated to be a Human Carcinogen (related to Diesel exhaust particulates)

IARC: Monograph 105 [in prep] (related to Diesel engine exhaust) (Group 1 (carcinogenic to humans))

For additional information on equipment bonding and grounding, refer to the American Petroleum Institute (API) Recommended Practice 2003, "Protection Against Ignitions Arising out of Static, Lightning, and Stray Currents" or National Fire Protection Association (NFPA) 77, "Recommended Practice on Static Electricity".

Key/Legend

ACGIH = American Conference of Governmental Industrial Hygienists; ADR = Transport of Dangerous Goods by Road; ADR/RID = European Agreement of Dangerous Goods by Road/Rail; BOD = Biochemical Oxygen Demand; CAS = Chemical Abstracts Service; CEPA = Canadian Environmental Protection Act; CERCLA = Comprehensive Environmental Response, Compensation, and Liability Act; CFR = Code of Federal Regulations; CPR = Controlled Products Regulations; DFG = Deutsche Forschungsgemeinschaft; DOT = Department of Transportation; DSL = Domestic Substances List; EC50 = Effective Concentration 50%; EEC = European Economic Community; EINECS = European Inventory of Existing Commercial Chemical Substances; ELINCS = European List of Notified Chemical Substances; EPA = Environmental Protection Agency; EU = European Union; FDA = Food and Drug Administration; GHS = Globally Harmonized System for the Classification and Labelling of Chemicals; HCS = Hazard Communication Standard; HMIS = Hazardous Materials Identification System; IARC = International Agency for Research on Cancer; IATA = International Air Transport Association; ICAO = International Civil Aviation Organization; IDL = Ingredient Disclosure List; IDLH = Immediately Dangerous to Life or Health; IMDG = International Maritime Dangerous Goods; IMO = International Maritime Organization; ISHL = Industrial Safety and Health Law; Kow = Octanol/water partition coefficient; LC50 = Lethal Concentration 50%; LD50 = Lethal Dose 50%; LEL = Lower Explosive Limit; LFL = Lower Flammable Limit; LLV = Level Limit Ceiling Limit (Sweden dust); MAK = Maximum Concentration Value in the Workplace; MITI = Ministry of International Trade and Industry; MSDS = Material Safety Data Sheet; NAB = Threshold Values (Indonesia); NCEC = National Chemical Emergency Centre; NDSL = Non-Domestic Substances List; NFPA = National Fire Protection Association; NIOSH = National Institute for Occupational Safety and Health; NJTSR = New Jersey Trade Secret Registry; NTP = National Toxicology Program; OEL = Occupational Exposure Limit; OSHA = Occupational Safety and Health Administration; PEL = Permissible Exposure Limit; PNOC = Particulates Not Otherwise Classified; PPE = Personal Protective Equipment; PRTR = Designated Chemical Substance Law (Japan); PSD = Short Term Exposure Limit (Indonesia); RCRA = Resource Conservation and Recovery Act; REACH = Registration, Evaluation, Authorisation and Restriction of Chemical Substances; REL = Recommended Exposure Limit; RID = Transport of Dangerous Goods by Rail; SARA = Superfund Amendments and Reauthorization Act; SCBA = Self Contained Breathing Apparatus; SDS = Safety Data Sheet; SEPA = State Environmental Protection Administration; STEL = Short Term Exposure Limit; TDG = Transportation of Dangerous Goods; TLV = Threshold Limit Value; TSCA = Toxic Substances Control Act; TWA = Time Weighted Average; UEL = Upper Explosive Limit; UFL = Upper Flammable Limit; VLA-ED = Valor l mite Ambiental de Exposici n Diaria (Environmental Exposure Daily Limit Value); VME = valeur limite d'exposition (Occupational Exposure Limits); WHMIS = Workplace Hazardous Materials Information Systems

MSDS Prepared by: NOVA Chemicals

MSDS Information Phone Number: 1-412-490-4063

Other Information

Notice to Reader:

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This is the end of MSDS # NOVA-0034.



SAFETY DATA SHEET

No. 630-AA

According to Appendix D, OSHA Hazard Communication Standard 29 CFR §1910.1200

1. Identification

Product identifier

Product name No. 630-AA

Product number L0067-004, L0067-005, L0067-035, L0067-039, L0067-040, L0067-078A, L0067-079, L0067-086, L0067-092, L0067-040B, L0067-100, L0067-001, L0067-006, L0067-040NL, L0067-078

Recommended use of the chemical and restrictions on use

Application Lubricating grease.

Uses advised against No specific uses advised against are identified.

Details of the supplier of the safety data sheet

Manufacturer Lubriplate Lubricants Co.
Corporate Headquarters
129 Lockwood Street
Newark, NJ 07105

Midwest Office & Plant
1500 Oakdale Ave.
Toledo, OH 43605
419-691-2491
419-693-3806

Emergency telephone number

Emergency telephone Chem-Tel: 1-800-255-3924 (US & Canada only)
01-813-248-0585 (Outside US & Canada)

2. Hazard(s) identification

Classification of the substance or mixture

Physical hazards Not Classified

Health hazards Not Classified

Environmental hazards Aquatic Acute 3 - H402 Aquatic Chronic 3 - H412

Label elements

Hazard statements H412 Harmful to aquatic life with long lasting effects.

Precautionary statements P273 Avoid release to the environment.
P501 Dispose of contents/ container in accordance with national regulations.

Other hazards

This product does not contain any substances classified as PBT or vPvB.

3. Composition/information on ingredients

Mixtures

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Inhalation	A single exposure may cause the following adverse effects: Temporary irritation.
Ingestion	May cause discomfort if swallowed. May cause stomach pain or vomiting.
Skin contact	Prolonged contact may cause dryness of the skin.
Eye contact	May be slightly irritating to eyes.

Indication of immediate medical attention and special treatment needed

Notes for the doctor Treat symptomatically.

5. Fire-fighting measures

Extinguishing media

Suitable extinguishing media The product is not flammable. Extinguish with alcohol-resistant foam, carbon dioxide, dry powder or water fog. Use fire-extinguishing media suitable for the surrounding fire.

Unsuitable extinguishing media Do not use water jet as an extinguisher, as this will spread the fire.

Special hazards arising from the substance or mixture

Specific hazards None known.

Hazardous combustion products Thermal decomposition or combustion products may include the following substances: Harmful gases or vapors.

Advice for firefighters

Protective actions during firefighting Avoid breathing fire gases or vapors. Evacuate area. Cool containers exposed to heat with water spray and remove them from the fire area if it can be done without risk. Cool containers exposed to flames with water until well after the fire is out. Avoid discharge to the aquatic environment. Control run-off water by containing and keeping it out of sewers and watercourses. If risk of water pollution occurs, notify appropriate authorities.

Special protective equipment for firefighters Wear positive-pressure self-contained breathing apparatus (SCBA) and appropriate protective clothing. Standard Firefighter's clothing including helmets, protective boots and gloves will provide a basic level of protection for chemical incidents.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

Personal precautions No action shall be taken without appropriate training or involving any personal risk. Keep unnecessary and unprotected personnel away from the spillage. Wear protective clothing as described in Section 8 of this safety data sheet. Follow precautions for safe handling described in this safety data sheet. Wash thoroughly after dealing with a spillage. Ensure procedures and training for emergency decontamination and disposal are in place. Do not touch or walk into spilled material.

Environmental precautions

Environmental precautions Avoid discharge into drains or watercourses or onto the ground. Avoid discharge to the aquatic environment. Large Spillages: Inform the relevant authorities if environmental pollution occurs (sewers, waterways, soil or air).

Methods and material for containment and cleaning up

No. 630-AA

Methods for cleaning up	Wear protective clothing as described in Section 8 of this safety data sheet. Clear up spills immediately and dispose of waste safely. Approach the spillage from upwind. Collect spillage with a shovel and broom, or similar and reuse, if possible. Collect and place in suitable waste disposal containers and seal securely. Flush contaminated area with plenty of water. Wash thoroughly after dealing with a spillage. Dangerous for the environment. Do not empty into drains. Dispose of waste to licensed waste disposal site in accordance with the requirements of the local Waste Disposal Authority.
Reference to other sections	For personal protection, see Section 8. See Section 11 for additional information on health hazards. See Section 12 for additional information on ecological hazards. For waste disposal, see Section 13.

7. Handling and storage**Precautions for safe handling**

Usage precautions Read and follow manufacturer's recommendations. Wear protective clothing as described in Section 8 of this safety data sheet. Keep away from food, drink and animal feeding stuffs. Keep container tightly sealed when not in use. Avoid discharge to the aquatic environment. Do not handle until all safety precautions have been read and understood. Do not handle broken packages without protective equipment.

Advice on general occupational hygiene Wash promptly if skin becomes contaminated. Take off contaminated clothing and wash before reuse. Wash contaminated clothing before reuse. Do not eat, drink or smoke when using this product. Wash at the end of each work shift and before eating, smoking and using the toilet. Change work clothing daily before leaving workplace.

Conditions for safe storage, including any incompatibilities

Storage precautions Store away from incompatible materials (see Section 10). Store in accordance with local regulations. Keep only in the original container. Keep container tightly closed, in a cool, well ventilated place. Keep containers upright. Protect containers from damage. Utilize retaining walls to prevent soil and water pollution in the event of spillage. The storage area floor should be leak-tight, jointless and not absorbent.

Storage class Miscellaneous hazardous material storage.

Specific end uses(s)

Specific end use(s) The identified uses for this product are detailed in Section 1.

8. Exposure controls/Personal protection**Control parameters****Occupational exposure limits****Distillates (petroleum), hydrotreated heavy naphthenic**

Mineral oil, excluding metal working fluids (pure, highly and severely refined)
ACGIH

zinc oxide

Long-term exposure limit (8-hour TWA): OSHA 5 mg/m³ fume
Long-term exposure limit (8-hour TWA): OSHA 15 mg/m³ total dust
Long-term exposure limit (8-hour TWA): ACGIH 2 mg/m³ respirable fraction
Short-term exposure limit (15-minute): ACGIH 10 mg/m³ respirable fraction
Long-term exposure limit (8-hour TWA): OSHA 5 mg/m³ respirable fraction

OSHA = Occupational Safety and Health Administration.
ACGIH = American Conference of Governmental Industrial Hygienists.

zinc oxide (CAS: 1314-13-2)

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Immediate danger to life and health 500 mg/m³

Exposure controls**Protective equipment****Appropriate engineering controls**

Provide adequate ventilation. Personal, workplace environment or biological monitoring may be required to determine the effectiveness of the ventilation or other control measures and/or the necessity to use respiratory protective equipment. Use process enclosures, local exhaust ventilation or other engineering controls as the primary means to minimize worker exposure. Personal protective equipment should only be used if worker exposure cannot be controlled adequately by the engineering control measures. Ensure control measures are regularly inspected and maintained. Ensure operatives are trained to minimize exposure.

Eye/face protection

Eyewear complying with an approved standard should be worn if a risk assessment indicates eye contact is possible. Personal protective equipment for eye and face protection should comply with OSHA 1910.133. Unless the assessment indicates a higher degree of protection is required, the following protection should be worn: Tight-fitting safety glasses.

Hand protection

Chemical-resistant, impervious gloves complying with an approved standard should be worn if a risk assessment indicates skin contact is possible. The most suitable glove should be chosen in consultation with the glove supplier/manufacturer, who can provide information about the breakthrough time of the glove material. To protect hands from chemicals, gloves should comply with OSHA 1910.138 and be demonstrated to be impervious to the chemical and resist degradation. Considering the data specified by the glove manufacturer, check during use that the gloves are retaining their protective properties and change them as soon as any deterioration is detected. Frequent changes are recommended.

Other skin and body protection

Appropriate footwear and additional protective clothing complying with an approved standard should be worn if a risk assessment indicates skin contamination is possible.

Hygiene measures

Provide eyewash station and safety shower. Contaminated work clothing should not be allowed out of the workplace. Wash contaminated clothing before reuse. Clean equipment and the work area every day. Good personal hygiene procedures should be implemented. Wash at the end of each work shift and before eating, smoking and using the toilet. When using do not eat, drink or smoke. Preventive industrial medical examinations should be carried out. Warn cleaning personnel of any hazardous properties of the product.

Respiratory protection

Respiratory protection complying with an approved standard should be worn if a risk assessment indicates inhalation of contaminants is possible. Ensure all respiratory protective equipment is suitable for its intended use and is NIOSH approved. Check that the respirator fits tightly and the filter is changed regularly. Gas and combination filter cartridges should comply with OSHA 1910.134. Full face mask respirators with replaceable filter cartridges should comply with OSHA 1910.134. Half mask and quarter mask respirators with replaceable filter cartridges should comply with OSHA 1910.134.

Environmental exposure controls

Keep container tightly sealed when not in use. Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

9. Physical and chemical properties**Information on basic physical and chemical properties****Appearance**

Solid.

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Color	Off-white.
Odor	Mild.
Odor threshold	Not available.
pH	Not available.
Melting point	Not available.
Initial boiling point and range	>288°C (>550.4°F)
Flash point	> 204°C/399.2°F Cleveland open cup.
Evaporation rate	< 0.01 (butyl acetate = 1)
Upper/lower flammability or explosive limits	Not available.
Vapor pressure	<0.0013 kPa @ 25°C
Vapor density	> 5
Relative density	0.95
Solubility(ies)	Insoluble in water.
Partition coefficient	Not available.
Auto-ignition temperature	Not available.
Decomposition Temperature	Not available.
Viscosity	Not available.
Explosive properties	Not applicable.
Oxidizing properties	Not available.
Other information	None.

10. Stability and reactivity

Reactivity	See the other subsections of this section for further details.
Stability	Stable at normal ambient temperatures and when used as recommended. Stable under the prescribed storage conditions.
Possibility of hazardous reactions	No potentially hazardous reactions known.
Conditions to avoid	There are no known conditions that are likely to result in a hazardous situation.
Materials to avoid	No specific material or group of materials is likely to react with the product to produce a hazardous situation.
Hazardous decomposition products	Does not decompose when used and stored as recommended. Thermal decomposition or combustion products may include the following substances: Harmful gases or vapors.

11. Toxicological information**Information on toxicological effects****Acute toxicity - oral**

No. 630-AA

Summary	Based on available data the classification criteria are not met.
Notes (oral LD₅₀)	Based on available data the classification criteria are not met.
<u>Acute toxicity - dermal</u>	
Summary	Based on available data the classification criteria are not met.
Notes (dermal LD₅₀)	Based on available data the classification criteria are not met.
<u>Acute toxicity - inhalation</u>	
Summary	Based on available data the classification criteria are not met.
Notes (inhalation LC₅₀)	Based on available data the classification criteria are not met.
<u>Skin corrosion/irritation</u>	
Summary	Based on available data the classification criteria are not met.
Animal data	Based on available data the classification criteria are not met.
<u>Serious eye damage/irritation</u>	
Summary	Based on available data the classification criteria are not met.
Serious eye damage/irritation	Based on available data the classification criteria are not met.
<u>Respiratory sensitization</u>	
Summary	Based on available data the classification criteria are not met.
Respiratory sensitization	Based on available data the classification criteria are not met.
<u>Skin sensitization</u>	
Summary	Based on available data the classification criteria are not met.
Skin sensitization	Based on available data the classification criteria are not met.
<u>Germ cell mutagenicity</u>	
Summary	Based on available data the classification criteria are not met.
Genotoxicity - in vitro	Based on available data the classification criteria are not met.
<u>Carcinogenicity</u>	
Summary	Based on available data the classification criteria are not met.
Carcinogenicity	Based on available data the classification criteria are not met.
IARC carcinogenicity	None of the ingredients are listed or exempt.
<u>Reproductive toxicity</u>	
Summary	Based on available data the classification criteria are not met.
Reproductive toxicity - fertility	Based on available data the classification criteria are not met.
Reproductive toxicity - development	Based on available data the classification criteria are not met.
<u>Specific target organ toxicity - single exposure</u>	
Summary	Based on available data the classification criteria are not met.
STOT - single exposure	Not classified as a specific target organ toxicant after a single exposure.
<u>Specific target organ toxicity - repeated exposure</u>	
Summary	Based on available data the classification criteria are not met.
STOT - repeated exposure	Not classified as a specific target organ toxicant after repeated exposure.

No. 630-AA**Aspiration hazard****Summary** Not relevant. Solid.**Aspiration hazard** Not relevant. Solid.**General information**

The severity of the symptoms described will vary dependent on the concentration and the length of exposure.

Inhalation

A single exposure may cause the following adverse effects: Temporary irritation.

Ingestion

May cause discomfort if swallowed. May cause stomach pain or vomiting.

Skin Contact

Prolonged contact may cause dryness of the skin.

Eye contact

May be slightly irritating to eyes.

Route of exposure

Ingestion Inhalation Skin and/or eye contact

Target Organs

No specific target organs known.

12. Ecological information**Acute aquatic toxicity****Summary** Based on available data the classification criteria are not met.**Chronic aquatic toxicity****Summary** Harmful to aquatic life with long lasting effects.**Persistence and degradability****Persistence and degradability** The degradability of the product is not known.**Bioaccumulative potential****Bio-Accumulative Potential** No data available on bioaccumulation.**Partition coefficient**

Not available.

Mobility in soil**Mobility** No data available.**Other adverse effects****Other adverse effects** None known.**13. Disposal considerations****Waste treatment methods****General information**

The generation of waste should be minimized or avoided wherever possible. Reuse or recycle products wherever possible. This material and its container must be disposed of in a safe way. Disposal of this product, process solutions, residues and by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any local authority requirements. When handling waste, the safety precautions applying to handling of the product should be considered. Care should be taken when handling emptied containers that have not been thoroughly cleaned or rinsed out. Empty containers or liners may retain some product residues and hence be potentially hazardous.

Disposal methods

Do not empty into drains. Dispose of surplus products and those that cannot be recycled via a licensed waste disposal contractor. Waste, residues, empty containers, discarded work clothes and contaminated cleaning materials should be collected in designated containers, labeled with their contents. Waste packaging should be collected for reuse or recycling. Incineration or landfill should only be considered when recycling is not feasible.

No. 630-AA**14. Transport information**

General The product is not covered by international regulations on the transport of dangerous goods (IMDG, IATA, DOT).

UN Number

UN No. (International) Not applicable.

UN No. (DOT) Not applicable.

UN proper shipping name

Proper shipping name (International) Not applicable.

Proper shipping name (DOT) Not applicable.

Transport hazard class(es)

Transport Labels (International) No transport warning sign required.

DOT transport labels

No transport warning sign required.

Packing group

Packing group (International) Not applicable.

DOT packing group Not applicable.

Environmental hazards**Environmentally Hazardous Substance**

No.

Special precautions for user

Not applicable.

DOT reportable quantity Not applicable.

DOT TIH Zone Not applicable.

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code Not applicable.

15. Regulatory information

Regulatory References OSHA Hazard Communication Standard 29 CFR §1910.1200

US Federal Regulations**SARA Section 302 Extremely Hazardous Substances Tier II Threshold Planning Quantities**

None of the ingredients are listed or exempt.

CERCLA/Superfund, Hazardous Substances/Reportable Quantities (EPA)

None of the ingredients are listed or exempt.

SARA Extremely Hazardous Substances EPCRA Reportable Quantities

None of the ingredients are listed or exempt.

No. 630-AA

SARA 313 Emission Reporting

The following ingredients are listed or exempt:

zinc oxide

1.0 %

Antimony dialkyldithiocarbamate

1.0 %

CAA Accidental Release Prevention

None of the ingredients are listed or exempt.

FDA - Essential Chemical

None of the ingredients are listed or exempt.

FDA - Precursor Chemical

None of the ingredients are listed or exempt.

SARA (311/312) Hazard Categories

None of the ingredients are listed or exempt.

OSHA Highly Hazardous Chemicals

None of the ingredients are listed or exempt.

US State Regulations

California Proposition 65 Carcinogens and Reproductive Toxins

None of the ingredients are listed or exempt.

California Air Toxics "Hot Spots" (A-I)

The following ingredients are listed or exempt:

zinc oxide

California Air Toxics "Hot Spots" (A-II)

None of the ingredients are listed or exempt.

California Directors List of Hazardous Substances

The following ingredients are listed or exempt:

zinc oxide

Massachusetts "Right To Know" List

The following ingredients are listed or exempt:

zinc oxide

Rhode Island "Right To Know" List

The following ingredients are listed or exempt:

zinc oxide

Minnesota "Right To Know" List

The following ingredients are listed or exempt:

zinc oxide

New Jersey "Right To Know" List

The following ingredients are listed or exempt:

zinc oxide

No. 630-AA**Pennsylvania "Right To Know" List**

The following ingredients are listed or exempt:

zinc oxide

Inventories**US - TSCA**

All the ingredients are listed or exempt.

US - TSCA 12(b) Export Notification

None of the ingredients are listed or exempt.

16. Other information**Abbreviations and acronyms used in the safety data sheet**

TDG: The transport of dangerous goods act

IATA: International air transport association.

ICAO: Technical instructions for the safe transport of dangerous goods by air.

IMDG: International maritime dangerous goods.

CAS: Chemical abstracts service.

ATE: Acute toxicity estimate.

LC₅₀: Lethal concentration to 50 % of a test population.

LD₅₀: Lethal dose to 50% of a test population (median lethal dose).

EC₅₀: 50% of maximal effective concentration.

PBT: Persistent, bioaccumulative and toxic substance.

vPvB: Very persistent and very bioaccumulative.

Classification abbreviations and acronyms

Aquatic Chronic = Hazardous to the aquatic environment (chronic)

Training advice

Read and follow manufacturer's recommendations. Only trained personnel should use this material.

Revision comments

Rereleased through new GHS Software.

Revision date

9/10/2020

Revision

3

Supersedes date

7/1/2020

SDS No.

4759

Hazard statements in full

H315 Causes skin irritation.

H319 Causes serious eye irritation.

H400 Very toxic to aquatic life.

H402 Harmful to aquatic life.

H410 Very toxic to aquatic life with long lasting effects.

H412 Harmful to aquatic life with long lasting effects.

End of SDS

This information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process. Such information is, to the best of the company's knowledge and belief, accurate and reliable as of the date indicated. However, no warranty, guarantee or representation is made to its accuracy, reliability or completeness. It is the user's responsibility to satisfy himself as to the suitability of such information for his own particular use.

SAFETY DATA SHEET

Professional Lysol Disinfectant Spray - All Scents



HEALTH • HYGIENE • HOME

1. Product and company identification

- Product name** : Professional Lysol Disinfectant Spray - All Scents
- Distributed by** : Reckitt Benckiser LLC.
Morris Corporate Center IV
399 Interpace Parkway (P.O. Box 225)
Parsippany, New Jersey 07054-0225
+1 973 404 2600
- Emergency telephone number (Medical)** : 1-800-338-6167
- Emergency telephone number (Transport)** : 1-800-424-9300 (U.S. & Canada) CHEMTREC
Outside U.S. and Canada (North America), call Chemtrec:703-527-3887
- Website:** : <http://www.rbnainfo.com>
- Synonym** : Lysol® Brand III Kills 99.9% of Viruses & Bacteria** Disinfectant Spray
•Cherry Blossom & Pomegranate Scent
•Citrus Meadows Scent/Hawaii Sunset Essence Scent
•Crisp Linen Scent/For Baby's room
•Crisp Mountain Air Scent/Cool Adirondack Air Scent
•Early Morning Breeze Scent
•For Baby's Room
•Jasmine & Rain Scent
•Lemon Breeze
•Spring Waterfall
•Summer Breeze
•Vanilla & Blossoms Scent
•Crisp Berry Scent
•Original Scent
•Garden Mist Scent
- Product use** : Disinfectant.

This SDS is designed for workplace employees, emergency personnel and for other conditions and situations where there is greater potential for large-scale or prolonged exposure, in accordance with the requirements of USDOL Occupational Safety and Health Administration.

This SDS is not applicable for consumer use of our products. For consumer use, all precautionary and first aid language is provided on the product label in accordance with the applicable government regulations, and shown in Section 15 of this SDS.

- SDS #** : D0224478 v10.0
- Formulation #:** : 1338-022 (0175933 v1.0) Original
1338-022 (8083521 v1.0) Original
1338-019 (0175919 v1.0) Country
1338-019 (8080039 v1.0) Campestre
1338-016 (0175935 v1.0) Summer Breeze
1338-018 (0175934 v1.0) Green Apple / Green Apple Breeze
1338-017 (0175927 v1.0) Kitchen (Citrus)
1338-021 (0175938 v1.0) Crisp Berry
1338-020 (0175932 v1.0) Garden Mist

D0224478 v10.0

1. Product and company identification

1338-020 (8089468 v1.0) Bebe
 1338-015 (0175918 v1.0) Spring Waterfall
 1338-015 (0258756 v1.0) Blr Swf Ext Prd
 1178-172 (0175917 v1.0) Crisp Linen
 1178-172 (8089462 v1.0) Frescura
 1178-172 (0242193 v1.0) Blr C/L Ext Prd
 1338-026 (0175929 v1.0) Early Morning Breeze
 1314-032 (0175926 v1.0) Citrus Meadows
 1544-074 (0175943 v2.0) Vanilla & Blossoms
 1314-038 (0175920 v1.0) Jasmine & Rain / Lavender
 e0002-161 (8159483 v1.0) Pomegranate Crush
 1784-045A (0346500 v1.0) Crisp Mountain Air
 1325-133 (0222651 v1.0) Amphyl
 1338-023 (0175940 v1.0) Fresh / Oxygen

EPA ID No. : 777-99
UPC Code / Sizes : Sizes: 6 oz., 12 oz., 12.5 oz. and 19 oz. (Tin plate steel cans).

2. Hazards identification

Classification of the substance or mixture : FLAMMABLE AEROSOLS - Category 2
 GASES UNDER PRESSURE - Compressed gas
 Percentage of the mixture consisting of ingredient(s) of unknown toxicity: 2.4%

GHS label elements

Hazard pictograms :



Signal word : Warning
Hazard statements : Flammable aerosol.
 Contains gas under pressure; may explode if heated.

Precautionary statements

General : Keep out of reach of children. If medical advice is needed, have product container or label at hand.
Prevention : Wear eye or face protection. Keep away from heat, sparks, open flames and hot surfaces. - No smoking. Pressurized container: may burst if heated. Do not pierce or burn, even after use. Do not spray on an open flame or other ignition source. Wash hands thoroughly after handling.
Response : Not applicable.
Storage : Protect from sunlight. Do not expose to temperatures exceeding 50 °C/122 °F. Store in a well-ventilated place.
Disposal : Not applicable.
Supplemental label elements : None known.
Hazards not otherwise classified : None known.

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3. Composition/information on ingredients

Substance/mixture : Mixture

Ingredient name	%	CAS number
Ethyl alcohol	30 - 60	64-17-5
butane	1-5	106-97-8
propane	<2.5	74-98-6

Any concentration shown as a range is to protect confidentiality or is due to batch variation.

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment and hence require reporting in this section.

4. First aid measures

Description of necessary first aid measures

- Eye contact** : Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for at least 10 minutes. Get medical attention if irritation occurs.
- Inhalation** : Remove victim to fresh air and keep at rest in a position comfortable for breathing. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Get medical attention if adverse health effects persist or are severe. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.
- Skin contact** : Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur. Wash clothing before reuse. Clean shoes thoroughly before reuse.
- Ingestion** : Wash out mouth with water. Remove dentures if any. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Stop if the exposed person feels sick as vomiting may be dangerous. Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Get medical attention if adverse health effects persist or are severe. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.

Most important symptoms/effects, acute and delayed

Potential acute health effects

- Eye contact** : May cause eye irritation upon direct contact with eyes.
- Inhalation** : No known significant effects or critical hazards.
- Skin contact** : No known significant effects or critical hazards.
- Ingestion** : No known significant effects or critical hazards.

Over-exposure signs/symptoms

- Eye contact** : Adverse symptoms may include the following:
irritation
redness
- Inhalation** : Adverse symptoms may include the following:
respiratory tract irritation
coughing
- Skin contact** : No specific data.
- Ingestion** : No specific data.

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4. First aid measures

Indication of immediate medical attention and special treatment needed, if necessary

- Notes to physician** : Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
- Specific treatments** : No specific treatment.
- Protection of first-aiders** : No action shall be taken involving any personal risk or without suitable training. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation.

See toxicological information (Section 11)

5. Fire-fighting measures

Extinguishing media

- Suitable extinguishing media** : Use an extinguishing agent suitable for the surrounding fire.
- Unsuitable extinguishing media** : None known.

Specific hazards arising from the chemical : Flammable aerosol. In a fire or if heated, a pressure increase will occur and the container may burst, with the risk of a subsequent explosion. Gas may accumulate in low or confined areas or travel a considerable distance to a source of ignition and flash back, causing fire or explosion. Bursting aerosol containers may be propelled from a fire at high speed. Runoff to sewer may create fire or explosion hazard.

Hazardous thermal decomposition products : Decomposition products may include the following materials:
carbon dioxide
carbon monoxide

Special protective actions for fire-fighters : Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training. Move containers from fire area if this can be done without risk. Use water spray to keep fire-exposed containers cool.

Special protective equipment for fire-fighters : Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

- For non-emergency personnel** : No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. In the case of aerosols being ruptured, care should be taken due to the rapid escape of the pressurized contents and propellant. If a large number of containers are ruptured, treat as a bulk material spillage according to the instructions in the clean-up section. Do not touch or walk through spilled material. Shut off all ignition sources. No flares, smoking or flames in hazard area. Avoid breathing vapor or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.
- For emergency responders** : If specialized clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".

Environmental precautions : Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).

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6. Accidental release measures

Methods and materials for containment and cleaning up

- Small spill** : Stop leak if without risk. Move containers from spill area. Use spark-proof tools and explosion-proof equipment. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.
- Large spill** : Stop leak if without risk. Move containers from spill area. Use spark-proof tools and explosion-proof equipment. Approach release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Wash spillages into an effluent treatment plant or proceed as follows. Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations (see Section 13). Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spilled product. Note: see Section 1 for emergency contact information and Section 13 for waste disposal.

7. Handling and storage

Precautions for safe handling

- Protective measures** : Put on appropriate personal protective equipment (see Section 8). Pressurized container: protect from sunlight and do not expose to temperatures exceeding 50°C. Do not pierce or burn, even after use. Do not ingest. Avoid contact with eyes, skin and clothing. Avoid breathing gas. Avoid breathing vapor or mist. Use only with adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Store and use away from heat, sparks, open flame or any other ignition source. Use explosion-proof electrical (ventilating, lighting and material handling) equipment. Use only non-sparking tools. Empty containers retain product residue and can be hazardous.

- Conditions for safe storage, including any incompatibilities** : Do not store above the following temperature: 50°C (122°F). Store in accordance with local regulations. Store away from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Protect from sunlight. Eliminate all ignition sources. Use appropriate containment to avoid environmental contamination.

8. Exposure controls/personal protection

Control

Occupational exposure limits

Ingredient name	Exposure limits
Ethyl alcohol	ACGIH TLV (United States, 6/2013). STEL: 1000 ppm 15 minutes. OSHA PEL 1989 (United States, 3/1989). TWA: 1000 ppm 8 hours. TWA: 1900 mg/m ³ 8 hours. NIOSH REL (United States, 10/2013). TWA: 1000 ppm 10 hours. TWA: 1900 mg/m ³ 10 hours. OSHA PEL (United States, 2/2013). TWA: 1000 ppm 8 hours. TWA: 1900 mg/m ³ 8 hours.
butane	OSHA PEL 1989 (United States, 3/1989). TWA: 800 ppm 8 hours. TWA: 1900 mg/m ³ 8 hours. NIOSH REL (United States, 10/2013).

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8. Exposure controls/personal protection

<p>propane</p>	<p>TWA: 800 ppm 10 hours. TWA: 1900 mg/m³ 10 hours. ACGIH TLV (United States, 6/2013). STEL: 1000 ppm 15 minutes.</p> <p>OSHA PEL 1989 (United States, 3/1989). TWA: 1000 ppm 8 hours. TWA: 1800 mg/m³ 8 hours. NIOSH REL (United States, 10/2013). TWA: 1000 ppm 10 hours. TWA: 1800 mg/m³ 10 hours. OSHA PEL (United States, 2/2013). TWA: 1000 ppm 8 hours. TWA: 1800 mg/m³ 8 hours.</p>
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Appropriate engineering controls : Use only with adequate ventilation. If user operations generate dust, fumes, gas, vapor or mist, use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits. The engineering controls also need to keep gas, vapor or dust concentrations below any lower explosive limits. Use explosion-proof ventilation equipment.

Environmental exposure controls : Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

Individual protection measures

Hygiene measures : Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

Eye/face protection : Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: safety glasses with side-shields.

Skin protection

Hand protection : Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. Considering the parameters specified by the glove manufacturer, check during use that the gloves are still retaining their protective properties. It should be noted that the time to breakthrough for any glove material may be different for different glove manufacturers. In the case of mixtures, consisting of several substances, the protection time of the gloves cannot be accurately estimated.

Body protection : Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product. When there is a risk of ignition from static electricity, wear anti-static protective clothing. For the greatest protection from static discharges, clothing should include anti-static overalls, boots and gloves.

Other skin protection : Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

Respiratory protection : Based on the hazard and potential for exposure, select a respirator that meets the appropriate standard or certification. Respirators must be used according to a respiratory protection program to ensure proper fitting, training, and other important aspects of use.

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9. Physical and chemical properties

Appearance

Physical state	: Liquid. [Aerosol.]
Color	: Clear.
Odor	: Characteristic.
Odor threshold	: Not available.
pH	: 10.5 to 11.8 [Conc. (% w/w): 100%]
Melting point	: Not available.
Boiling point	: Not available.
Flash point	: Closed cup: 25.6°C (78.1°F)
Evaporation rate	: Not available.
Flammability (solid, gas)	: Not available.
Lower and upper explosive (flammable) limits	: Not available.
Vapor pressure	: Not available.
Vapor density	: Not available.
Relative density	: 0.8667 to 0.8967 g/cm ³ [20 to 25°C]
Solubility	: Easily soluble in the following materials: cold water and hot water.
Partition coefficient: n-octanol/water	: Not available.
Auto-ignition temperature	: Not available.
Decomposition temperature	: Not available.
Viscosity	: Not available.
Flow time (ISO 2431)	: Not available.
<u>Aerosol product</u>	
Type of aerosol	: Spray
Heat of combustion	: 17.99 kJ/g
Ignition distance	: <45.72 cm

10. Stability and reactivity

Reactivity	: No specific test data related to reactivity available for this product or its ingredients.
Chemical stability	: The product is stable.
Possibility of hazardous reactions	: Under normal conditions of storage and use, hazardous reactions will not occur.
Conditions to avoid	: Avoid all possible sources of ignition (spark or flame).
Incompatible materials	: No specific data.
Hazardous decomposition products	: Under normal conditions of storage and use, hazardous decomposition products should not be produced.

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11. Toxicological information

Information on toxicological effects

Acute toxicity

Product/ingredient name	Result	Species	Dose	Exposure
Ethyl alcohol	LC50 Inhalation Vapor LD50 Oral	Rat Rat	124700 mg/m ³ 7 g/kg	4 hours -
Lysol® Brand III Kills 99.9% of Viruses & Bacteria** Disinfectant Spray	LC50 Inhalation Vapor	Rat	>2.12 mg/l	4 hours Maximum attainable concentration

Conclusion/Summary : Not classified Harmful. * Information is based on toxicity test result of the concentrate of a similar product.

Irritation/Corrosion

Product/ingredient name	Result	Species	Score	Exposure	Observation
Ethyl alcohol	Eyes - Moderate irritant	Rabbit	-	0.066666667 minutes	-
	Eyes - Mild irritant	Rabbit	-	100 milligrams	-
	Eyes - Moderate irritant	Rabbit	-	24 hours 500 milligrams	-
	Eyes - Severe irritant	Rabbit	-	100 microliters	-
	Skin - Mild irritant	Rabbit	-	500 milligrams	-
	Skin - Moderate irritant	Rabbit	-	400 milligrams	-
Lysol® Brand III Kills 99.9% of Viruses & Bacteria** Disinfectant Spray	Eyes - Cornea opacity	Rabbit	<1	24 hours 20 milligrams	-
	Skin - Primary dermal irritation index (PDII)	Rabbit	0.3	72 hours	4 days
				4 hours	72 hours

Conclusion/Summary

Skin : Slightly irritating to the skin. *Information is based on toxicity test result of the concentrate of a similar product.

Eyes : Moderately irritating to eyes. *Information is based on toxicity test result of the concentrate of a similar product.

Respiratory : Based on available data, the classification criteria are not met.

Sensitization

Not available.

Mutagenicity

Not available.

Carcinogenicity

Not available.

Classification

Product/ingredient name	OSHA	IARC	NTP
Ethyl alcohol	-	1	-

D0224478 v10.0

11. Toxicological information

Reproductive toxicity

Not available.

Teratogenicity

Not available.

Specific target organ toxicity (single exposure)

Not available.

Specific target organ toxicity (repeated exposure)

Not available.

Aspiration hazard

Not available.

Information on the likely routes of exposure : Not available.

Potential acute health effects

Eye contact : May cause eye irritation upon direct contact with eyes.

Inhalation : No known significant effects or critical hazards.

Skin contact : No known significant effects or critical hazards.

Ingestion : No known significant effects or critical hazards.

Symptoms related to the physical, chemical and toxicological characteristics

Eye contact : Adverse symptoms may include the following:
irritation
redness

Inhalation : Adverse symptoms may include the following:
respiratory tract irritation
coughing

Skin contact : No specific data.

Ingestion : No specific data.

Delayed and immediate effects and also chronic effects from short and long term exposure

Short term exposure

Potential immediate effects : Not available.

Potential delayed effects : Not available.

Long term exposure

Potential immediate effects : Not available.

Potential delayed effects : Not available.

Potential chronic health effects

Not available.

General : No known significant effects or critical hazards.

Carcinogenicity : No known significant effects or critical hazards.

Mutagenicity : No known significant effects or critical hazards.

Teratogenicity : No known significant effects or critical hazards.

D0224478 v10.0

11. Toxicological information

Developmental effects : No known significant effects or critical hazards.

Fertility effects : No known significant effects or critical hazards.

Numerical measures of toxicity

Acute toxicity estimates

Not available.

12. Ecological information

Toxicity

Product/ingredient name	Result	Species	Exposure
Ethyl alcohol	Acute EC50 17.921 mg/l Marine water	Algae - Ulva pertusa	96 hours
	Acute EC50 2000 µg/l Fresh water	Daphnia - Daphnia magna	48 hours
	Acute LC50 25500 µg/l Marine water	Crustaceans - Artemia franciscana - Larvae	48 hours
	Acute LC50 42000 µg/l Fresh water	Fish - Oncorhynchus mykiss	4 days
	Chronic NOEC 4.995 mg/l Marine water	Algae - Ulva pertusa	96 hours
	Chronic NOEC 0.375 ul/L Fresh water	Fish - Gambusia holbrooki - Larvae	12 weeks

Persistence and degradability

Not available.

Bioaccumulative potential

Product/ingredient name	LogP _{ow}	BCF	Potential
Ethyl alcohol	-0.35	-	low
butane	2.89	-	low
propane	1.09	-	low

Mobility in soil

Soil/water partition coefficient (K_{oc}) : Not available.






Other adverse effects : No known significant effects or critical hazards.

13. Disposal considerations

Disposal methods : The generation of waste should be avoided or minimized wherever possible. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. This material and its container must be disposed of in a safe way. Empty containers or liners may retain some product residues. Do not puncture or incinerate container.

D0224478 v10.0

14. Transport information

Regulatory information	UN number	Proper shipping name	Classes	PG*	Label	Additional information
DOT Classification	UN1950	Aerosols, flammable	2.1	-		Limited quantity
TDG Classification	UN1950	Aerosols, flammable	2.1	-		Limited quantity
Mexico Classification	UN1950	Aerosols, flammable	2.1	-		Limited quantity
IMDG Class	UN1950	Aerosols, flammable	2.1	-		Limited quantity
IATA-DGR Class	UN1950	Aerosols, flammable	2.1	-		See DG List

Special precautions for user : **Transport within user's premises:** always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage.

PG* : Packing group

15. Regulatory information

U.S. Federal regulations : **TSCA 8(a) PAIR:** 2-methylpropan-2-ol
TSCA 8(a) CDR Exempt/Partial exemption: Not determined
United States inventory (TSCA 8b): Not determined.
Clean Water Act (CWA) 311: ammonia
Clean Air Act (CAA) 112 regulated flammable substances: butane; propane

Clean Air Act Section 112 (b) Hazardous Air Pollutants (HAPs) : Not listed

Clean Air Act Section 602 Class I Substances : Not listed

Clean Air Act Section 602 Class II Substances : Not listed

DEA List I Chemicals (Precursor Chemicals) : Not listed

DEA List II Chemicals (Essential Chemicals) : Not listed

SARA 302/304

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15. Regulatory information

Composition/information on ingredients

No products were found.

SARA 304 RQ : Not applicable.

SARA 311/312

Classification : Fire hazard
Sudden release of pressure

Composition/information on ingredients

Name	%	Fire hazard	Sudden release of pressure	Reactive	Immediate (acute) health hazard	Delayed (chronic) health hazard
Ethyl alcohol	30 - 60	Yes.	No.	No.	Yes.	No.
butane	5 - 10	Yes.	Yes.	No.	No.	No.
propane	1 - 2.5	Yes.	Yes.	No.	No.	No.

State regulations

Massachusetts : The following components are listed: ETHYL ALCOHOL; BUTANE; PROPANE

New York : None of the components are listed.

New Jersey : The following components are listed: ETHYL ALCOHOL; ALCOHOL; BUTANE; PROPANE

Pennsylvania : The following components are listed: DENATURED ALCOHOL; BUTANE; PROPANE

Canada

WHMIS (Canada) : Class B-2: Flammable liquid
Class B-5: Flammable aerosol.

Canadian lists

Canadian NPRI : The following components are listed: Ethanol; Butane (all isomers); Propane

CEPA Toxic substances : None of the components are listed.

Canada inventory : Not determined.

Label elements

Signal word: : CAUTION

Hazard statements : Causes moderate eye irritation

Precautionary measures : Do not get in eyes, on skin, or on clothing. Wash with soap and water.
Keep out of the reach of children.
CONTENTS UNDER PRESSURE. Do not puncture or incinerate container. Do not expose to heat or store at temperatures above 120 °F. Keep away from heat, sparks, open flames and hot surfaces. - No smoking.

Hazard statements :



Flammable

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16. Other information

Hazardous Material Information System (U.S.A.) :

Health	*	1
Flammability		3
Physical hazards		0
Personal protection		B

Caution: HMIS® ratings are based on a 0-4 rating scale, with 0 representing minimal hazards or risks, and 4 representing significant hazards or risks. Although HMIS® ratings are not required on MSDSs under 29 CFR 1910.1200, the preparer may choose to provide them. HMIS® ratings are to be used with a fully implemented HMIS® program. HMIS® is a registered mark of the National Paint & Coatings Association (NPCA). HMIS® materials may be purchased exclusively from J. J. Keller (800) 327-6868.

The customer is responsible for determining the PPE code for this material.

National Fire Protection Association (U.S.A.) :



NFPA (30B) aerosol Flammability Level 1

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Copyright ©2001, National Fire Protection Association, Quincy, MA 02269. This warning system is intended to be interpreted and applied only by properly trained individuals to identify fire, health and reactivity hazards of chemicals. The user is referred to certain limited number of chemicals with recommended classifications in NFPA 49 and NFPA 325, which would be used as a guideline only. Whether the chemicals are classified by NFPA or not, anyone using the 704 systems to classify chemicals does so at their own risk.

Key to abbreviations :

- ATE = Acute Toxicity Estimate
- BCF = Bioconcentration Factor
- GHS = Globally Harmonized System of Classification and Labelling of Chemicals
- IATA = International Air Transport Association
- IBC = Intermediate Bulk Container
- IMDG = International Maritime Dangerous Goods
- LogPow = logarithm of the octanol/water partition coefficient
- MARPOL = International Convention for the Prevention of Pollution From Ships, 1973 as modified by the Protocol of 1978. ("Marpol" = marine pollution)
- UN = United Nations

Date of issue : 05/01/2017

Date of previous issue : 26/06/2015.

Version : 10

Prepared by : Reckitt Benckiser LLC.
Product Safety Department
1 Philips Parkway
Montvale, New Jersey 07646-1810 USA.
FAX: 201-476-7770

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16. Other information

Revision comments : Addition of the compressed gas pictogram on section 2 and section 1 for Parsippany address

✔ Indicates information that has changed from previously issued version.

Notice to reader

To the best of our knowledge, the information contained herein is accurate. However, neither the above-named supplier, nor any of its subsidiaries, assumes any liability whatsoever for the accuracy or completeness of the information contained herein.

Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.



RB is a member of the CSPA Product Care Product Stewardship Program.

VALCO CINCINNATI CONSUMER PRODUCTS INC.
SAFETY DATA SHEET
MATERIAL NAME: METAL POLISH PART NUMBERS 710XX610, 710XX611, 710XX640
PART NUMBERS (KITS): 710XX376, 710XX419, 710XX608
PART NUMBERS (DISPLAYS): 710XX422, 710XX423
EMERGENCY TELEPHONE NO.: CALL INFOTRAC AT 1-800-535-5053
PRODUCT INFORMATION NO.: (513) 874-6550
DATE ISSUED: OCTOBER 2015

SECTION I – GENERAL INFORMATION

MANUFACTURER'S NAME: VALCO CINCINNATI, INCORPORATED
ADDRESS: 411 CIRCLE FREEWAY DRIVE, CINCINNATI, OHIO 45246
TRADE NAMES & SYNONYMS: METAL POLISH
RECOMMENDED USE: Metal Polish
SHELF LIFE: 3 YEARS

SECTION II – HAZARDS IDENTIFICATION

APPEARANCE Viscous opaque off white liquid.

PHYSICAL STATE: Liquid.

ODOR: Solvent odor.

CLASSIFICATION

Germ cell mutagenicity	Category 1B
Reproductive toxicity	Category 2
Specific target organ toxicity (repeated exposure)	Category 1
Aspiration toxicity	Category 1
Flammable Liquids	Category 4

HAZARDS NOT OTHERWISE CLASSIFIED (HNOC)

Causes mild skin irritation

SIGNAL WORD

Danger

HAZARD STATEMENTS

May cause genetic defects
Suspected of damaging fertility or the unborn child
Causes damage to organs through prolonged or repeated exposure
May be fatal if swallowed and enters airways
Combustible liquid



PRECAUTIONARY STATEMENTS – PREVENTION

Obtain special instructions before use
Do not handle until all safety precautions have been read and understood
Use personal protective equipment as required
Do not breathe dust/fume/gas/mist/vapors/spray
Wash face, hands and any exposed skin thoroughly after handling
Do not eat, drink or smoke when using this product
Keep away from heat/sparks/open flames/ hot surfaced – NO SMOKING

PRECAUTIONARY STATEMENTS – RESPONSE

If exposed or concerned: Get medical advice/attention
IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician
Do not induce vomiting
IN CASE OF FIRE: Use CO2, dry chemical or foam for extinction

PRECAUTIONARY STATEMENTS – DISPOSAL

Dispose of contents/container to an approved waste disposal plant

OTHER HAZARDS

Toxic to aquatic life with long lasting effects

VALCO CINCINNATI CONSUMER PRODUCTS INC.

SAFETY DATA SHEET

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SECTION III – COMPOSITION/INFORMATION ON INGREDIENTS

CHEMICAL NAME	CAS NO	WEIGHT %
Mineral Spirits (Rule 66)	8052-41-3	20-25
Toulene	108-88-3	1-5

If Chemical Name/CAS No is “proprietary” and/or weight % is listed as a range, the specific chemical identity and/or percentage of composition has been withheld as a trade secret.

SECTION IV – FIRST AID MEASURES

FIRST AID MEASURES

GENERAL ADVICE	Provide this SDS to medical personnel for treatment.
EYE CONTACT	Rinse thoroughly with plenty of water for at least 15 minutes, lifting lower and upper eyelids. Consult a physician.
SKIN CONTACT	Wash off immediately with plenty of water for at least 15 minutes.
INHALATION	Remove to fresh air.
INGESTION	IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician. Do not induce vomiting.

MOST IMPORTANT SYMPTOMS AND EFFECTS

SYMPTOMS	Causes damage to organs through prolonged or repeated exposure. May be fatal if swallowed and enters airways. Causes mild skin irritation.
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INDICATION OF ANY IMMEDIATE MEDICAL ATTENTION AND SPECIAL TREATMENT NEEDED

NOTE TO PHYSICIAN	Treat symptomatically.
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SECTION V – FIRE FIGHTING MEASURES

SUITABLE EXTINGUISHING MEDIA

Carbon dioxide (CO2). Dry chemical. Foam.

UNSUITABLE EXTINGUISHING MEDIA

Direct water stream may spread fire.

SPECIFIC HAZARDS ARISING FROM THE CHEMICAL

Combustible liquid. Violent steam generation or eruption may occur upon application of direct water stream. Spills of these organic liquids on hot fibrous insulations may lead to lowering of the auto ignition temperatures possibly resulting in spontaneous combustion.

PROTECTIVE EQUIPMENT AND PRECAUTIONS FOR FIREFIGHTERS

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

SECTION VI – ACCIDENTAL RELEASE MEASURES

PERSONAL PRECAUTIONS, PROTECTIVE EQUIPMENT AND EMERGENCY PROCEDURES

PERSONAL PRECAUTIONS	Use personal protective equipment as required. Remove all sources of ignition.
ENVIRONMENTAL PRECAUTIONS	See Section XII for additional Ecological Information.

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SECTION VI – ACCIDENTAL RELEASE MEASURES (CONT)

METHODS AND MATERIAL FOR CONTAINMENT AND CLEANING UP

CONTAINMENT METHODS Prevent further leakage or spillage if safe to do so.

CLEAN UP METHODS Contain and collect with an inert absorbent and place into an appropriate container for disposal. Dispose of in accordance with federal, state and local regulations.

SECTION VII – HANDLING AND STORAGE

PRECAUTIONS FOR SAFE HANDLING

ADVICE ON SAFE HANDLING Handle in accordance with good industrial hygiene and safety practice. Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Use personal protective equipment as required. Do not breathe dust/fume/gas/mist/vapors/spray. Wash face, hands and any exposed skin thoroughly after handling. Do not eat, drink or smoke when using this product. Keep away from heat/sparks/open flames/hot surfaces.
NO SMOKING.

CONDITIONS FOR SAFE STORAGE, INCLUDING ANY INCOMPATIBILITIES

STORAGE Keep container tightly closed and store in a cool, dry and well-ventilated place. Store locked up.

INCOMPATIBLE MATERIALS None known based on information supplied.

SECTION VIII – EXPOSURE CONTROLS/PERSONAL PROTECTION

EXPOSURE GUIDELINES

CHEMICAL NAME	ACGIH TLV	OSHA PEL	NIOSH IDLH
Mineral Spirits (Rule 66) 8052-41-3	TWA: 100 ppm	TWA: 500 ppm TWA: 2900 mg/m ³ (vacated) TWA: 100 ppm (vacated) TWA: 525 mg/m ³	IDLH: 20000 mg/m ³ Ceiling: 1800 mg/m ³ 15 min TWA: 350 mg/m ³
Touleve 108-88-3	TWA: 20 ppm	TWA: 200 ppm (vacated) TWA: 100 ppm (vacated) TWA: 375 mg/m ³ (vacated) STEL: 150 ppm (vacated) STEL: 560 mg/m ³ Ceiling: 300 ppm	IDLH: 500 ppm TWA: 100 ppm TWA: 375 mg/m ³ STEL: 150 ppm STEL: 560 mg/m ³

APPROPRIATE ENGINEERING CONTROLS

ENGINEERING CONTROLS Apply technical measures to comply with the occupational exposure limits. Showers. Eyewash Stations. Ventilation Systems.

VALCO CINCINNATI CONSUMER PRODUCTS INC.

SAFETY DATA SHEET

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SECTION VIII – EXPOSURE CONTROLS/PERSONAL PROTECTION (CONT)

INDIVIDUAL PROTECTION MEASURES, SUCH AS PERSONAL PROTECTIVE EQUIPMENT

EYE/FACE PROTECTION	Protective glasses or face shield is recommended.
SKIN/BODY PROTECTION	No protective equipment is needed under normal use conditions.
RESPIRATORY PROTECTION	No protective equipment is needed under normal use conditions.
GENERAL HYGIENE	Handle in accordance with good industrial hygiene and safety practice.

SECTION IX – PHYSICAL AND CHEMICAL PROPERTIES

INFORMATION ON BASIC PHYSICAL AND CHEMICAL PROPERTIES

PHYSICAL STATE	Liquid
APPEARANCE	Viscous Opaque off white liquid
COLOR	Off white
ODOR	Solvent odor
ODOR THRESHOLD	Not determined

PROPERTY	VALUES	REMARKS/METHOD
pH	Not determined	
Melting Point/Freezing Point	Not determined	
Boiling Point/Boiling Range	160°C / 320°F	
Flash Point	61.1°C / 142°F	
Evaporation Rate	Not determined	
Flammability (solid, gas)	Liquid – not applicable	
Upper Flammability Limits	Not determined	
Lower Flammability Limits	Not determined	
Vapor Pressure	2.0 mmHg	
Vapor Density	4.9	(Air=1)
Specific Gravity	1.09	
Water Solubility	Nil	
Solubility in other solvents	Not determined	
Partition Coefficient	Not determined	
Auto-ignition Temperature	Not determined	
Decomposition Temperature	Not determined	
Kinematic Viscosity	Not determined	
Dynamic Viscosity	Not determined	
Explosive Properties	Not determined	
Oxidizing Properties	Not determined	
VOC Content	Not determined	

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SECTION X – STABILITY AND REACTIVITY

REACTIVITY

Not reactive under normal conditions.

CHEMICAL STABILITY

Stable under recommended storage conditions.

POSSIBILITY OF HAZARDOUS REACTIONS

None under normal processing.

CONDITIONS TO AVOID

Keep out of reach of children.

INCOMPATIBLE MATERIALS

None known based on information supplied.

HAZARDOUS DECOMPOSITION PRODUCTS

None known based on information supplied.

SECTION XI – TOXICOLOGICAL INFORMATION

LIKELY ROUTES OF EXPOSURE

EYE CONTACT Avoid contact with eyes.
SKIN CONTACT Causes mild skin irritation.
INHALATION Do not inhale.
INGESTION Do not ingest.

COMPONENT INFORMATION

CHEMICAL NAME	ORAL LD50	DERMAL LD50	INHALATION LC50
Toluene 108-88-3	= 2600 mg/kg (Rat)	= 12000 mg/kg (Rabbit)	= 12.5 mg/L (Rat) 4 h

INFORMATION ON PHYSICAL, CHEMICAL AND TOXICOLOGICAL EFFECTS

SYMPTOMS Please see Section IV of this SDS for symptoms.

DELAYED/IMMEDIATE EFFECTS – CHRONIC EFFECTS FROM SHORT AND LONG TERM EXPOSURE

GERM CELL MUTAGENICITY May cause genetic defects
CARCINOGENICITY Group 3 IARC components are “not classifiable as human carcinogens”.

VALCO CINCINNATI CONSUMER PRODUCTS INC.

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SECTION XI – TOXICOLOGICAL INFORMATION (CONT)

CHEMICAL NAME	ACGIH	IARC	NTP	OSHA
Toluene 108-88-3		Group 3		

Legend

IARC (International Agency for Research on Cancer)

Group 3 IARC components are "not classifiable as human carcinogens"

Reproductive toxicity Suspected of damaging fertility or the unborn child.

STOT - repeated exposure Causes damage to organs through prolonged or repeated exposure.

Aspiration hazard May be fatal if swallowed and enters airways.

Numerical measures of toxicity

Not determined

SECTION XII – ECOLOGICAL INFORMATION

ECOTOXICITY

Toxic to aquatic life with long lasting effects.

COMPONENT INFORMATION

CHEMICAL NAME	ALGAE AQUATIC PLANTS	FISH	TOXICITY TO MICROORGANISMS	CRUSTACEA
Toluene 108-88-3	433:96 h Pseudokirchneriella Subcapitata mg/L EC50 12:5:72 h Pseudokirchneriella Subcapitata mg/L EC50 static	15.22-19.05 96 h Pimephales promelas mg/L LC50 flow-through 12:6 96 h Pimephales promelas mg/L LC50 static 11.0-15.0 96 h Lepomis macrochirus mg/L LC50 static 5.89-7.81 96 h Oncorhynchus mykiss mg/L LC50 flow-through: 96 h Oryzias latipes mg/L LC50 static 28.2:96 h Poecilia reticulate mg/L LC50 semi- static 50.87-70.34: 96 h Poecilia reticulate mg/L LC50 static 14.1 – 17.16: 96 h Oncorhynchus mykiss mg/L LC50 static 5.8: 96 h Oncorhynchus mykiss mg/L LC50 semi-static	EC50 = 19.7 mg/L 30 min	5.46 – 9.83: 48 h Daphnia magna mg/L EC50 Static 11.5: 48 h Daphnia magna mg/L EC50

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SECTION XII – ECOLOGICAL INFORMATION (CONT)

PERSISTENCE/DEGRADABILITY

Not determined.

BIOACCUMULATION

Not determined.

MOBILITY

CHEMICAL NAME	PARTITION COEFFICIENT
Toluene 108-88-3	2.65

OTHER ADVERSE EFFECTS

Not determined.

SECTION XIII - DISPOSAL

WASTE TREATMENT METHODS

DISPOSAL OF WASTES Disposal should be in accordance with applicable regional, national and local laws and regulations.

CONTAMINATED PACKAGING Disposal should be in accordance with applicable regional, national and local laws and regulations.

US EPA WASTE NUMBER

CHEMICAL NAME	RCRA	RCRA-BASIS FOR LISTING	RCRA-D SERIES WASTES	RCRA-USERIES WASTES
Toluene 108-88-3	U220	Included in waste streams: F005, F025, F039, K015, K036, K037, K149, K151		U220

CHEMICAL NAME	RCRA-HALOGENATED ORGANIC COMPOUNDS	RCRA-P SERIES WASTES	RCRA-F SERIES WASTES	RCRA-KSERIES WASTES
Toluene 108-88-3			Toxic waste Waste number F025 Condensed light ends, spent Filters and filter aids and spent desiccant wastes from the production of certain chlorinated aliphatic hydrocarbons by free radical catalyzed processes. These chlorinated aliphatic hydrocarbons are those having carbon chain lengths ranging from one to and including five, with varying amounts and positions of chlorine substitution	

VALCO CINCINNATI CONSUMER PRODUCTS INC.

SAFETY DATA SHEET

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SECTION XIII – DISPOSAL (CONT)

CALIFORNIA HAZARDOUS WASTE STATUS

CHEMICAL NAME	CALIFORNIA HAZARDOUS WASTE STATUS
Toluene 108-88-3	Toxic Ignitable

SECTION XIV - TRANSPORTATION

NOTE According to 49 CFR §173.150(f)(1), this material should be classified as “NA1993, Combustible Liquid, N.O.S.” if it is shipped in bulk.

DOT Not regulated (If shipped in NON BULK packaging by ground transport)

IATA Not regulated

IMDG This material may meet the definition of a marine pollutant
MARINE POLLUTANT

SECTION XV – REGULATORY INFORMATION

INTERNATIONAL INVENTORIES

CHEMICAL NAME	TSCA	DSL	NDSL	EINECS	ELINCS	ENCS	IECSC	KECL	PICCS	AICS
Mineral Spirits (Rule 66)	Present	X		Present		Present	X	Present	X	X
Toluene	Present	X		Present		Present	X	Present	X	X

Legend:

TSCA - United States Toxic Substances Control Act Section 8(b) Inventory

DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List

EINECS/ELINCS - European Inventory of Existing Chemical Substances/European List of Notified Chemical Substances

ENCS - Japan Existing and New Chemical Substances

IECSC - China Inventory of Existing Chemical Substances

KECL - Korean Existing and Evaluated Chemical Substances

PICCS - Philippines Inventory of Chemicals and Chemical Substances

AICS - Australian Inventory of Chemical Substances

US FEDERAL REGULATIONS

CERCLA

This material, as supplied, contains one or more substances regulated as a hazardous substance under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302)

CHEMICAL NAME	HAZARDOUS SUBSTANCES RQs	CERCLA/SARA RQ	REPORTABLE QUANTITY (RQ)
Toluene 108-88-3	1 lb		RQ 1 lb final RQ RQ 0.454 kg final RQ

SARA 313

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product contains a chemical or chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372.

CHEMICAL NAME	CAS NO	WEIGHT %	SARA 313-THRESHOLD VALUES %
Toluene 108-88-3	108-88-3	2.3	1.0

VALCO CINCINNATI CONSUMER PRODUCTS INC.**SAFETY DATA SHEET****MATERIAL NAME:** METAL POLISH PART NUMBERS 710XX610, 710XX611, 710XX640**PART NUMBERS (KITS):** 710XX376, 710XX419, 710XX608**PART NUMBERS (DISPLAYS):** 710XX422, 710XX423**EMERGENCY TELEPHONE NO.:** CALL INFOTRAC AT 1-800-535-5053**PRODUCT INFORMATION NO.:** (513) 874-6550**DATE ISSUED:** OCTOBER 2015**SECTION XV – REGULATORY INFORMATION (CONT)****CWA (CLEAN WATER ACT)**

This product contains the following substances which are regulated pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42).

CHEMICAL NAME	CWA-REPORTABLE QUANTITIES	CWA-TOXIC POLLUTANTS	CWA-PRIORITY POLLUTANTS	CWA-HAZARDOUS SUBSTANCES
Toluene	1000 lb	X	X	X

US STATE REGULATIONS**CALIFORNIA PROPOSITION 65**

This product contains the following Proposition 65 chemicals.

CHEMICAL NAME	CALIFORNIA PROPOSITION 65
Toluene 108-88-3	Developmental Female Reproductive

US STATE RIGHT-TO-KNOW REGULATIONS

CHEMICAL NAME	NEW JERSEY	MASSACHUSETTS	PENNSYLVANIA
Mineral Spirits (Rule 66) 8052-41-3	X	X	X
Toluene 108-88-3	X	X	X

SECTION XVI – OTHER INFORMATION

<u>NFPA</u>	HEALTH HAZARDS 1	FLAMMABILITY 2	INSTABILITY 0	SPECIAL HAZARDS Not determined
<u>HMIS</u>	HEALTH HAZARDS Not determined	FLAMMABILITY Not determined	INSTABILITY Not determined	SPECIAL HAZARDS Not determined

TO THE BEST OF OUR KNOWLEDGE, THE INFORMATION CONTAINED HEREIN IS ACCURATE; OBTAINED FROM SOURCES BELIEVED BY VALCO CINCINNATI, INC. TO BE ACCURATE. SINCE THE CONDITIONS AND METHODS OF USE OF OUR PRODUCT ARE BEYOND OUR CONTROL, WE DISCLAIM ANY AND ALL LIABILITY ARISING OUT OF THE IMPROPER USE OF THIS PRODUCT OR THE INFORMATION PROVIDED HERE WITH.

Methane 0.0001% to 3.0% in Air

SDS Number: NLB 2120

Revision Date: 5/15/2018

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PRODUCT AND COMPANY IDENTIFICATION

Manufacturer

NorLab a division of Norco
898 W. Gowen Rd.
Boise, ID 83705

Contact: Quality Dept.
Phone: 208-336-1643
Fax: 208-433-6160
Web: www.norlab-gas.com

Product Name: Methane 0.0001% to 3.0% in Air
Revision Date: 5/15/2018
Version: 2
SDS Number: NLB 2120
Common Name: Methane in Air
CAS Number: Not Available - Gas Mixture
EPA Number: Not Available
RCRA Number: Not Applicable
Chemical Family: Gas Mixture
Chemical Formula: CH₄ in Air
Synonyms: Methane in Air, Calibration Gas
Product Use: Calibration of analytical instrumentation

For Transportation Emergency Contact CHEMTREC: 800-424-9300

Methane 0.0001% to 3.0% in Air

SDS Number: NLB 2120

Revision Date: 5/15/2018

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HAZARDS IDENTIFICATION

Classification of the Substance or Mixture

GHS Classification in Accordance with 29 CFR 1910 (OSHA HCS):

Physical, Gases Under Pressure, Compressed Gas

GHS Label Elements, Including Precautionary Statements

GHS Signal Word: **WARNING**

GHS Hazard Pictograms:



GHS Hazard Statements:

H280 - Contains gas under pressure; may explode if heated

CGA-HG24 - SUPPORTS COMBUSTION.

GHS Precautionary Statements:

P202 - Do not handle until all safety precautions have been read and understood.

P260 - Do not breathe gas.

P403 - Store and use in a well ventilated place.

P309 - IF exposed or if you feel unwell:

P340 - Remove person to fresh air and keep comfortable for breathing.

CGA-PG02 - Protect from sunlight when ambient temperature exceeds 52 °C (125 °F).

CGA-PG06 - Close valve after each use and when empty.

CGA-PG10 - Use only with equipment rated for cylinder pressure.

CGA-PG11 - Never put cylinders into unventilated areas of passenger vehicles.

CGA-PG20 - Use only equipment of compatible materials of construction.

CGA-PG05 - Use a back flow preventive device in the piping.

Hazards not Otherwise Classified (HNOC) or not Covered by GHS

Route of Entry: Skin; Eyes; Inhalation;

Target Organs: Respiratory system;

Inhalation: Gas mixture contains sufficient oxygen to support life. Inhalation of high methane concentrations may cause central nervous system depression with dizziness, disorientation, in-coordination, nausea, and narcosis. High concentrations may also cause cardiac sensitization resulting in irregular heartbeat and may make the individual more susceptible to cardiac effects of substances such as epinephrine and adrenaline.

Skin Contact: Contact with rapidly expanding gas near the point of release may cause frostbite with redness, skin color change to gray or white, and blistering.

Eye Contact: Contact with rapidly expanding gas near the point of release may cause frostbite.

Ingestion: Not anticipated. Product is a gas at normal conditions.

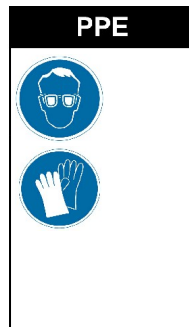
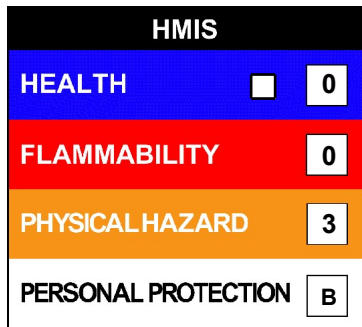
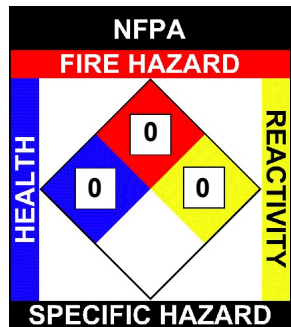
Methane 0.0001% to 3.0% in Air

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NFPA: Health = 0, Fire = 0, Reactivity = 0, Specific Hazard = n/a
 HMIS III: Health = 0, Fire = 0, Physical Hazard = 3
 HMIS PPE: B - Safety Glasses, Gloves



3 COMPOSITION/INFORMATION OF INGREDIENTS

Ingredients:

Cas#	%	Chemical Name
74-82-8	0.0001-3.0%	Methane
7782-44-7	20.9%	Oxygen
7727-37-9	76.1-79.0999%	Nitrogen

Air balance = 20.9% Oxygen in Nitrogen

4 FIRST AID MEASURES

Inhalation: PROMPT MEDICAL ATTENTION IS MANDATORY IN ALL CASES OF OVEREXPOSURE TO PRODUCT. RESCUE PERSONNEL SHOULD BE EQUIPED WITH SELF-CONTAINED BREATHING APPARATUS. Conscious persons should be assisted to an uncontaminated area and inhale fresh air. Quick removal from the contaminated area is most important. Unconscious persons should be moved to an uncontaminated area, given assisted (artificial) respiration and supplemental oxygen. Further treatment should be symptomatic and supportive.

Skin Contact: None required for gas. For frostbite, immerse skin in lukewarm water. DO NOT USE HOT WATER. Obtain medical attention.

Eye Contact: None Required for gas. If frostbite is suspected, flush eyes with cool water for 15 minutes and obtain immediate medical attention.

Ingestion: Not a direct hazard.

5 FIRE FIGHTING MEASURES

Flammability: Not Flammable
Flash Point: None
Flash Point Method: Not Applicable
Autoignition Temp: None
LEL: 5.0% (Methane)
UEL: 15.0% (Methane)

Fire and Explosion Hazards:
 Nonflammable. Cylinders may rupture violently or vent rapidly from pressure when involved in a fire situation.

Extinguishing Media:
 None required. Use as appropriate for surrounding materials

Fire Fighting Instructions:
 Use water spray to cool adjacent cylinders and areas. Firefighters should wear respiratory protection (SCBA) and full turnout or Bunker gear. Continue to cool fire-exposed cylinders until well after flames are extinguished.

Methane 0.0001% to 3.0% in Air

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ACCIDENTAL RELEASE MEASURES

Evacuate all personnel from affected area. Use appropriate protective equipment. If leak is in user's equipment, be certain to purge piping with inert gas prior to attempting repairs. If leak is in container or valve, contact the appropriate emergency telephone number listed in section 1, or call your closest Norco/NorLab location.

7

HANDLING AND STORAGE

Handling Precautions:

Use only in well-ventilated areas. Valve protection caps must remain in place unless the cylinder is secured with valve outlet piped to use point. Do not drag, slide or roll cylinders. Use a suitable hand truck for cylinder movement. Use a pressure regulator when connecting cylinder to lower pressure (<3000 PSIG) piping or systems. Do not heat cylinder by any means to increase the discharge rate of product from the cylinder. Use a check valve or trap in the discharge line to prevent hazardous backflow into the cylinder.

For additional recommendations, consult Compressed Gas Association Pamphlets P-1.

Never carry a compressed gas cylinder or a container of a gas in cryogenic liquid from in an enclosed space such as a car trunk, van or station wagon.

Storage Requirements:

Protect cylinders from physical damage. Store in cool, dry, well-ventilated area away from heavy traffic areas and emergency exits. Do not allow the temperature where cylinders are stored to exceed 125 degrees F (52 degrees C). Cylinders should be stored upright and firmly secured to prevent falling or being knocked over. Full and empty cylinders should be segregated. Use a "first in-first out" inventory system to prevent full cylinders from being stored for excessive periods of time.

Methane 0.0001% to 3.0% in Air

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EXPOSURE CONTROLS/PERSONAL PROTECTION

Engineering Controls: Local exhaust ventilation as necessary to limit exposure below the acceptable exposure limits.
Personal Protective Equipment: Methane cas#:(74-82-8) [0.0001-3.0%]
Oxygen cas#:(7782-44-7) [20.9%]
Nitrogen cas#:(7727-37-9) [76.1-79.0999%]

Personal protective equipment

Respiratory protection: Where risk assessment shows air-purifying respirators are appropriate use a full-face respirator with multi-purpose combination (US) or type AXBEK (EN 14387) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

Hand protection: Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching gloves outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands. Full contact Material: Fluorinated rubber Minimum layer thickness: 0.7 mm Break through time: 480 min Material tested: Vitoject (KCL 890 / Aldrich Z677698, Size M)

Splash protection: Material: Nitrile rubber Minimum layer thickness: 0.4 mm Break through time: 60 min Material tested: Camatril (KCL 730 / Aldrich Z677442, Size M) data source: KCL GmbH, D-36124 Eichenzell, phone +49 (0)6659 87300, e-mail sales@kcl.de, test method: EN374 If used in solution, or mixed with other substances, and under conditions which differ from EN 374, contact the supplier of the CE approved gloves. This recommendation is advisory only and must be evaluated by an Industrial Hygienist familiar with the specific situation of anticipated use by our customers. It should not be construed as offering an approval for any specific use scenario.

Eye protection: Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

Skin and body protection: impervious clothing, The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

Hygiene measures: General industrial hygiene practice.

Methane cas#:(74-82-8) [0.0001-3.0%]

Components with workplace control parameters

TWA 1,000 ppm USA. ACGIH Threshold Limit Values (TLV)
Central Nervous System impairment Cardiac sensitization

Oxygen cas#:(7782-44-7) [20.9%]

Nitrogen cas#:(7727-37-9) [76.1-79.0999%]

Methane 0.0001% to 3.0% in Air

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9 PHYSICAL AND CHEMICAL PROPERTIES

Appearance:	Colorless Gas	Odor:	Odorless
Physical State:	Gas	Molecular Formula:	CH ₄ in Air
Odor Threshold:	Not Available	Solubility:	Negligible
Spec Grav./Density:	Not Available	Percent Volatile:	100%
Boiling Point:	Not Determined	Freezing/Melting Pt.:	Not Determined
Flammability:	Not Flammable	Flash Point:	Not Determined
		UFL/LFL:	15.0% / 5.0% (Methane)

10 STABILITY AND REACTIVITY

Chemical Stability:	Stable
Conditions to Avoid:	None known
Materials to Avoid:	None
Hazardous Decomposition:	Combustion will produce carbon dioxide and, possibly toxic chemicals such as carbon monoxide.
Hazardous Polymerization:	Will not occur.

11 TOXICOLOGICAL INFORMATION

Methane cas#:(74-82-8) [0.0001-3.0%]

Information on toxicological effects

Acute toxicity:

Oral LD50 no data available

Inhalation LC50

Dermal LD50

Other information on acute toxicity

Skin corrosion/irritation: no data available

Serious eye damage/eye irritation: no data available

Respiratory or skin sensitization: no data available

Germ cell mutagenicity: no data available

Carcinogenicity:

IARC: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

ACGIH: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by ACGIH.

NTP: No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

OSHA: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.

Reproductive toxicity: no data available

Teratogenicity: no data available

Specific target organ toxicity - single exposure (Globally Harmonized System):no data available

Specific target organ toxicity - repeated exposure (Globally Harmonized System):no data available

Aspiration hazard: no data available

Potential health effects: Inhalation May be harmful if inhaled. May cause respiratory tract irritation. Ingestion May be harmful if swallowed.

Skin May be harmful if absorbed through skin. May cause skin irritation. Eyes May cause eye irritation.

Signs and Symptoms of Exposure: To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

Synergistic effects: no data available

Additional Information: RTECS: PA1490000

Oxygen cas#:(7782-44-7) [20.9%]

Information on toxicological effects

Acute toxicity:

Methane 0.0001% to 3.0% in Air

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Oral LD50 no data available

Inhalation LC50

Dermal LD50

Other information on acute toxicity

Skin corrosion/irritation: no data available

Serious eye damage/eye irritation: no data available

Respiratory or skin sensitization: no data available

Germ cell mutagenicity: no data available

Carcinogenicity:

IARC: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

ACGIH: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by ACGIH.

NTP: No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

OSHA: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.

Reproductive toxicity: no data available

Teratogenicity: no data available

Specific target organ toxicity - single exposure (Globally Harmonized System):no data available

Specific target organ toxicity - repeated exposure (Globally Harmonized System):no data available

Aspiration hazard: no data available

Potential health effects: Inhalation May be harmful if inhaled. May cause respiratory tract irritation. Ingestion May be harmful if swallowed.

Skin May be harmful if absorbed through skin. May cause skin irritation. Eyes May cause eye irritation.

Signs and Symptoms of Exposure: Nausea, Dizziness, Unconsciousness, May be harmful.

Synergistic effects: no data available

Additional Information:RTECS: RS2060000

Nitrogen cas#:(7727-37-9) [76.1-79.0999%]

Information on toxicological effects

Acute toxicity:

Oral LD50 no data available

Inhalation LC50

Dermal LD50

Other information on acute toxicity

Skin corrosion/irritation: no data available

Serious eye damage/eye irritation: no data available

Respiratory or skin sensitization: no data available

Germ cell mutagenicity: no data available

Carcinogenicity:

IARC: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

ACGIH: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by ACGIH.

NTP: No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

OSHA: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.

Reproductive toxicity: no data available

Teratogenicity: no data available

Specific target organ toxicity - single exposure (Globally Harmonized System):no data available

Specific target organ toxicity - repeated exposure (Globally Harmonized System):no data available

Aspiration hazard: no data available

Potential health effects: Inhalation May be harmful if inhaled. May cause respiratory tract irritation. Ingestion May be harmful if swallowed.

Skin May be harmful if absorbed through skin. May cause skin irritation. Eyes May cause eye irritation.

Signs and Symptoms of Exposure: May be harmful., Nausea, Headache, Vomiting

Synergistic effects: no data available

Additional Information:RTECS: QW9700000

Methane 0.0001% to 3.0% in Air

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ECOLOGICAL INFORMATION

Methane cas#:(74-82-8) [0.0001-3.0%]

Information on ecological effects

Toxicity: no data available

Persistence and degradability: no data available

Bioaccumulative potential: no data available

Mobility in soil: no data available

PBT and vPvB assessment: no data available

Other adverse effects: no data available

Oxygen cas#:(7782-44-7) [20.9%]

Information on ecological effects

Toxicity: no data available

Persistence and degradability: no data available

Bioaccumulative potential: no data available

Mobility in soil: no data available

PBT and vPvB assessment: no data available

Other adverse effects: no data available

Nitrogen cas#:(7727-37-9) [76.1-79.0999%]

Information on ecological effects

Toxicity: no data available

Persistence and degradability: no data available

Bioaccumulative potential: no data available

Mobility in soil: no data available

PBT and vPvB assessment: no data available

Other adverse effects: no data available

Methane 0.0001% to 3.0% in Air

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13 DISPOSAL CONSIDERATIONS

Dispose of in accordance with local regulations. Do not attempt to dispose of waste or unused quantities in returnable cylinders. Return in the shipping container, properly labeled, with any valve outlet plugs or caps secure and valve protection cap in place to NorLab for proper disposal. Non-refillable containers should be vented in a well-ventilated area then disposed of in compliance with local regulations, or returned to NorLab.

14 TRANSPORT INFORMATION

UN1956, Compressed gas, n.o.s., 2.2

Proper Shipping Name US:

UN 1956, Compressed Gas N.O.S., (Methane, Air), 2.2

Proper Shipping Name Canada:

UN1956, Compressed Gas, N.O.S., (Methane, Air), 2.2



15 REGULATORY INFORMATION

Component (CAS#) [%] - CODES

Methane (74-82-8) [0.0001-3.0%] MASS, NJHS, PA, TSCA, TXAIR

Oxygen (7782-44-7) [20.9%] MASS, PA, TSCA

Nitrogen (7727-37-9) [76.1-79.0999%] MASS, PA, TSCA

Regulatory CODE Descriptions

MASS = MA Massachusetts Hazardous Substances List

NJHS = NJ Right-to-Know Hazardous Substances

PA = PA Right-To-Know List of Hazardous Substances

TSCA = Toxic Substances Control Act

TXAIR = TX Air Contaminants with Health Effects Screening Level

16 OTHER INFORMATION

Disclaimer:

Although reasonable care has been taken in the preparation of this document, we extend no warranties and make no representations as to the accuracy or completeness of the information contained herein, and assume no responsibility regarding the suitability of this information for the user's intended purposes or for the consequences of its use. Each individual should make a determination as to the suitability of the information for their particular purpose(s).



SAFETY DATA SHEET

1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND COMPANY

1.1 Product Identifier

Chemical Name	Methanol
CAS Number	67-56-1
EINECS Number	200-659-6
REACH Registration Number	01-2119433307-44-xxxx

1.2 Relevant identified uses of the substance or mixture and uses advised against

Identified use(s): Fuel additive. Additive for diesel oil. Chemical Intermediate Antifreeze liquid. Cleaning agent. Glass cleaner.

Not to be used for: None specified

1.3 Details of the supplier of the safety data sheet

Tennants Distribution Limited
Hazelbottom Road
Cheetham
Manchester
M8 0GR
Tel: 44(0)161 205 4454
Fax: 44(0) 161 203 4298
Email: msds@tennantsdistribution.com

1.4 Emergency telephone number

Tel: 44(0)844 335 0001 (24 hours)

2. HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture

Physical hazards: Flam. Liq. 2: H225
Health hazards: Acute Tox. 3: H301, Acute Tox. 3: H311, Acute Tox. 3: H331, STOT SE 1: H370
Environmental hazards: Not Classified

2.2 Label elements

Pictogram:



Signal word: Danger

Hazard statements

H225 Highly flammable liquid and vapour.
H301+H311+H331 Toxic if swallowed, in contact with skin or if inhaled.
H370 Causes damage to organs.

Precautionary statements:

P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P240 Ground/bond container and receiving equipment.
P241 Use explosion-proof electrical equipment.
P242 Use only non-sparking tools.
P243 Take precautionary measures against static discharge.
P260 Do not breathe vapour/ spray.
P261 Avoid breathing vapour/ spray.
P264 Wash contaminated skin thoroughly after handling.
P270 Do not eat, drink or smoke when using this product.
P271 Use only outdoors or in a well-ventilated area.
P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.
P301+P310 IF SWALLOWED: Immediately call a POISON CENTER/ doctor.
P302+P352 IF ON SKIN: Wash with plenty of water.
P303+P361+P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water or shower.
P304+P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P308+P311 IF exposed or concerned: Call a POISON CENTER or doctor.
P311 Call a POISON CENTER/ doctor.

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P312 Call a POISON CENTRE/doctor if you feel unwell.
P321 Specific treatment (see medical advice on this label).
P330 Rinse mouth.
P361+P364 Take off immediately all contaminated clothing and wash it before reuse.
P370+P378 In case of fire: Use foam, carbon dioxide, dry powder or water fog to extinguish.
P403+P233 Store in a well-ventilated place. Keep container tightly closed.
P403+P235 Store in a well-ventilated place. Keep cool.
P405 Store locked up.
P501 Dispose of contents/ container in accordance with national regulations.
Contains: Methanol

3. COMPOSITION/INFORMATION ON INGREDIENTS

3.1 Substances

Methanol

CAS Number: 67-56-1

EC Number: 200-659-6

REACH Registration Number: 01-2119433307-44-XXXX

Classification:

Flam. Liq. 2: H225, Acute Tox. 3: H301, Acute Tox. 3: H311, Acute Tox. 3: H331, STOT SE 1: H370

The full text for all hazard statements is displayed in Section 16.

4. FIRST AID MEASURES

4.1 Description of first aid measures

Inhalation

Move affected person to fresh air at once. Rinse nose and mouth with water. Get medical attention if any discomfort continues.

Skin contact

Remove affected person from source of contamination. Remove contaminated clothing immediately and wash skin with soap and water. Get medical attention if symptoms are severe or persist after washing.

Eye contact

Remove any contact lenses and open eyelids wide apart. Rinse with water. Continue to rinse for at least 15 minutes and get medical attention.

Ingestion

Remove affected person from source of contamination. Remove person to fresh air and keep comfortable for breathing. Never give anything by mouth to an unconscious person. Give plenty of water to drink. Do not induce vomiting. Get medical attention immediately.

Protection of first aiders

First aid personnel should wear appropriate protective equipment during any rescue.

4.2 Most important symptoms and effects, both acute and delayed

Inhalation

Prolonged or repeated exposure to vapours in high concentrations may cause the following adverse effects: Gas or vapour is harmful on prolonged exposure or in high concentrations. Vapours may cause drowsiness and dizziness.

Ingestion

Prolonged or repeated exposure may cause the following adverse effects: May cause liver and/or renal damage.

Skin contact

May cause nausea, headache, dizziness and intoxication.

Eye contact

Prolonged or repeated exposure to vapours in high concentrations may cause the following adverse effects: May cause severe eye irritation.

4.3 Indication of any immediate medical attention and special treatment needed

Notes for the doctor Treat symptomatically. Get medical attention if a large quantity has been ingested.**Specific treatments** No special treatment required.

5. FIRE FIGHTING MEASURES

5.1 Extinguishing Media

Suitable: Use alcohol-resistant foam, carbon dioxide or dry powder to extinguish. Use dry powder, dry sand or dry earth to extinguish. Water spray, fog or mist.**Unsuitable:** Do not use water jet as an extinguisher, as this will spread the fire.

5.2 Special hazards arising from the substance or mixture

Hazardous combustion: Thermal decomposition or combustion products may include the following substances: Oxides of carbon. Oxides of nitrogen.

5.3 Advice for fire-fighters

Protective actions during fire fighting: In case of fire: Evacuate area. No action shall be taken without appropriate



training or involving any personal risk. Control run-off water by containing and keeping it out of sewers and watercourses.

Special protective equipment for fire fighters: Wear positive-pressure self-contained breathing apparatus (SCBA) and appropriate protective clothing.

6. ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures

Personal precautions No action shall be taken without appropriate training or involving any personal risk. Evacuate area. Wear protective clothing as described in Section 8 of this safety data sheet.

For non-emergency personnel Evacuate area. Keep upwind to avoid inhalation of gases, vapours, fumes and smoke.

For emergency responders Wear protective clothing as described in Section 8 of this safety data sheet.

6.2 Environmental precautions

Avoid the spillage or runoff entering drains, sewers or watercourses. Inform the relevant authorities if environmental pollution occurs (sewers, waterways, soil or air).

6.3 Methods and material for containment and cleaning up

Methods for cleaning up: Small Spillages: Stop leak if safe to do so. Move containers from spillage area. Do not touch or walk into spilled material. Absorb spillage with sand or other inert absorbent. Large Spillages: Absorb spillage with sand or other inert absorbent. Collect spillage for reclamation or disposal in sealed containers via a licensed waste contractor.

6.4 Reference to other sections

See Section 8 for details of protective equipment. See Section 13 for details of disposal.

7. HANDLING AND STORAGE

7.1 Precautions for safe handling

Usage precautions: Avoid exposure - obtain special instructions before use. For personal protection, see Section 8.

Avoid contact with skin, eyes and clothing. Do not breathe vapour/spray.

Advice on general occupational hygiene: Do not eat, drink or smoke when using this product. Good personal hygiene procedures should be implemented. Wash at the end of each work shift and before eating, smoking and using the toilet.

7.2 Conditions for safe storage, including any incompatibilities

Storage precautions: Store in tightly-closed, original container in a dry, cool and well-ventilated place. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.

7.3 Specific end use(s)

The identified uses for this product are detailed in Section 1.2.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 Control parameters

Occupational exposure limits

Methanol

Long-term exposure limit (8-hour TWA): WEL 200 ppm 266 mg/m³

Short-term exposure limit (15-minute): WEL 250 ppm 333 mg/m³ Sk

WEL = Workplace Exposure Limit

Sk = Can be absorbed through the skin

DNEL

Methanol

Workers - Dermal; Short term systemic effects: 40 mg/kg/day

Workers - Dermal; Long term systemic effects: 40 mg/kg/day

Workers - Inhalation; Short term systemic effects: 260 mg/m³

Workers - Inhalation; Short term local effects: 260 mg/m³

Workers - Inhalation; Long term systemic effects: 260 mg/m³

Workers - Inhalation; Long term local effects: 260 mg/m³

Consumer - Dermal; Short term systemic effects: 8 mg/kg/day

Consumer - Dermal; Long term systemic effects: 8 mg/kg/day

Consumer - Inhalation; Short term systemic effects: 50 mg/m³

Consumer - Inhalation; Short term local effects: 50 mg/m³

Consumer - Inhalation; Long term systemic effects: 50 mg/m³

Consumer - Inhalation; Long term local effects: 50 mg/m³

PNEC

- Fresh water; 20.8 mg/l

- marine water; 2.08 mg/l

- Intermittent release; 1540 mg/l

- Soil; 100 mg/kg

- STP; 100 mg/l



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- Sediment (Freshwater); 77 mg/kg
- Sediment (Marine water); 7.7 mg/k

8.2 Exposure controls

Protective equipment



Appropriate engineering controls: As this product contains ingredients with exposure limits, process enclosures, local exhaust ventilation or other engineering controls should be used to keep worker exposure below any statutory or recommended limits, if use generates dust, fumes, gas, vapour or mist.

Eye/face protection

Wear tight-fitting, chemical splash goggles or face shield.

Skin and body protection

Avoid contact with skin. Wear appropriate clothing to prevent any possibility of liquid contact and repeated or prolonged vapour contact.

Eye protection

Full face visor.

Hand protection

To protect hands from chemicals, gloves should comply with European Standard EN374. It is recommended that gloves are made of the following material: Butyl rubber. Nitrile rubber. Viton rubber (fluoro rubber). Frequent changes are recommended.

Hygiene measures

Good personal hygiene procedures should be implemented. Wash promptly with soap and water if skin becomes contaminated. Promptly remove any clothing that becomes contaminated. Wash at the end of each work shift and before eating, smoking and using the toilet. Do not eat, drink or smoke when using this product. Do not smoke in work area. Provide eyewash station and safety shower.

Respiratory protection

Wear a full face piece respirator fitted with the following cartridge: Gas filter, type A2. Gas filter, type AX.

Environmental exposure controls

Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. Keep container tightly sealed when not in use. Residues and empty containers should be taken care of as hazardous waste according to local and national provisions.

9. PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties

Appearance Liquid.

Colour Colourless.

Odour Alcoholic.

pH Not applicable.

Melting point -98°C

Initial boiling point and range 64.7°C

Flash point 9.7°C Closed cup.

Evaporation rate Not determined.

Flammability (solid, gas) Highly flammable liquid and vapour.

Upper/lower flammability or explosive limits Upper flammable/explosive limit: 36% Lower flammable/explosive limit: 6%

Vapour pressure 169.27 hPa @ 25°C

Vapour density 1.11

Relative density 0.79 - 0.80 @ 20°C g/cm³

Solubility(ies) Miscible with water. ethanol acetone diethyl ether, benzene and chloroform

Partition coefficient Formaldehyde log Kow: 0.35 Methanol. log Pow: -0.77

Auto-ignition temperature 455°C

Decomposition Temperature Not determined.

Viscosity 0.544 - 0.590 mPa s @ 25°C

Oxidising properties Does not meet the criteria for classification as oxidising.

10. STABILITY AND REACTIVITY

10.1 Reactivity

See Section 10.3 (Possibility of hazardous reactions) for further information.

10.2 Chemical stability

Stable at normal ambient temperatures and when used as recommended.



10.3 Possibility of hazardous reactions

The following materials may react with the product: Acids. Strong oxidising agents.

10.4 Conditions to avoid

Avoid heat, flames and other sources of ignition.

10.5 Incompatible materials

Avoid contact with the following materials: Acids. Strong oxidising agents.

10.6 Hazardous decomposition products

Heating may generate the following products: Oxides of carbon. Oxides of nitrogen.

11. TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects

Acute Toxicity

Acute toxicity oral (LD₅₀ mg/kg) 1,187.0

Species Rat

ATE oral (mg/kg) 100.0

Acute toxicity dermal (LD₅₀ mg/kg) 17,100.0

Species Rabbit

ATE dermal (mg/kg) 300.0

Acute toxicity inhalation (LC₅₀ vapours mg/l) 128.2

Species Rat

ATE inhalation (vapours mg/l) 3.0

Methanol

Acute toxicity oral (LD₅₀ mg/kg) 1,187.0

Species: Rat

ATE oral (mg/kg): 100

Acute toxicity dermal (LD₅₀ mg/kg) 17,100.0

Species: Rabbit

ATE dermal (mg/kg): 300

Acute toxicity inhalation (LC₅₀ vapours mg/l) 128.2

Species Rat

ATE inhalation (vapours mg/l) 3.0

12. ECOLOGICAL INFORMATION

12.1 Toxicity

Acute aquatic toxicity

Acute toxicity - fish NOEC, 96 hours: 64000 mg/l, Fish, Brachydanio rerio (Zebra Fish)

Acute toxicity - aquatic invertebrates EC₅₀, 24 hours: 20803 mg/l, Daphnia magna

Acute toxicity - aquatic plants EC₅₀, 192 hours: 8000 mg/l, Freshwater algae

Acute toxicity - microorganisms IC₅₀, 24 hours: 880 mg/l,

Acute toxicity - terrestrial LC₅₀, 48 hours: >1 mg/cm², Eisenia Fetida (Earthworm)

Chronic aquatic toxicity

Chronic toxicity - aquatic invertebrates LC₅₀, 96 hours: 54890 mg/l, Freshwater invertebrates

Toxicity to soil EC₅₀, 28 days: 5683 mg/kg, Folsomia Candida

12.2 Persistence and degradability

The product is readily biodegradable.

12.3 Bio accumulative potential

Bioaccumulative potential: The product is not bioaccumulating.

Partition coefficient Formaldehyde log Kow: 0.35 Methanol. log Pow: -0.77

12.4 Mobility in soil

Not determined.

12.5 Results of PBT and vPvB assessment

This product does not contain any substances classified as PBT or vPvB.

13. DISPOSAL CONSIDERATIONS

13.1 Waste treatment methods

General information The generation of waste should be minimised or avoided wherever possible. Dispose of waste to licensed waste disposal site in accordance with the requirements of the local Waste Disposal Authority. Disposal of this product, process solutions, residues and by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any local authority requirements.

Disposal methods Dispose of waste via a licensed waste disposal contractor.

Waste class Commission Decision 2000/532/EC as amended by Decision 2001/118/EC establishing a list of wastes and hazardous waste pursuant to Council Directive 75/442/EEC on waste and Directive 91/689/EEC on hazardous




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waste with amendments.

14. TRANSPORT INFORMATION

14.1 UN Number	1230
14.2 Proper Shipping Name	METHANOL
14.3 Transport hazard class ADR/RID classification code Transport labels	3 + 6.1 Flammable, Toxic liquid FT1 
14.4 Packing group	II
14.5 Environmental	None
14.6 Special precautions for users ADR transport category Emergency Action Code Hazard Identification Number (ADR/RID) Tunnel restriction code EmS	2 •2WE 336 (D/E) F-E, S-D

14.7. Transport in bulk according to Annex II of MARPOL and the IBC Code No further information

15. REGULATORY INFORMATION

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture
National regulations
The Carriage of Dangerous Goods and Use of Transportable Pressure Equipment Regulations 2009 (SI 2009 No. 1348) (as amended) ["CDG 2009"]. EH40/2005 Workplace exposure limits.
EU legislation
Regulation (EC) No 1907/2006 of the European Parliament and of the Council of 18 December 2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH) (as amended).
Regulation (EC) No 1272/2008 of the European Parliament and of the Council of 16 December 2008 on classification, labelling and packaging of substances and mixtures (as amended).

15.2 Chemical safety assessment
A Chemical Safety Assessment has been carried out on this substance.

16. OTHER INFORMATION

Full text of H-Statements referred to under sections 2 and 3
H225 Highly flammable liquid and vapour
H370 Causes damage to organs
H301 Toxic if swallowed
H311 Toxic in contact with skin
H331 Toxic if inhaled

Source of key data used to compile the data sheet
Supplier information

Modifications from last revision
The Safety Data Sheets have been revised in accordance with current data
Date: 25/06/2020
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ANNEX : Exposure Scenario

Number	Short description of exposure scenario	Product category	Life cycle stage covered by the ES					Sector of use	Process category	Article category	Environmental release category
			Manufacture	Formulation	End Use						
					Industrial use	Professional use	Consumer use				
1	Manufacture of the substance/Use as an intermediate/Use as an process chemical	-	X	-	X	-	-	3, 8, 9	1, 2, 3, 4, 8a, 8b, 15	-	ERC 1, 4, 6a, 6b
2	Distribution of the substance	-	X	-	X	-	-	3, 8, 9	1, 2, 3, 4, 8a, 8b, 9	-	ERC 1, 2
3	Formulation and (re)packing of substance and mixtures	-	-	X	X	-	-	3, 10	1,2,3,4,8a, 8b, 9, 15	-	ERC 2
4	Use as a fuel in industrial settings	-	-	-	X	-	-	3	1, 2, 3, 8a, 8b, 16, 19	-	ERC 8b
5	Use as a fuel in professional settings	-	-	-	-	X	-	22	1, 2, 3, 8a, 8b, 16, 19	-	ERC 8b, 8e
6	Industrial use in cleaning agents	-	-	-	X	-	-	3	1, 2, 3, 4, 7, 8a, 8b, 10, 13	-	ERC 4
7	Professional use in cleaning agents	-	-	-	-	X	-	22	1, 2, 3, 4, 8a, 8b, 10, 11, 13	-	ERC 8a, 8d
8	Use as a laboratory reagent in industrial settings	-	-	-	X	-	-	3	10, 15	-	ERC 4
9	Use as a laboratory reagent in professional settings	-	-	-	-	X	-	22	10, 15	-	ERC 8a
10	Industrial use as wastewater treatment chemical	-	-	-	X	-	-	3	2	-	ERC 9b
11	Professional use in oilfield drilling and production operations	-	-	-	-	X	-	22	4, 5, 8a, 8b	-	ERC 9b
12	Consumer use of cleaning agents and de-icers (liquid products)	4, 35	-	-	-	-	X	21	-	-	ERC 8a, 8d
13	Consumer use of cleaning agents and de-icers (spray products)	4, 35	-	-	-	-	X	21	-	-	ERC 8a, 8d
14a	Consumer use of fuels indoors (Domestic/hobby use e.g in model engines, fuel cells, fondue sets)	13	-	-	-	-	X	21	-	-	ERC 8b
14b	Consumer use of fuels outdoors (gasoline additive)	-	-	-	-	-	X	21	PROC 16	-	ERC 8e

Exposure Scenario 1

1. Exposure scenario	
Title	Manufacture of the substance/Use as an intermediate/Use as an process chemical
Sector of use	SU3 - Industrial Manufacturing (all) SU8 - Manufacture of bulk, large scale chemicals (including petroleum products) SU9 - Manufacture of fine chemicals
Process category	PROC1 - Use in closed process, no likelihood of exposure PROC2 - Use in closed, continuous process with occasional controlled exposure PROC3 - Use in closed batch process (synthesis or formulation) PROC4 - Use in batch and other process (synthesis) where opportunity for exposure arises PROC8a - Transfer of substance or preparation (charging/ discharging) from/ to vessels/ large containers at non-dedicated facilities PROC8b - Transfer of substance or preparation (charging/ discharging) from/ to vessels/ large containers at dedicated facilities PROC15 - Use as laboratory reagent
Product category	
Article category	
Environmental release category	ERC1 - Manufacture of substances ERC4 - Industrial use of processing aids in processes and products, not becoming part of articles ERC6a - Industrial use resulting in manufacture of another substance (use of intermediates)
Processes, tasks, activities covered	Manufacture of the substance or use as an intermediate or process chemical or extraction agent. Includes recycling/ recovery, material transfers, storage, maintenance and loading (including marine vessel/barge, road/rail car and bulk container), sampling and associated laboratory activities
2. Operational conditions and risk management measures	
2.1. Control of worker exposure	
2.1.1. Control of worker exposure : PROC 1,2,3&4	
Frequency and duration of use	
Exposure duration per day	> 4 h/d
Frequency of exposure	< 240 d/y
Product characteristics	
Physical Form (at time of use)	Liquid
Vapour pressure	169,27 hPa
Dustiness	not applicable
Concentration of the Substance in Mixture/Article	Pure substance
Amount used	
	Not relevant
Human factors not influenced by risk management	
Dermal exposure	Palm of one hand (240cm ²) (PROC 1 & 3) Palms of both hands (480 cm ²) (PROC 2 & 4)
Other operational conditions affecting workers exposure	
Use	Industrial use
Indoor/Outdoor	Indoor use
Technical conditions and measures at process level to prevent release	
	none
Technical conditions and measures to control dispersion from the source towards the worker	
Local exhaust	no (PROC 1 & 3) yes Effectiveness : 90% (PROC 2 & 4)

Organisational measures to prevent /limit releases, dispersion and exposure	
Not relevant (ECETOC TRA)	
Conditions and measures related to personal protection, hygiene and health evaluation	
Respiratory protection	Not required
2.1.2. Control of worker exposure : PROC 8a & 8b	
Frequency and duration of use	
Exposure duration per day	>4h
Frequency of exposure	< 240 d/y
Product characteristics	
Physical Form (at time of use)	Liquid
Vapour pressure	169,27 hPa
Dustiness	not applicable
Concentration of the Substance in Mixture/Article	Pure substance
Amount used	Not relevant
Human factors not influenced by risk management	
Dermal exposure	Palm of one hand (240cm ²) (PROC 8a)
	Palms of both hands (480 cm ²) (PROC 8b)
Other operational conditions affecting workers exposure	
Use	Industrial use
Indoor/Outdoor	Indoor use
Technical conditions and measures at process level to prevent release	
none	
Technical conditions and measures to control dispersion from the source towards the worker	
Local exhaust	yes Effectiveness : 90% (PROC 8a)
	yes Effectiveness : 97% (PROC 8b)
Organisational measures to prevent /limit releases, dispersion and exposure	
Not relevant (ECETOC TRA)	
Conditions and measures related to personal protection, hygiene and health evaluation	
Respiratory protection	Not required
2.1.3. Control of worker exposure : PROC 15	
Frequency and duration of use	
Exposure duration per day	> 4 h/d
Frequency of exposure	< 240 d/y
Product characteristics	
Physical Form (at time of use)	Liquid
Vapour pressure	169,27 hPa
Dustiness	not applicable
Concentration of the Substance in Mixture/Article	Pure substance
Amount used	Not relevant
Human factors not influenced by risk management	
Dermal exposure	Palm of one hand (240cm ²)
Other operational conditions affecting workers exposure	
Use	Industrial use
Indoor/Outdoor	Indoor use
Technical conditions and measures at process level to prevent release	
none	
Technical conditions and measures to control dispersion from the source towards the worker	
Local exhaust	yes Effectiveness : 90%
Organisational measures to prevent /limit releases, dispersion and exposure	

Not relevant (ECETOC TRA)	
Conditions and measures related to personal protection, hygiene and health evaluation	
Respiratory protection	Not required
2.2. Control of environmental exposure	
not required	
Human factors not influenced by risk management	
not required	
Other operational conditions affecting workers exposure	
not required	
Technical conditions and measures at process level to prevent release	
not required	
Technical conditions and measures to control dispersion from the source towards the worker	
not required	
Organisational measures to prevent /limit releases, dispersion and exposure	
not required	
Conditions and measures related to personal protection, hygiene and health evaluation	
not required	
3. Exposure estimation and reference to its source	
3.1. Health	
The ECETOC TRA tool has been used to estimate workplace exposures unless otherwise indicated	
3.2. Environment	
not required	
4. Guidance to check compliance with the Exposure Scenario	
4.1. Health	
Predicted exposures are not expected to exceed the DN(M)EL when the Risk Management Measures/Operational Conditions outlined in Section 2 are implemented. Where other Risk Management Measures/Operational Conditions are adopted, then users should ensure that risks are managed to at least equivalent levels.	
4.2. Environment	
not required	

Exposure Scenario 2

1. Exposure scenario	
Title	Distribution of the substance
Sector of use	SU3 - Industrial Manufacturing (all) SU8 - Manufacture of bulk, large scale chemicals (including petroleum products) SU9 - Manufacture of fine chemicals
Process category	PROC1 - Use in closed process, no likelihood of exposure PROC2 - Use in closed, continuous process with occasional controlled exposure PROC3 - Use in closed batch process (synthesis or formulation) PROC4 - Use in batch and other process (synthesis) where opportunity for exposure arises PROC8a - Transfer of substance or preparation (charging/ discharging) from/ to vessels/ large containers at non-dedicated facilities PROC8b - Transfer of substance or preparation (charging/ discharging) from/ to vessels/ large containers at dedicated facilities PROC9 - Transfer of substance or preparation into small containers (dedicated filling line, including weighing)
Environmental release category	ERC1 - Manufacture of substances ERC2 - Formulation of preparations
Processes, tasks, activities covered	Loading (including marine vessel/barge, rail/road car and IBC loading) and repacking (including drums and small packs) of substance, including its distribution and associated laboratory activities
2. Operational conditions and risk management measures	
2.1. Control of worker exposure	
2.1.1. Control of worker exposure : PROC 1,2,3&4	
Frequency and duration of use	
Exposure duration per day	> 4 h/d
Frequency of exposure	< 240 d/y
Product characteristics	
Physical Form (at time of use)	Liquid
Vapour pressure	169,27 hPa
Dustiness	not applicable
Concentration of the Substance in Mixture/Article	Pure substance
Amount used	Not relevant
Human factors not influenced by risk management	
Dermal exposure	Palm of one hand (240cm ²) (PROC 1&3) Palms of both hands (480 cm ²) (PROC 2&4)
Other operational conditions affecting workers exposure	
Use	Industrial use
Indoor/Outdoor	Indoor use
Technical conditions and measures at process level to prevent release	
none	
Technical conditions and measures to control dispersion from the source towards the worker	
Local exhaust	no (PROC 1) yes Effectiveness : 90% (PROC 2,3 & 4)
Organisational measures to prevent /limit releases, dispersion and exposure	
Not relevant (ECETOC TRA)	
Conditions and measures related to personal protection, hygiene and health evaluation	
Respiratory protection	Not required
2.1.2. Control of worker exposure : PROC 8a, 8b & 9	
Frequency and duration of use	

Exposure duration per day	> 4h
Frequency of exposure	< 240 d/y
Product characteristics	
Physical Form (at time of use)	Liquid
Vapour pressure	169,27 hPa
Dustiness	not applicable
Concentration of the Substance in Mixture/Article	Pure substance
Amount used	Not relevant
Human factors not influenced by risk management	
Dermal exposure	Palms of both hands (480 cm ²) (PROC 8b&9) Both hands (960cm ²) (PROC 8a)
Other operational conditions affecting workers exposure	
Use	Industrial use
Indoor/Outdoor	Indoor use
Technical conditions and measures at process level to prevent release	
none	
Technical conditions and measures to control dispersion from the source towards the worker	
Local exhaust	yes Effectiveness : 90% (PROC 8a & 9) yes Effectiveness : 97% (PROC 8b)
Organisational measures to prevent /limit releases, dispersion and exposure	
Not relevant (ECETOC TRA)	
Conditions and measures related to personal protection, hygiene and health evaluation	
Respiratory protection	Not required
2.2. Control of environmental exposure	
not required	
Human factors not influenced by risk management	
not required	
Other operational conditions affecting workers exposure	
not required	
Technical conditions and measures at process level to prevent release	
not required	
Technical conditions and measures to control dispersion from the source towards the worker	
not required	
Organisational measures to prevent /limit releases, dispersion and exposure	
not required	
Conditions and measures related to personal protection, hygiene and health evaluation	
not required	
3. Exposure estimation and reference to its source	
3.1. Health	
The ECETOC TRA tool has been used to estimate workplace exposures unless otherwise indicated	
3.2. Environment	
not required	
4. Guidance to check compliance with the Exposure Scenario	
4.1. Health	
Predicted exposures are not expected to exceed the DN(M)EL when the Risk Management Measures/Operational Conditions outlined in Section 2 are implemented. Where other Risk Management Measures/Operational Conditions are adopted, then users should ensure that risks are managed to at least equivalent levels.	
4.2. Environment	
not required	

Exposure Scenario 3

1. Exposure scenario	
Title	Formulation and (re)packing of substance and mixtures
Sector of use	SU3 - Industrial Manufacturing (all) SU 10 - Formulation [mixing] of preparations and/ or re-packaging (excluding alloys)
Process category	PROC1 - Use in closed process, no likelihood of exposure PROC2 - Use in closed, continuous process with occasional controlled exposure PROC3 - Use in closed batch process (synthesis or formulation) PROC4 - Use in batch and other process (synthesis) where opportunity for exposure arises PROC8a - Transfer of substance or preparation (charging/ discharging) from/ to vessels/ large containers at non-dedicated facilities PROC8b - Transfer of substance or preparation (charging/ discharging) from/ to vessels/ large containers at dedicated facilities PROC9 - Transfer of substance or preparation into small containers (dedicated filling line, including weighing) PROC15 - Use as laboratory reagent
Product category	
Article category	
Environmental release category	ERC2 - Formulation of preparations
Processes, tasks, activities covered	Formulation, packing and re-packing of the substance and its mixtures in batch or continuous operations, including storage, materials transfers, mixing, large and small scale packing, maintenance and associated laboratory activities
2. Operational conditions and risk management measures	
2.1. Control of worker exposure	
2.1.1. Control of worker exposure : PROC 1,2,3&4	
Frequency and duration of use	
Exposure duration per day	>4h
Frequency of exposure	< 240 d/y
Product characteristics	
Physical Form (at time of use)	Liquid
Vapour pressure	169,27 hPa
Dustiness	not applicable
Concentration of the Substance in Mixture/Article	Pure substance
Amount used	Not relevant
Human factors not influenced by risk management	
Dermal exposure	Palm of one hand (240cm ²) (PROC 1 & 3) Palms of both hands (480 cm ²) (PROC 2 & 4)
Other operational conditions affecting workers exposure	
Use	Industrial use
Indoor/Outdoor	Indoor use
Technical conditions and measures at process level to prevent release	
none	
Technical conditions and measures to control dispersion from the source towards the worker	
Local exhaust	no (PROC 1) yes, Effectiveness : 90% (PROC 2,3 & 4)
Organisational measures to prevent /limit releases, dispersion and exposure	
Not relevant (ECETOC TRA)	
Conditions and measures related to personal protection, hygiene and health evaluation	
Respiratory protection	Not required

2.1.2. Control of worker exposure : PROC 8a, 8b & 9	
Frequency and duration of use	
Exposure duration per day	> 4h
Frequency of exposure	< 240 d/y
Product characteristics	
Physical Form (at time of use)	Liquid
Vapour pressure	169,27 hPa
Dustiness	not applicable
Concentration of the Substance in Mixture/Article	Pure substance
Amount used	Not relevant
Human factors not influenced by risk management	
Dermal exposure	Palms of both hands (480 cm ²) (PROC 8b&9)
	Both hands (960cm ²) (PROC 8a)
Other operational conditions affecting workers exposure	
Use	Industrial use
Indoor/Outdoor	Indoor use
Technical conditions and measures at process level to prevent release	
none	
Technical conditions and measures to control dispersion from the source towards the worker	
Local exhaust	yes Effectiveness : 90% (PROC 8a & 9)
	yes Effectiveness : 97% (PROC 8b)
Organisational measures to prevent /limit releases, dispersion and exposure	
Not relevant (ECETOC TRA)	
Conditions and measures related to personal protection, hygiene and health evaluation	
Respiratory protection	Not required
2.1.3. Control of worker exposure : PROC 15	
Frequency and duration of use	
Exposure duration per day	> 4h
Frequency of exposure	< 240 d/y
Product characteristics	
Physical Form (at time of use)	Liquid
Vapour pressure	169,27 hPa
Dustiness	not applicable
Concentration of the Substance in Mixture/Article	Pure substance
Amount used	Not relevant
Human factors not influenced by risk management	
Dermal exposure	Palm of one hand (240cm ²)
Other operational conditions affecting workers exposure	
Use	Industrial use
Indoor/Outdoor	Indoor use
Technical conditions and measures at process level to prevent release	
none	
Technical conditions and measures to control dispersion from the source towards the worker	
Local exhaust	yes Effectiveness : 90%
Organisational measures to prevent /limit releases, dispersion and exposure	
Not relevant (ECETOC TRA)	
Conditions and measures related to personal protection, hygiene and health evaluation	
Respiratory protection	Not required
2.2. Control of environmental exposure	

not required
Human factors not influenced by risk management
Product characteristics
Other operational conditions affecting workers exposure
not required
Technical conditions and measures at process level to prevent release
not required
Technical conditions and measures to control dispersion from the source towards the worker
not required
Organisational measures to prevent /limit releases, dispersion and exposure
not required
Conditions and measures related to personal protection, hygiene and health evaluation
not required
3. Exposure estimation and reference to its source
3.1. Health
The ECETOC TRA tool has been used to estimate workplace exposures unless otherwise indicated
3.2. Environment
not required
4. Guidance to check compliance with the Exposure Scenario
4.1. Health
Predicted exposures are not expected to exceed the DN(M)EL when the Risk Management Measures/Operational Conditions outlined in Section 2 are implemented. Where other Risk Management Measures/Operational Conditions are adopted, then users should ensure that risks are managed to at least equivalent levels.
4.2. Environment
not required

Exposure Scenario 14a

1. Exposure scenario	
Title	Consumer use of fuels indoors (Domestic/hobby use e.g in model engines, fuel cells, fondue sets)
Sector of use	SU 21 - Consumer uses: Private households (= general public = consumers)
Process category	
Product category	PC13 - Fuels
Article category	
Environmental release category	
Processes, tasks, activities covered	
Exposure Assessment Method	ConsExpo (v4.1)
2. Operational conditions and risk management measures	
2.1. Control of worker exposure	
2.1.1. Control of consumer exposure	
Frequency and duration of use	
Exposure duration per day	10' (ConsExpo Default)
Frequency of exposure	2 d/y (ConsExpo Default)
Application duration	10' (ConsExpo Default)
Product characteristics: Product characteristics	
Physical Form (at time of use)	Liquid
Vapour pressure	169,27 hPa
Dustiness	not applicable
Concentration of the Substance in Mixture/Article	0,80
Molecular Weight	100 g/mol (ConsExpo Default)
Mass transfer rate	0,413 m/min (Thibodauxs's method)
Amount used	Maximum applied quantity per task : 800 g
Human factors not influenced by risk management	
Dermal exposure	
<i>Use by spraying</i>	Both hands (960cm ²)
<i>Cleaning techniques</i>	Palm of one hand (240cm ²)
Inhalation Rate	34,7 m ³ /d
Other given operational conditions affecting consumers exposure	
Room Volume	20 m ³
Ventilation Rate	0,5 l/h
Release Area	2 cm ²
Conditions and measures related to information and behavioural advice to consumers	
none	
Conditions and measures related to personal protection, hygiene and health evaluation	
none	
2.2. Control of environmental exposure	
not required	
Human factors not influenced by risk management	
not required	
Other operational conditions affecting workers exposure	

not required
Technical conditions and measures at process level to prevent release
not required
Technical conditions and measures to control dispersion from the source towards the worker
not required
Organisational measures to prevent /limit releases, dispersion and exposure
not required
Conditions and measures related to personal protection, hygiene and health evaluation
not required
3. Exposure estimation and reference to its source
3.1. Health
The ECETOC TRA tool has been used to estimate workplace exposures unless otherwise indicated
3.2. Environment
not required
4. Guidance to check compliance with the Exposure Scenario
4.1. Health
Predicted exposures are not expected to exceed the DN(M)EL when the Risk Management Measures/Operational Conditions outlined in Section 2 are implemented. Where other Risk Management Measures/Operational Conditions are adopted, then users should ensure that risks are managed to at least equivalent levels.
4.2. Environment
not required

Exposure Scenario 14b

1. Exposure scenario	
Title	Consumer use of fuels outdoors (gasoline additive)
Sector of use	SU 21 - Consumer uses: Private households (= general public = consumers)
Process category	PROC16 - Using material as fuel sources, limited exposure to unburned product to be expected
Product category	
Article category	
Environmental release category	
Processes, tasks, activities covered	Filling up cars and other vehicles at petrol stations
Exposure Assessment Method	ECETOC TRA
2. Operational conditions and risk management measures	
2.1. Control of worker exposure	
2.1.1. Control of consumer exposure	
Frequency and duration of use	
Exposure duration per day	<15' (ConsExpo Default)
Frequency of exposure	<240 d/y (ConsExpo Default)
Application duration	10' (ConsExpo Default)
Product characteristics: Product characteristics	
Physical Form (at time of use)	Liquid
Vapour pressure	169,27 hPa
Dustiness	not applicable
Concentration of the Substance in Mixture/Article	1,00
Amount used	
Human factors not influenced by risk management	
Cleaning techniques	Both hands (960cm ²)
Other given operational conditions affecting consumers exposure	
Use	Professional use
Indoor/Outdoor	Outdoor use
Conditions and measures related to information and behavioural advice to consumers	
none	
Technical conditions and measures at process level to prevent release	
none	
Technical conditions and measures to control dispersion from the source towards the worker	
none	
Organisational measures to prevent /limit releases, dispersion and exposure	
Not relevant (ECETOC TRA)	
Conditions and measures related to personal protection, hygiene and health evaluation	
Respiratory protection	Not required
Conditions and measures related to personal protection, hygiene and health evaluation	
Respiratory protection	Not required
2.2. Control of environmental exposure	
not required	
Human factors not influenced by risk management	
not required	
Other operational conditions affecting workers exposure	
not required	
Technical conditions and measures at process level to prevent release	
not required	

Technical conditions and measures to control dispersion from the source towards the worker
not required
Organisational measures to prevent /limit releases, dispersion and exposure
not required
Conditions and measures related to personal protection, hygiene and health evaluation
not required
3. Exposure estimation and reference to its source
3.1. Health
The ECETOC TRA tool has been used to estimate workplace exposures unless otherwise indicated
3.2. Environment
not required
4. Guidance to check compliance with the Exposure Scenario
4.1. Health
Predicted exposures are not expected to exceed the DN(M)EL when the Risk Management Measures/Operational Conditions outlined in Section 2 are implemented. Where other Risk Management Measures/Operational Conditions are adopted, then users should ensure that risks are managed to at least equivalent levels.
4.2. Environment
not required

Exposure Scenario 10

1. Exposure scenario	
Title	Industrial use as wastewater treatment chemical
Sector of use	SU 3 - Industrial uses: Uses of substances as such or in preparations at industrial sites
Process category	PROC2 - Use in closed, continuous process with occasional controlled exposure
Product category	
Article category	
Environmental release category	ERC9b - Wide dispersive outdoor use of substances in closed systems
Processes, tasks, activities covered	
2. Operational conditions and risk management measures	
2.1. Control of worker exposure	
2.1.1. Control of worker exposure : PROC 2	
Frequency and duration of use	
Exposure duration per day	> 4h
Frequency of exposure	< 240 d/y
Product characteristics	
Physical Form (at time of use)	Liquid
Vapour pressure	169,27 hPa
Dustiness	not applicable
Concentration of the Substance in Mixture/Article	Pure substance
Amount used	Not relevant
Human factors not influenced by risk management	
Dermal exposure	Palms of both hands (480 cm ²)
Other operational conditions affecting workers exposure	
Use	Industrial use
Indoor/Outdoor	Indoor use
Technical conditions and measures at process level to prevent release	
none	
Technical conditions and measures to control dispersion from the source towards the worker	
Local exhaust	yes Effectiveness : 90%
Organisational measures to prevent /limit releases, dispersion and exposure	
Not relevant (ECETOC TRA)	
Conditions and measures related to personal protection, hygiene and health evaluation	
Respiratory protection	Not required
2.2. Control of environmental exposure	
not required	
Human factors not influenced by risk management	
not required	
Other operational conditions affecting workers exposure	
not required	
Technical conditions and measures at process level to prevent release	
not required	
Technical conditions and measures to control dispersion from the source towards the worker	
not required	
Organisational measures to prevent /limit releases, dispersion and exposure	
not required	
Conditions and measures related to personal protection, hygiene and health evaluation	
not required	

3. Exposure estimation and reference to its source
3.1 Health
The ECETOC TRA tool has been used to estimate workplace exposures unless otherwise indicated
3.2. Environment
not required
4. Guidance to check compliance with the Exposure Scenario
4.1. Health
Predicted exposures are not expected to exceed the DN(M)EL when the Risk Management Measures/Operational Conditions outlined in Section 2 are implemented. Where other Risk Management Measures/Operational Conditions are adopted, then users should ensure that risks are managed to at least equivalent levels.
4.2. Environment
not required

Exposure Scenario 11

1. Exposure scenario	
Title	Professional use in oilfield drilling and production operations
Sector of use	SU22 - Public domain (administration, education, entertainment, services, craftsmen)
Process category	PROC4 - Use in batch and other process (synthesis) where opportunity for exposure arises PROC5 - Mixing or blending in batch processes for formulation of preparations and articles (multistage and/ or significant contact) PROC8a - Transfer of substance or preparation (charging/ discharging) from/ to vessels/ large containers at non-dedicated facilities PROC8b - Transfer of substance or preparation (charging/ discharging) from/ to vessels/ large containers at dedicated facilities
Product category	
Article category	
Environmental release category	ERC9b - Wide dispersive outdoor use of substances in closed systems
Processes, tasks, activities covered	Oil field well drilling and production operations (including drilling muds and well cleaning) including material transfers, on-site formulation, well head operations, shaker room activities and related maintenance.
2. Operational conditions and risk management measures	
2.1. Control of worker exposure	
2.1.1. Control of worker exposure : PROC 4	
Frequency and duration of use	
Exposure duration per day	1-4h
Frequency of exposure	< 240 d/y
Product characteristics	
Physical Form (at time of use)	Liquid
Vapour pressure	169,27 hPa
Dustiness	not applicable
Concentration of the Substance in Mixture/Article	Pure substance
Amount used	Not relevant
Human factors not influenced by risk management	
Dermal exposure	Palms of both hands (480 cm ²)
Other operational conditions affecting workers exposure	
Use	Professional use
Indoor/Outdoor	Indoor use
Technical conditions and measures at process level to prevent release	
none	
Technical conditions and measures to control dispersion from the source towards the worker	
Local exhaust	yes Effectiveness : 80%
Organisational measures to prevent /limit releases, dispersion and exposure	
Not relevant (ECETOC TRA)	
Conditions and measures related to personal protection, hygiene and health evaluation	
Respiratory protection	Not required
2.1.2. Control of worker exposure : PROC 5	
Frequency and duration of use	
Exposure duration per day	> 4h
Frequency of exposure	< 240 d/y
Product characteristics	
Physical Form (at time of use)	Liquid

Vapour pressure	169,27 hPa
Dustiness	not applicable
Concentration of the Substance in Mixture/Article	< 5%
Amount used	Not relevant
Human factors not influenced by risk management	
Dermal exposure	Palms of both hands (480 cm ²)
Other operational conditions affecting workers exposure	
Use	Professional use
Indoor/Outdoor	Indoor use
Technical conditions and measures at process level to prevent release	
none	
Technical conditions and measures to control dispersion from the source towards the worker	
Local exhaust	no
Organisational measures to prevent /limit releases, dispersion and exposure	
Not relevant (ECETOC TRA)	
Conditions and measures related to personal protection, hygiene and health evaluation	
Respiratory protection	Not required
2.1.2. Control of worker exposure : PROC 8a & 8b	
Frequency and duration of use	
Exposure duration per day	> 4h
Frequency of exposure	< 240 d/y
Product characteristics	
Physical Form (at time of use)	Liquid
Vapour pressure	169,27 hPa
Dustiness	not applicable
Concentration of the Substance in Mixture/Article	< 5%
Amount used	Not relevant
Human factors not influenced by risk management	
Dermal exposure	Palms of both hands (480 cm ²) (PROC 8b) Both hands (960cm ²) (PROC 8a)
Other operational conditions affecting workers exposure	
Use	Professional use
Indoor/Outdoor	Indoor use
Technical conditions and measures at process level to prevent release	
none	
Technical conditions and measures to control dispersion from the source towards the worker	
Local exhaust	no
Organisational measures to prevent /limit releases, dispersion and exposure	
Not relevant (ECETOC TRA)	
Conditions and measures related to personal protection, hygiene and health evaluation	
Respiratory protection	Not required
2.2. Control of environmental exposure	
not required	
Human factors not influenced by risk management	
not required	
Other operational conditions affecting workers exposure	
not required	
Technical conditions and measures at process level to prevent release	
not required	
Technical conditions and measures to control dispersion from the source towards the worker	

not required
Organisational measures to prevent /limit releases, dispersion and exposure
Other operational conditions affecting workers exposure
Conditions and measures related to personal protection, hygiene and health evaluation
not required
3. Exposure estimation and reference to its source
3.1. Health
The ECETOC TRA tool has been used to estimate workplace exposures unless otherwise indicated
3.2. Environment
not required
4. Guidance to check compliance with the Exposure Scenario
4.1. Health
Predicted exposures are not expected to exceed the DN(M)EL when the Risk Management Measures/Operational Conditions outlined in Section 2 are implemented. Where other Risk Management Measures/Operational Conditions are adopted, then users should ensure that risks are managed to at least equivalent levels.
4.2. Environment
not required

Exposure Scenario 12

1. Exposure scenario	
Title	Consumer use of cleaning agents and de-icers (liquid products)
Sector of use	SU 21 - Consumer uses: Private households (= general public = consumers)
Process category	
Product category	PC4 - Anti-Freeze and de-icing products
	PC35 - Washing and cleaning products (including solvent based products)
Article category	
Environmental release category	ERC8a - Wide dispersive indoor use of processing aids in open systems ERC8d - Wide dispersive outdoor use of processing aids in open systems
Processes, tasks, activities covered	Application of cleaning agents and de-icers as liquid non-spray products.
Exposure Assessment Method	ConsExpo (v4.1)
2. Operational conditions and risk management measures	
2.1. Control of consumer exposure	
2.1.1. Control of consumer exposure	
Frequency and duration of use	
Exposure duration per day	240' (ConsExpo Default)
Frequency of exposure	104 d/y (ConsExpo Default)
Application duration	20' (ConsExpo Default)
Product characteristics	
Physical Form (at time of use)	Liquid
Vapour pressure	169,27 hPa
Dustiness	not applicable
Concentration of the Substance in Mixture/Article	Pure substance
Molecular Weight	18g/mol (ConsExpo Default)
Mass transfer rate	0,413 m/min (Thibodauxs's method)
Amount used	Maximum applied quantity per task : 100 g
Human factors not influenced by risk management	
Dermal exposure	1900 cm ²
Inhalation Rate	24,1 l/min
Other given operational conditions affecting consumers exposure	
Room Volume	58 m ³
Ventilation Rate	0,5 l/h
Release Area	5 m ²
Conditions and measures related to information and behavioural advice to consumers	
none	
Conditions and measures related to personal protection, hygiene and health evaluation	
none	
2.2. Control of environmental exposure	
not required	
Human factors not influenced by risk management	
not required	
Other operational conditions affecting workers exposure	
not required	
Technical conditions and measures at process level to prevent release	
not required	
Technical conditions and measures to control dispersion from the source towards the worker	
not required	

Organisational measures to prevent /limit releases, dispersion and exposure
not required
Conditions and measures related to personal protection, hygiene and health evaluation
not required
3. Exposure estimation and reference to its source
3.1. Health
The ECETOC TRA tool has been used to estimate workplace exposures unless otherwise indicated
3.2. Environment
not required
4. Guidance to check compliance with the Exposure Scenario
4.1. Health
Predicted exposures are not expected to exceed the DN(M)EL when the Risk Management Measures/Operational Conditions outlined in Section 2 are implemented. Where other Risk Management Measures/Operational Conditions are adopted, then users should ensure that risks are managed to at least equivalent levels.
4.2. Environment
not required

Exposure Scenario 13

1. Exposure scenario	
Title	Consumer use of cleaning agents and de-icers (spray products)
Sector of use	SU 21 - Consumer uses: Private households (= general public = consumers)
Process category	
Product category	PC4 - Anti-Freeze and de-icing products
	PC35 - Washing and cleaning products (including solvent based products)
Article category	
Environmental release category	ERC8a - Wide dispersive indoor use of processing aids in open systems ERC8d - Wide dispersive outdoor use of processing aids in open systems
Processes, tasks, activities covered	Application of cleaning agents and de-icers as liquid non-spray products.
Exposure Assessment Method	ConsExpo (v4.1)
2. Operational conditions and risk management measures	
2.1. Control of worker exposure	
2.1.1. Control of consumer exposure	
Frequency and duration of use	
Exposure duration per day	60' (ConsExpo Default)
Frequency of exposure	365 d/y (ConsExpo Default)
Application duration	10' (ConsExpo Default)
Duration of the activity: Spraying	0,41' (ConsExpo Default)
Product characteristics: Product characteristics	
Physical Form (at time of use)	Liquid
Vapour pressure	169,27 hPa
Dustiness	not applicable
Concentration of the Substance in Mixture/Article	< 5%
Molecular Weight	22 g/mol (ConsExpo Default)
Mass transfer rate	0,413 m/min (Thibodauxs's method)
Amount used	Maximum applied quantity per task : 16,2 g
Human factors not influenced by risk management	
Dermal exposure	
<i>Use by spraying</i>	Both hands (960cm ²)
<i>Cleaning techniques</i>	Palm of one hand (240cm ²)
Inhalation Rate	24,1 l/min
Other given operational conditions affecting consumers exposure	
Room Volume	15 m ³
Room Height	2,5 m
Ventilation Rate	2,5 l/h
Release Area	1,71 m ²
Conditions and measures related to information and behavioural advice to consumers	
Spraying away from exposed person	
Conditions and measures related to personal protection, hygiene and health evaluation	
none	
2.2. Control of environmental exposure	
not required	
Human factors not influenced by risk management	
not required	
Other operational conditions affecting workers exposure	
not required	

Technical conditions and measures at process level to prevent release
not required
Technical conditions and measures to control dispersion from the source towards the worker
not required
Organisational measures to prevent /limit releases, dispersion and exposure
not required
Conditions and measures related to personal protection, hygiene and health evaluation
not required
3. Exposure estimation and reference to its source
3.1. Health
The ECETOC TRA tool has been used to estimate workplace exposures unless otherwise indicated
3.2. Environment
not required
4. Guidance to check compliance with the Exposure Scenario
4.1. Health
Predicted exposures are not expected to exceed the DN(M)EL when the Risk Management Measures/Operational Conditions outlined in Section 2 are implemented. Where other Risk Management Measures/Operational Conditions are adopted, then users should ensure that risks are managed to at least equivalent levels.
4.2. Environment
not required

not required
Human factors not influenced by risk management
not required
Other operational conditions affecting workers exposure
not required
Technical conditions and measures at process level to prevent release
not required
Technical conditions and measures to control dispersion from the source towards the worker
not required
Organisational measures to prevent /limit releases, dispersion and exposure
not required
Conditions and measures related to personal protection, hygiene and health evaluation
not required
3. Exposure estimation and reference to its source
3.1. Health
The ECETOC TRA tool has been used to estimate workplace exposures unless otherwise indicated
3.2. Environment
not required
4. Guidance to check compliance with the Exposure Scenario
4.1. Health
Predicted exposures are not expected to exceed the DN(M)EL when the Risk Management Measures/Operational Conditions outlined in Section 2 are implemented. Where other Risk Management Measures/Operational Conditions are adopted, then users should ensure that risks are managed to at least equivalent levels.
4.2. Environment
not required

Exposure Scenario 7

1. Exposure scenario	
Title	Professional use in cleaning agents
Sector of use	SU 3 - Industrial uses: Uses of substances as such or in preparations at industrial sites SU8 - Manufacture of bulk, large scale chemicals (including petroleum products) SU9 - Manufacture of fine chemicals SU 10 - Formulation [mixing] of preparations and/ or re-packaging (excluding alloys)
Process category	PROC1 - Use in closed process, no likelihood of exposure PROC2 - Use in closed, continuous process with occasional controlled exposure PROC3 - Use in closed batch process (synthesis or formulation) PROC4 - Use in batch and other process (synthesis) where opportunity for exposure arises PROC8a - Transfer of substance or preparation (charging/ discharging) from/ to vessels/ large containers at non-dedicated facilities PROC8b - Transfer of substance or preparation (charging/ discharging) from/ to vessels/ large containers at dedicated facilities PROC10 - Roller application or brushing PROC11 - Non industrial spraying PROC13 - Treatment of articles by dipping and pouring
Product category	
Article category	
Environmental release category	ERC8a - Wide dispersive indoor use of processing aids in open systems ERC8d - Wide dispersive outdoor use of processing aids in open systems
Processes, tasks, activities covered	Covers the use as a component of cleaning products including pouring/unloading from drums or containers; and exposures during mixing/diluting in the preparatory phase and cleaning activities (including spraying, brushing, dipping, wiping automated and by hand).
2. Operational conditions and risk management measures	
2.1. Control of worker exposure	
2.1.1. Control of worker exposure : PROC 1,2,3 & 4	
Frequency and duration of use	
Exposure duration per day	>4h (PROC 1,2,3) 1-4h (PROC 4)
Frequency of exposure	< 240 d/y
Product characteristics	
Physical Form (at time of use)	Liquid
Vapour pressure	169,27 hPa
Dustiness	not applicable
Concentration of the Substance in Mixture/Article	Pure substance
Amount used	Not relevant
Human factors not influenced by risk management	
Dermal exposure	Palm of one hand (240cm ²) (PROC 1 & 3) Palms of both hands (480 cm ²) (PROC 2&4)
Other operational conditions affecting workers exposure	
Use	Industrial use
Indoor/Outdoor	Indoor use
Technical conditions and measures at process level to prevent release	
none	
Technical conditions and measures to control dispersion from the source towards the worker	

Local exhaust	no (PROC 1)
	yes Effectiveness : 80% (PROC 2,3&4)
Organisational measures to prevent /limit releases, dispersion and exposure	
Not relevant (ECETOC TRA)	
Conditions and measures related to personal protection, hygiene and health evaluation	
Respiratory protection	Not required
2.1.2. Control of worker exposure : PROC 8a & 8b	
Frequency and duration of use	
Exposure duration per day	> 4h
Frequency of exposure	< 240 d/y
Product characteristics	
Physical Form (at time of use)	Liquid
Vapour pressure	169,27 hPa
Dustiness	not applicable
Concentration of the Substance in Mixture/Article	> 5%
Amount used	Not relevant
Human factors not influenced by risk management	
Dermal exposure	Palms of both hands (480 cm ²) (PROC 8b)
	Both hands (960cm ²) (PROC 8a)
Other operational conditions affecting workers exposure	
Use	Professional use
Indoor/Outdoor	Indoor use
Technical conditions and measures at process level to prevent release	
none	
Technical conditions and measures to control dispersion from the source towards the worker	
Local exhaust	no
Organisational measures to prevent /limit releases, dispersion and exposure	
Not relevant (ECETOC TRA)	
Conditions and measures related to personal protection, hygiene and health evaluation	
Respiratory protection	Not required
2.1.3. Control of worker exposure : PROC 10	
Frequency and duration of use	
Exposure duration per day	> 4h
Frequency of exposure	< 240 d/y
Product characteristics	
Physical Form (at time of use)	Liquid
Vapour pressure	169,27 hPa
Dustiness	not applicable
Concentration of the Substance in Mixture/Article	< 5%
Amount used	Not relevant
Human factors not influenced by risk management	
Dermal exposure	Both hands (960cm ²)
Other operational conditions affecting workers exposure	
Indoor/Outdoor	Indoor use
Technical conditions and measures at process level to prevent release	
none	
Technical conditions and measures to control dispersion from the source towards the worker	
Local exhaust	no
Organisational measures to prevent /limit releases, dispersion and exposure	
Not relevant (ECETOC TRA)	

Conditions and measures related to personal protection, hygiene and health evaluation	
Respiratory protection	Not required
2.1.3. Control of worker exposure : PROC 11	
Frequency and duration of use	
Exposure duration per day	200' Value taken from Riskofderm; not relevant in the Stoffenmanager
Frequency of exposure	1-4 d/w
Product characteristics	
Physical Form (at time of use)	Liquid
Vapour pressure	169,27 hPa
Dustiness	not applicable
Concentration of the Substance in Mixture/Article	< 3%
Amount used	Flow rate : 5l/min application rate
Human factors not influenced by risk management	
Dermal exposure	Both hands (960cm ²)
Other operational conditions affecting workers exposure	
Indoor/Outdoor	Indoor use
Room Volume	100-1000m ³
Technical conditions and measures at process level to prevent release	
segragation	Worker is not within one meter of the source
Technical conditions and measures to control dispersion from the source towards the worker	
Spraying process	Level or downward
Direction of airflow that comes from the source	away from the worker
Distance of worker from the source	more than one meter
Organisational measures to prevent /limit releases, dispersion and exposure	
Regular cleaning of equipment, work area and clothing.	yes
Conditions and measures related to personal protection, hygiene and health evaluation	
Respiratory protection	Not required
Protective gloves	yes Effectiveness : 90%
2.1.4. Control of worker exposure : PROC 13	
Frequency and duration of use	
Exposure duration per day	> 4h
Frequency of exposure	< 240 d/y
Product characteristics	
Physical Form (at time of use)	Liquid
Vapour pressure	
Dustiness	not applicable
Concentration of the Substance in Mixture/Article	Pure substance
Amount used	Not relevant
Human factors not influenced by risk management	
Dermal exposure	Palms of both hands (480 cm ²)
Other operational conditions affecting workers exposure	
Indoor/Outdoor	Indoor use
Technical conditions and measures at process level to prevent release	
none	
Technical conditions and measures to control dispersion from the source towards the worker	
Local exhaust	yes Effectiveness : 80%
Organisational measures to prevent /limit releases, dispersion and exposure	
Not relevant (ECETOC TRA)	
Conditions and measures related to personal protection, hygiene and health evaluation	

Respiratory protection	Not required
2.2. Control of environmental exposure	
not required	
Human factors not influenced by risk management	
not required	
Other operational conditions affecting workers exposure	
not required	
Technical conditions and measures at process level to prevent release	
not required	
Technical conditions and measures to control dispersion from the source towards the worker	
not required	
Organisational measures to prevent /limit releases, dispersion and exposure	
not required	
Conditions and measures related to personal protection, hygiene and health evaluation	
not required	
3. Exposure estimation and reference to its source	
3.1. Health	
The ECETOC TRA tool has been used to estimate workplace exposures unless otherwise indicated	
3.2. Environment	
not required	
4. Guidance to check compliance with the Exposure Scenario	
4.1. Health	
Predicted exposures are not expected to exceed the DN(M)EL when the Risk Management Measures/Operational Conditions outlined in Section 2 are implemented. Where other Risk Management Measures/Operational Conditions are adopted, then users should ensure that risks are managed to at least equivalent levels.	
4.2. Environment	
not required	

Exposure Scenario 8

1. Exposure scenario	
Title	Use as a laboratory reagent in industrial settings
Sector of use	SU 3 - Industrial uses: Uses of substances as such or in preparations at industrial sites
Process category	PROC10 - Roller application or brushing PROC15 - Use as laboratory reagent
Product category	
Article category	
Environmental release category	ERC4 - Industrial use of processing aids in processes and products, not becoming part of articles
Processes, tasks, activities covered	Use of the substance within laboratory settings, including material transfers and equipment cleaning
2. Operational conditions and risk management measures	
2.1. Control of worker exposure	
2.1.1. Control of worker exposure : PROC 10	
Frequency and duration of use	
Exposure duration per day	> 4h
Frequency of exposure	< 240 d/y
Product characteristics	
Physical Form (at time of use)	Liquid
Vapour pressure	169,27 hPa
Dustiness	not applicable
Concentration of the Substance in Mixture/Article	80%
Amount used	Not relevant
Human factors not influenced by risk management	
Dermal exposure	Both hands (960cm ²)
Other operational conditions affecting workers exposure	
Use	Industrial use
Indoor/Outdoor	Indoor use
Technical conditions and measures at process level to prevent release	
none	
Technical conditions and measures to control dispersion from the source towards the worker	
Local exhaust	yes Effectiveness : 90%
Organisational measures to prevent /limit releases, dispersion and exposure	
Not relevant (ECETOC TRA)	
Conditions and measures related to personal protection, hygiene and health evaluation	
Respiratory protection	Not required
Not relevant (ECETOC TRA)	
Conditions and measures related to personal protection, hygiene and health evaluation	
Respiratory protection	Not required
2.1.2. Control of worker exposure : PROC 15	
Frequency and duration of use	
Exposure duration per day	>4h
Frequency of exposure	< 240 d/y
Product characteristics	
Physical Form (at time of use)	Liquid
Vapour pressure	169,27 hPa
Dustiness	not applicable

Concentration of the Substance in Mixture/Article	Pure substance
Amount used	Not relevant
Human factors not influenced by risk management	
Dermal exposure	Palm of one hand (240cm ²)
Other operational conditions affecting workers exposure	
Use	Industrial use
Indoor/Outdoor	Indoor use
Technical conditions and measures at process level to prevent release	
none	
Technical conditions and measures to control dispersion from the source towards the worker	
Local exhaust	yes Effectiveness : 90%
Organisational measures to prevent /limit releases, dispersion and exposure	
Not relevant (ECETOC TRA)	
Conditions and measures related to personal protection, hygiene and health evaluation	
Respiratory protection	Not required
2.2. Control of environmental exposure	
not required	
Human factors not influenced by risk management	
not required	
Other operational conditions affecting workers exposure	
not required	
Technical conditions and measures at process level to prevent release	
not required	
Technical conditions and measures to control dispersion from the source towards the worker	
not required	
Organisational measures to prevent /limit releases, dispersion and exposure	
not required	
Conditions and measures related to personal protection, hygiene and health evaluation	
not required	
3. Exposure estimation and reference to its source	
3.1. Health	
The ECETOC TRA tool has been used to estimate workplace exposures unless otherwise indicated	
3.2. Environment	
not required	
4. Guidance to check compliance with the Exposure Scenario	
4.1. Health	
Predicted exposures are not expected to exceed the DN(M)EL when the Risk Management Measures/Operational Conditions outlined in Section 2 are implemented. Where other Risk Management Measures/Operational Conditions are adopted, then users should ensure that risks are managed to at least equivalent levels.	
4.2. Environment	
not required	

Exposure Scenario 9

1. Exposure scenario	
Title	Use as a laboratory reagent in professional settings
Sector of use	SU22 - Public domain (administration, education, entertainment, services, craftsmen)
Process category	PROC10 - Roller application or brushing PROC15 - Use as laboratory reagent
Product category	
Article category	
Environmental release category	ERC8a - Wide dispersive indoor use of processing aids in open systems
Processes, tasks, activities covered	Use of small quantities within laboratory settings, including material transfers and equipment cleaning
2. Operational conditions and risk management measures	
2.1. Control of worker exposure	
2.1.1. Control of worker exposure : PROC 10	
Frequency and duration of use	
Exposure duration per day	> 4h
Frequency of exposure	< 240 d/y
Product characteristics	
Physical Form (at time of use)	Liquid
Vapour pressure	169,27 hPa
Dustiness	not applicable
Concentration of the Substance in Mixture/Article	< 5%
Amount used	Not relevant
Human factors not influenced by risk management	
Dermal exposure	Both hands (960cm ²)
Other operational conditions affecting workers exposure	
Use	Professional use
Indoor/Outdoor	Indoor use
Technical conditions and measures at process level to prevent release	
none	
Technical conditions and measures to control dispersion from the source towards the worker	
Local exhaust	no
Organisational measures to prevent /limit releases, dispersion and exposure	
Not relevant (ECETOC TRA)	
Conditions and measures related to personal protection, hygiene and health evaluation	
Respiratory protection	Not required
Not relevant (ECETOC TRA)	
Conditions and measures related to personal protection, hygiene and health evaluation	
Respiratory protection	Not required
2.1.2. Control of worker exposure : PROC 15	
Frequency and duration of use	
Exposure duration per day	> 4h
Frequency of exposure	< 240 d/y
Product characteristics	
Physical Form (at time of use)	Liquid
Vapour pressure	169,27 hPa
Dustiness	not applicable
Concentration of the Substance in Mixture/Article	Pure substance

Amount used	Not relevant
Human factors not influenced by risk management	
Dermal exposure	Palm of one hand (240cm ²)
Other operational conditions affecting workers exposure	
Use	Professional use
Indoor/Outdoor	Indoor use
Technical conditions and measures at process level to prevent release	
none	
Technical conditions and measures to control dispersion from the source towards the worker	
Local exhaust	yes Effectiveness : 80%
Organisational measures to prevent /limit releases, dispersion and exposure	
Not relevant (ECETOC TRA)	
Conditions and measures related to personal protection, hygiene and health evaluation	
Respiratory protection	Not required
2.2. Control of environmental exposure	
not required	
Human factors not influenced by risk management	
not required	
Other operational conditions affecting workers exposure	
not required	
Technical conditions and measures at process level to prevent release	
not required	
Technical conditions and measures to control dispersion from the source towards the worker	
not required	
Organisational measures to prevent /limit releases, dispersion and exposure	
not required	
Conditions and measures related to personal protection, hygiene and health evaluation	
not required	
3. Exposure estimation and reference to its source	
3.1. Health	
The ECETOC TRA tool has been used to estimate workplace exposures unless otherwise indicated	
3.2. Environment	
not required	
4. Guidance to check compliance with the Exposure Scenario	
4.1. Health	
Predicted exposures are not expected to exceed the DN(M)EL when the Risk Management Measures/Operational Conditions outlined in Section 2 are implemented. Where other Risk Management Measures/Operational Conditions are adopted, then users should ensure that risks are managed to at least equivalent levels.	
4.2. Environment	
not required	

Exposure Scenario 4

1. Exposure scenario	
Title	Use as a fuel in industrial settings
Sector of use	SU3 - Industrial Manufacturing (all)
Process category	PROC1 - Use in closed process, no likelihood of exposure PROC2 - Use in closed, continuous process with occasional controlled exposure PROC3 - Use in closed batch process (synthesis or formulation) PROC8a - Transfer of substance or preparation (charging/ discharging) from/ to vessels/ large containers at non-dedicated facilities PROC8b - Transfer of substance or preparation (charging/ discharging) from/ to vessels/ large containers at dedicated facilities PROC16 - Using material as fuel sources, limited exposure to unburned product to be expected PROC19 - Hand-mixing with intimate contact and only PPE available
Product category	
Article category	
Environmental release category	ERC8b - Wide dispersive indoor use of reactive substances in open systems
Processes, tasks, activities covered	Covers the use as a fuel (or fuel additive) and includes activities associated with its transfer, use, equipment maintenance and handling of waste
2. Operational conditions and risk management measures	
2.1. Control of worker exposure	
2.1.1. Control of worker exposure : PROC 1,2 & 3	
Frequency and duration of use	
Exposure duration per day	>4h
Frequency of exposure	< 240 d/y
Product characteristics	
Physical Form (at time of use)	Liquid
Vapour pressure	169,27 hPa
Dustiness	not applicable
Concentration of the Substance in Mixture/Article	Pure substance
Amount used	Not relevant
Human factors not influenced by risk management	
Dermal exposure	Palm of one hand (240cm ²) (PROC 1 & 3) Palms of both hands (480 cm ²) (PROC 2)
Other operational conditions affecting workers exposure	
Use	Industrial use
Indoor/Outdoor	Indoor use
Technical conditions and measures at process level to prevent release	
none	
Technical conditions and measures to control dispersion from the source towards the worker	
Local exhaust	no (PROC 1) yes Effectiveness : 90% (PROC 2 & 3)
Organisational measures to prevent /limit releases, dispersion and exposure	
Not relevant (ECETOC TRA)	
Conditions and measures related to personal protection, hygiene and health evaluation	
Respiratory protection	Not required
2.1.2. Control of worker exposure : PROC 8a & 8b	
Frequency and duration of use	
Exposure duration per day	> 4h

Frequency of exposure	< 240 d/y
Product characteristics	
Physical Form (at time of use)	Liquid
Vapour pressure	169,27 hPa
Dustiness	not applicable
Concentration of the Substance in Mixture/Article	Pure substance
Amount used	Not relevant
Human factors not influenced by risk management	
Dermal exposure	Palms of both hands (480 cm ²) (PROC 8b)
	Both hands (960cm ²) (PROC 8a)
Other operational conditions affecting workers exposure	
Use	Industrial use
Indoor/Outdoor	Indoor use
Technical conditions and measures at process level to prevent release	
none	
Technical conditions and measures to control dispersion from the source towards the worker	
Local exhaust	yes Effectiveness : 90% (PROC 8a)
	yes Effectiveness : 97% (PROC 8b)
Organisational measures to prevent /limit releases, dispersion and exposure	
Not relevant (ECETOC TRA)	
Conditions and measures related to personal protection, hygiene and health evaluation	
Respiratory protection	Not required
2.1.3. Control of worker exposure : PROC 16	
Frequency and duration of use	
Exposure duration per day	> 4h
Frequency of exposure	< 240 d/y
Product characteristics	
Physical Form (at time of use)	Liquid
Vapour pressure	169,27 hPa
Dustiness	not applicable
Concentration of the Substance in Mixture/Article	Pure substance
Amount used	Not relevant
Human factors not influenced by risk management	
Dermal exposure	Palm of one hand (240cm ²)
Other operational conditions affecting workers exposure	
Use	Industrial use
Indoor/Outdoor	Indoor use
Technical conditions and measures at process level to prevent release	
none	
Technical conditions and measures to control dispersion from the source towards the worker	
Local exhaust	no
Organisational measures to prevent /limit releases, dispersion and exposure	
Not relevant (ECETOC TRA)	
Conditions and measures related to personal protection, hygiene and health evaluation	
Respiratory protection	Not required
2.1.4. Control of worker exposure : PROC 19	
Frequency and duration of use	
Exposure duration per day	> 4h
Frequency of exposure	< 240 d/y

Product characteristics	
Physical Form (at time of use)	Liquid
Vapour pressure	169,27 hPa
Dustiness	not applicable
Concentration of the Substance in Mixture/Article	Pure substance
Amount used	Not relevant
Human factors not influenced by risk management	
Dermal exposure	both hands and forearms (1980 cm ²)
Other operational conditions affecting workers exposure	
Use	Industrial use
Indoor/Outdoor	
Technical conditions and measures at process level to prevent release	
none	
Technical conditions and measures to control dispersion from the source towards the worker	
Local exhaust	no
Organisational measures to prevent /limit releases, dispersion and exposure	
Not relevant (ECETOC TRA)	
Conditions and measures related to personal protection, hygiene and health evaluation	
Respiratory protection	Not required
Protective gloves	yes
2.2. Control of environmental exposure	
not required	
Human factors not influenced by risk management	
not required	
Other operational conditions affecting workers exposure	
not required	
Technical conditions and measures at process level to prevent release	
not required	
Technical conditions and measures to control dispersion from the source towards the worker	
not required	
Organisational measures to prevent /limit releases, dispersion and exposure	
not required	
Conditions and measures related to personal protection, hygiene and health evaluation	
not required	
3. Exposure estimation and reference to its source	
3.1. Health	
The ECETOC TRA tool has been used to estimate workplace exposures unless otherwise indicated	
3.2. Environment	
not required	
4. Guidance to check compliance with the Exposure Scenario	
4.1. Health	
Predicted exposures are not expected to exceed the DN(M)EL when the Risk Management Measures/Operational Conditions outlined in Section 2 are implemented. Where other Risk Management Measures/Operational Conditions are adopted, then users should ensure that risks are managed to at least equivalent levels.	
4.2. Environment	
not required	

Exposure Scenario 5

1. Exposure scenario	
Title	Use as a fuel in professional settings
Sector of use	SU22 - Public domain (administration, education, entertainment, services, craftsmen)
Process category	PROC1 - Use in closed process, no likelihood of exposure PROC2 - Use in closed, continuous process with occasional controlled exposure PROC3 - Use in closed batch process (synthesis or formulation) PROC8a - Transfer of substance or preparation (charging/ discharging) from/ to vessels/ large containers at non-dedicated facilities PROC8b - Transfer of substance or preparation (charging/ discharging) from/ to vessels/ large containers at dedicated facilities PROC16 - Using material as fuel sources, limited exposure to unburned product to be expected PROC19 - Hand-mixing with intimate contact and only PPE available
Product category	
Article category	
Environmental release category	ERC8b - Wide dispersive indoor use of reactive substances in open systems ERC8e - Wide dispersive outdoor use of reactive substances in open systems
Processes, tasks, activities covered	Covers the use as a fuel (or fuel additive) and includes activities associated with its transfer, use, equipment maintenance and handling of waste
2. Operational conditions and risk management measures	
2.1. Control of worker exposure	
2.1.1. Control of worker exposure : PROC 1,2 & 3	
Frequency and duration of use	
Exposure duration per day	>4h
Frequency of exposure	< 240 d/y
Product characteristics	
Physical Form (at time of use)	Liquid
Vapour pressure	169,27 hPa
Dustiness	not applicable
Concentration of the Substance in Mixture/Article	Pure substance
Amount used	Not relevant
Human factors not influenced by risk management	
Dermal exposure	Palm of one hand (240cm ²) (PROC 1&3) Palms of both hands (480 cm ²) (PROC 2)
Other operational conditions affecting workers exposure	
Use	Professional use
Indoor/Outdoor	Indoor use
Technical conditions and measures at process level to prevent release	
none	
Technical conditions and measures to control dispersion from the source towards the worker	
Local exhaust	no (PROC 1) yes Effectiveness : 80% (PROC 2 & 3)
Organisational measures to prevent /limit releases, dispersion and exposure	
Not relevant (ECETOC TRA)	
Conditions and measures related to personal protection, hygiene and health evaluation	
Respiratory protection	Not required
2.1.2. Control of worker exposure : PROC 8a & 8b	
Frequency and duration of use	
Exposure duration per day	> 4h

Frequency of exposure	< 240 d/y
Product characteristics	
Physical Form (at time of use)	Liquid
Vapour pressure	169,27 hPa
Dustiness	not applicable
Concentration of the Substance in Mixture/Article	> 5%
Amount used	Not relevant
Human factors not influenced by risk management	
Dermal exposure	Palms of both hands (480 cm ²) (PROC 8b)
	Both hands (960cm ²) (PROC 8a)
Other operational conditions affecting workers exposure	
Use	Professional use
Indoor/Outdoor	Indoor use
Technical conditions and measures at process level to prevent release	
none	
Technical conditions and measures to control dispersion from the source towards the worker	
Local exhaust	no
Organisational measures to prevent /limit releases, dispersion and exposure	
Not relevant (ECETOC TRA)	
Conditions and measures related to personal protection, hygiene and health evaluation	
Respiratory protection	Not required
2.1.3. Control of worker exposure : PROC 16	
Frequency and duration of use	
Exposure duration per day	>4h
Frequency of exposure	< 240 d/y
Product characteristics	
Physical Form (at time of use)	Liquid
Vapour pressure	169,27 hPa
Dustiness	not applicable
Concentration of the Substance in Mixture/Article	Pure substance
Amount used	Not relevant
Human factors not influenced by risk management	
Dermal exposure	Palm of one hand (240cm ²)
Other operational conditions affecting workers exposure	
Use	Professional use
Indoor/Outdoor	Indoor use
Technical conditions and measures at process level to prevent release	
none	
Technical conditions and measures to control dispersion from the source towards the worker	
Local exhaust	yes Effectiveness : 90%
Organisational measures to prevent /limit releases, dispersion and exposure	
Not relevant (ECETOC TRA)	
Conditions and measures related to personal protection, hygiene and health evaluation	
Respiratory protection	Not required
2.1.4. Control of worker exposure : PROC 19	
Frequency and duration of use	
Exposure duration per day	1 - 4h
Frequency of exposure	< 240 d/y
Product characteristics	

Physical Form (at time of use)	Liquid
Vapour pressure	169,27 hPa
Dustiness	not applicable
Concentration of the Substance in Mixture/Article	< 10 %
Amount used	Not relevant
Human factors not influenced by risk management	
Dermal exposure	both hands and forearms (1980 cm ²)
Other operational conditions affecting workers exposure	
Use	Professional use
Indoor/Outdoor	Indoor use
Technical conditions and measures at process level to prevent release	
none	
Technical conditions and measures to control dispersion from the source towards the worker	
Local exhaust	no
Organisational measures to prevent /limit releases, dispersion and exposure	
Not relevant (ECETOC TRA)	
Conditions and measures related to personal protection, hygiene and health evaluation	
Respiratory protection	Not required
Protective gloves	yes
2.2. Control of environmental exposure	
not required	
Human factors not influenced by risk management	
not required	
Other operational conditions affecting workers exposure	
not required	
Technical conditions and measures at process level to prevent release	
not required	
Technical conditions and measures to control dispersion from the source towards the worker	
not required	
Organisational measures to prevent /limit releases, dispersion and exposure	
not required	
Conditions and measures related to personal protection, hygiene and health evaluation	
not required	
3. Exposure estimation and reference to its source	
3.1. Health	
The ECETOC TRA tool has been used to estimate workplace exposures unless otherwise indicated	
3.2. Environment	
not required	
4. Guidance to check compliance with the Exposure Scenario	
4.1. Health	
Predicted exposures are not expected to exceed the DN(M)EL when the Risk Management Measures/Operational Conditions outlined in Section 2 are implemented. Where other Risk Management Measures/Operational Conditions are adopted, then users should ensure that risks are managed to at least equivalent levels.	
4.2. Environment	
not required	

Exposure Scenario 6

1. Exposure scenario	
Title	Industrial use in cleaning agents
Sector of use	SU 3 - Industrial uses: Uses of substances as such or in preparations at industrial sites
Process category	PROC1 - Use in closed process, no likelihood of exposure PROC2 - Use in closed, continuous process with occasional controlled exposure PROC3 - Use in closed batch process (synthesis or formulation) PROC4 - Use in batch and other process (synthesis) where opportunity for exposure arises PROC7 - Industrial spraying PROC8a - Transfer of substance or preparation (charging/ discharging) from/ to vessels/ large containers at non-dedicated facilities PROC8b - Transfer of substance or preparation (charging/ discharging) from/ to vessels/ large containers at dedicated facilities PROC10 - Roller application or brushing PROC13 - Treatment of articles by dipping and pouring
Product category	
Article category	
Environmental release category	ERC4 - Industrial use of processing aids in processes and products, not becoming part of articles
Processes, tasks, activities covered	Covers the use as a component of cleaning products including transfer from storage, pouring/unloading from drums or containers. Exposures during mixing/diluting in the preparatory phase and cleaning activities (including spraying, brushing, dipping, wiping, automated and by hand), related equipment cleaning and maintenance.
2. Operational conditions and risk management measures	
2.1. Control of worker exposure	
2.1.1. Control of worker exposure : PROC 1,2,3 & 4	
Frequency and duration of use	
Exposure duration per day	> 4h
Frequency of exposure	< 240 d/y
Product characteristics	
Physical Form (at time of use)	Liquid
Vapour pressure	169,27 hPa
Dustiness	not applicable
Concentration of the Substance in Mixture/Article	Pure substance
Amount used	Not relevant
Human factors not influenced by risk management	
Dermal exposure	Palm of one hand (240cm ²) (PROC 1&3) Palms of both hands (480 cm ²) (PROC 2&4)
Other operational conditions affecting workers exposure	
Use	Industrial use
Indoor/Outdoor	Indoor use
Technical conditions and measures at process level to prevent release	
none	
Technical conditions and measures to control dispersion from the source towards the worker	
Local exhaust	no (PROC 1) yes Effectiveness : 90% (PROC 2,3 & 4)
Organisational measures to prevent /limit releases, dispersion and exposure	
Not relevant (ECETOC TRA)	

Conditions and measures related to personal protection, hygiene and health evaluation	
Respiratory protection	Not required
2.1.2. Control of worker exposure : PROC 7	
Frequency and duration of use	
Exposure duration per day	8h
Frequency of exposure	4-5 d/w
Product characteristics	
Physical Form (at time of use)	Liquid
Vapour pressure	169,27 hPa
Dustiness	not applicable
Concentration of the Substance in Mixture/Article	> 5%
Amount used	Not relevant in the Stoffenmanager
Human factors not influenced by risk management	
Not relevant in the Stoffenmanager	
Other operational conditions affecting workers exposure	
Indoor/Outdoor	Indoor use
Room Volume	> 1000m ³
Work within one meter of the source :	no
Technical conditions and measures at process level to prevent release	
none	
Technical conditions and measures to control dispersion from the source towards the worker	
segregation	Worker is not within one meter of the source
immision controls	Work in a spray cabin without specific ventilation system
Organisational measures to prevent /limit releases, dispersion and exposure	
Regular cleaning of equipment, work area and clothing.	yes
Conditions and measures related to personal protection, hygiene and health evaluation	
Respiratory protection	Not required
2.1.3. Control of worker exposure : PROC 8a & 8b	
Frequency and duration of use	
Exposure duration per day	> 4h
Frequency of exposure	< 240 d/y
Product characteristics	
Physical Form (at time of use)	Liquid
Vapour pressure	169,27 hPa
Dustiness	not applicable
Concentration of the Substance in Mixture/Article	Pure substance
Amount used	Not relevant
Human factors not influenced by risk management	
Dermal exposure	Palms of both hands (480 cm ²) (PROC 8b) Both hands (960cm ²) (PROC 8a)
Other operational conditions affecting workers exposure	
Use	Industrial use
Indoor/Outdoor	Indoor use
Technical conditions and measures at process level to prevent release	
none	
Technical conditions and measures to control dispersion from the source towards the worker	
Local exhaust	yes Effectiveness : 90% (PROC 8a) yes Effectiveness : 97% (PROC 8b)

Organisational measures to prevent /limit releases, dispersion and exposure	
Not relevant (ECETOC TRA)	
Conditions and measures related to personal protection, hygiene and health evaluation	
Respiratory protection	Not required
2.1.4. Control of worker exposure : PROC 10	
Frequency and duration of use	
Exposure duration per day	> 4h
Frequency of exposure	< 240 d/y
Product characteristics	
Physical Form (at time of use)	Liquid
Vapour pressure	169,27 hPa
Dustiness	not applicable
Concentration of the Substance in Mixture/Article	80%
Amount used	Not relevant
Human factors not influenced by risk management	
Dermal exposure	Both hands (960cm ²)
Other operational conditions affecting workers exposure	
Indoor/Outdoor	Indoor use
Technical conditions and measures at process level to prevent release	
none	
Technical conditions and measures to control dispersion from the source towards the worker	
Local exhaust	yes Effectiveness : 90%
Organisational measures to prevent /limit releases, dispersion and exposure	
Not relevant (ECETOC TRA)	
Conditions and measures related to personal protection, hygiene and health evaluation	
Respiratory protection	Not required
2.1.5. Control of worker exposure : PROC 13	
Frequency and duration of use	
Exposure duration per day	>4h
Frequency of exposure	< 240 d/y
Product characteristics	
Physical Form (at time of use)	Liquid
Vapour pressure	169,27 hPa
Dustiness	not applicable
Concentration of the Substance in Mixture/Article	< 10 %
Amount used	Not relevant
Human factors not influenced by risk management	
Dermal exposure	
Other operational conditions affecting workers exposure	
Indoor/Outdoor	Indoor use
Technical conditions and measures at process level to prevent release	
none	
Technical conditions and measures to control dispersion from the source towards the worker	
Local exhaust	yes Effectiveness : 90%
Organisational measures to prevent /limit releases, dispersion and exposure	
Not relevant (ECETOC TRA)	
Conditions and measures related to personal protection, hygiene and health evaluation	
Respiratory protection	Not required
2.2. Control of environmental exposure	



Material Safety Data Sheet

ROHM AND HAAS HK DONGGUAN HOLDING LTD.

Product name: MOLYKOTE® 33 Light Extreme Low Temperature Grease

Issue Date: 13.11.2018

Print Date: 23.06.2023

ROHM AND HAAS HK DONGGUAN HOLDING LTD. encourages and expects you to read and understand the entire (M)SDS, as there is important information throughout the document. We expect you to follow the precautions identified in this document unless your use conditions would necessitate other appropriate methods or actions.

1. PRODUCT AND COMPANY IDENTIFICATION

Product name: MOLYKOTE® 33 Light Extreme Low Temperature Grease

Recommended use of the chemical and restrictions on use

Identified uses: Lubricants and lubricant additives

COMPANY IDENTIFICATION

ROHM AND HAAS HK DONGGUAN HOLDING LTD.
ROHM AND HAAS ELECTRONIC MATERIALS
TECHNOLOGY CENTRE
15 ON LOK MUN STREET, ON LOK TSUEN
FANLING NEW TERRITORIES
HONG KONG

Customer Information Number:

+852-2734-5345
SDSQuestion-AP@dupont.com

EMERGENCY TELEPHONE NUMBER

24-Hour Emergency Contact: 852-27345577

Local Emergency Contact: 852-27345577

2. HAZARDS IDENTIFICATION

GHS Classification

This product is not hazardous per the Globally Harmonized System of Classification and Labelling (GHS).

Other hazards

No data available

3. COMPOSITION/INFORMATION ON INGREDIENTS

This product is a mixture.

Component	CASRN	Concentration
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Lithium stearate	4485-12-5	>= 10.0 - < 20.0 %
Lithium stearate	4485-12-5	>= 10.0 - < 20.0 %

4. FIRST AID MEASURES

Description of first aid measures

General advice:

If potential for exposure exists refer to Section 8 for specific personal protective equipment.

Inhalation: Move person to fresh air; if effects occur, consult a physician.

Skin contact: Wash off with plenty of water.

Eye contact: Flush eyes thoroughly with water for several minutes. Remove contact lenses after the initial 1-2 minutes and continue flushing for several additional minutes. If effects occur, consult a physician, preferably an ophthalmologist.

Ingestion: No emergency medical treatment necessary.

Most important symptoms and effects, both acute and delayed:

Aside from the information found under Description of first aid measures (above) and Indication of immediate medical attention and special treatment needed (below), any additional important symptoms and effects are described in Section 11: Toxicology Information.

Indication of any immediate medical attention and special treatment needed

Notes to physician: No specific antidote. Treatment of exposure should be directed at the control of symptoms and the clinical condition of the patient.

5. FIREFIGHTING MEASURES

Suitable extinguishing media: Water spray Alcohol-resistant foam Carbon dioxide (CO₂) Dry chemical

Unsuitable extinguishing media: None known.

Special hazards arising from the substance or mixture

Hazardous combustion products: Silicon oxides Carbon oxides

Unusual Fire and Explosion Hazards: Exposure to combustion products may be a hazard to health.

Advice for firefighters

Fire Fighting Procedures: Use extinguishing measures that are appropriate to local circumstances and the surrounding environment. Use water spray to cool unopened containers. Remove undamaged containers from fire area if it is safe to do so. Evacuate area.

Special protective equipment for firefighters: Wear self-contained breathing apparatus for firefighting if necessary. Use personal protective equipment.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures: Follow safe handling advice and personal protective equipment recommendations.

Environmental precautions: Discharge into the environment must be avoided. Prevent further leakage or spillage if safe to do so. Retain and dispose of contaminated wash water. Local authorities should be advised if significant spillages cannot be contained.

Methods and materials for containment and cleaning up: Wipe up or scrape up and contain for salvage or disposal. Local or national regulations may apply to releases and disposal of this material, as well as those materials and items employed in the cleanup of releases. You will need to determine which regulations are applicable. For large spills, provide dyking or other appropriate containment to keep material from spreading. If dyked material can be pumped, Sections 13 and 15 of this SDS provide information regarding certain local or national requirements. See sections: 7, 8, 11, 12 and 13.

7. HANDLING AND STORAGE

Precautions for safe handling: Take care to prevent spills, waste and minimize release to the environment. Handle in accordance with good industrial hygiene and safety practice. Use only with adequate ventilation. See Engineering measures under EXPOSURE CONTROLS/PERSONAL PROTECTION section.

Conditions for safe storage: Keep in properly labelled containers. Store in accordance with the particular national regulations.

Do not store with the following product types: Strong oxidizing agents.
Unsuitable materials for containers: None known.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

If exposure limits exist, they are listed below. If no exposure limits are displayed, then no values are applicable.

Component	Regulation	Type of listing	Value/Notation
Lithium stearate	ACGIH	TWA Inhalable fraction	10 mg/m3
	ACGIH	TWA Respirable fraction	3 mg/m3
Lithium stearate	HK OEL	OEL-TWA	10 mg/m3
	ACGIH	TWA Inhalable fraction	10 mg/m3
	ACGIH	TWA Respirable fraction	3 mg/m3

HK OEL

OEL-TWA

10 mg/m3

Exposure controls

Engineering controls: Use local exhaust ventilation, or other engineering controls to maintain airborne levels below exposure limit requirements or guidelines. If there are no applicable exposure limit requirements or guidelines, general ventilation should be sufficient for most operations.

Individual protection measures

Eye/face protection: Use safety glasses (with side shields). Safety glasses (with side shields) should be consistent with EN 166 or equivalent.

Skin protection

Hand protection: Use gloves chemically resistant to this material when prolonged or frequently repeated contact could occur. Use chemical resistant gloves classified under Standard EN374: Protective gloves against chemicals and micro-organisms. Examples of preferred glove barrier materials include: Butyl rubber. Neoprene. Nitrile/butadiene rubber ("nitrile" or "NBR"). Ethyl vinyl alcohol laminate ("EVAL"). Polyvinyl alcohol ("PVA"). Polyvinyl chloride ("PVC" or "vinyl"). Viton. Examples of acceptable glove barrier materials include: Natural rubber ("latex"). When prolonged or frequently repeated contact may occur, a glove with a protection class of 3 or higher (breakthrough time greater than 60 minutes according to EN 374) is recommended. Glove thickness alone is not a good indicator of the level of protection a glove provides against a chemical substance as this level of protection is also highly dependent on the specific composition of the material that the glove is fabricated from. The thickness of the glove must, depending on model and type of material, generally be more than 0.35 mm to offer sufficient protection for prolonged and frequent contact with the substance. As an exception to this general rule it is known that multilayer laminate gloves may offer prolonged protection at thicknesses less than 0.35 mm. Other glove materials with a thickness of less than 0.35 mm may offer sufficient protection when only brief contact is expected. NOTICE: The selection of a specific glove for a particular application and duration of use in a workplace should also take into account all relevant workplace factors such as, but not limited to: Other chemicals which may be handled, physical requirements (cut/puncture protection, dexterity, thermal protection), potential body reactions to glove materials, as well as the instructions/specifications provided by the glove supplier.

Other protection: Wear clean, body-covering clothing.

Respiratory protection: Respiratory protection should be worn when there is a potential to exceed the exposure limit requirements or guidelines. If there are no applicable exposure limit requirements or guidelines, wear respiratory protection when adverse effects, such as respiratory irritation or discomfort have been experienced, or where indicated by your risk assessment process. For most conditions no respiratory protection should be needed; however, if discomfort is experienced, use an approved air-purifying respirator.

Use the following CE approved air-purifying respirator: Organic vapor cartridge, type A (boiling point >65 °C, meeting standard EN 14387).

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance

Physical state	Grease
Color	white
Odor	slight

Odor Threshold	No data available
pH	Not applicable
Melting point/range	No data available
Freezing point	No data available
Boiling point (760 mmHg)	Not applicable
Flash point	closed cup >101.1 °C
Evaporation Rate (Butyl Acetate = 1)	Not applicable
Flammability (solid, gas)	Not classified as a flammability hazard
Lower explosion limit	No data available
Upper explosion limit	No data available
Vapor Pressure	Not applicable
Relative Vapor Density (air = 1)	No data available
Relative Density (water = 1)	1.1
Water solubility	No data available
Partition coefficient: n-octanol/water	No data available
Auto-ignition temperature	No data available
Decomposition temperature	No data available
Dynamic Viscosity	Not applicable
Kinematic Viscosity	Not applicable
Explosive properties	Not explosive
Oxidizing properties	The substance or mixture is not classified as oxidizing.
Liquid Density	1.1 g/cm ³
Molecular weight	No data available
Particle size	No data available

NOTE: The physical data presented above are typical values and should not be construed as a specification.

10. STABILITY AND REACTIVITY

Reactivity: Not classified as a reactivity hazard.

Chemical stability: Stable under normal conditions.

Possibility of hazardous reactions: Can react with strong oxidizing agents.

Conditions to avoid: None known.

Incompatible materials: Oxidizing agents

Hazardous decomposition products: Benzene.

11. TOXICOLOGICAL INFORMATION

Toxicological information appears in this section when such data is available.

Acute toxicity

Acute oral toxicity

Very low toxicity if swallowed. Harmful effects not anticipated from swallowing small amounts.

As product: Single dose oral LD50 has not been determined.

Based on information for component(s):

LD50, Rat, > 5,000 mg/kg Estimated.

Acute dermal toxicity

Prolonged skin contact is unlikely to result in absorption of harmful amounts.

As product: The dermal LD50 has not been determined.

Based on information for component(s):

LC50, Rabbit, > 2,000 mg/kg Estimated.

Acute inhalation toxicity

Vapors are unlikely due to physical properties.

As product: The LC50 has not been determined.

Skin corrosion/irritation

Brief contact is essentially nonirritating to skin.

Serious eye damage/eye irritation

May cause slight eye irritation.

Corneal injury is unlikely.

Sensitization

For skin sensitization:

Contains component(s) which did not cause allergic skin sensitization in guinea pigs.

Contains component(s) which have not demonstrated the potential for contact allergy in mice.

For respiratory sensitization:

No relevant data found.

Specific Target Organ Systemic Toxicity (Single Exposure)

Evaluation of available data suggests that this material is not an STOT-SE toxicant.

Specific Target Organ Systemic Toxicity (Repeated Exposure)

Based on information for component(s):

Based on available data, repeated exposures are not anticipated to cause significant adverse effects.

Carcinogenicity

No relevant data found.

Teratogenicity

Contains component(s) which did not cause birth defects or any other fetal effects in lab animals.

Reproductive toxicity

Contains component(s) which did not interfere with fertility in animal studies.

Mutagenicity

No relevant data found.

Aspiration Hazard

Based on physical properties, not likely to be an aspiration hazard.

COMPONENTS INFLUENCING TOXICOLOGY:

Lithium stearate

Acute inhalation toxicity

The LC50 has not been determined.

Lithium stearate

Acute inhalation toxicity

The LC50 has not been determined.

12. ECOLOGICAL INFORMATION

Ecotoxicological information appears in this section when such data is available.

Ecotoxicity

Lithium stearate

Acute toxicity to fish

Material is not classified as dangerous to aquatic organisms (LC50/EC50/IC50/LL50/EL50 greater than 100 mg/L in most sensitive species).

Based on data from similar materials

LL50, Oncorhynchus mykiss (rainbow trout), 96 Hour, > 100 mg/l, OECD Test Guideline 203

Acute toxicity to aquatic invertebrates

Based on data from similar materials

EL50, Daphnia magna (Water flea), 48 Hour, > 100 mg/l, OECD Test Guideline 202

Acute toxicity to algae/aquatic plants

Based on data from similar materials

EL50, Pseudokirchneriella subcapitata (green algae), 72 Hour, > 100 mg/l, OECD Test Guideline 201

Toxicity to bacteria

Based on data from similar materials

NOEC, activated sludge, static test, 28 d, 13 mg/l

Lithium stearate

Acute toxicity to fish

Material is not classified as dangerous to aquatic organisms (LC50/EC50/IC50/LL50/EL50 greater than 100 mg/L in most sensitive species).
Based on data from similar materials
LL50, Oncorhynchus mykiss (rainbow trout), 96 Hour, > 100 mg/l, OECD Test Guideline 203

Acute toxicity to aquatic invertebrates

Based on data from similar materials
EL50, Daphnia magna (Water flea), 48 Hour, > 100 mg/l, OECD Test Guideline 202

Acute toxicity to algae/aquatic plants

Based on data from similar materials
EL50, Pseudokirchneriella subcapitata (green algae), 72 Hour, > 100 mg/l, OECD Test Guideline 201

Toxicity to bacteria

Based on data from similar materials
NOEC, activated sludge, static test, 28 d, 13 mg/l

Persistence and degradability

Lithium stearate

Biodegradability: Material is readily biodegradable. Passes OECD test(s) for ready biodegradability.

Based on data from similar materials 10-day Window: Not applicable

Biodegradation: 78 %

Exposure time: 28 d

Method: OECD Test Guideline 301C

Lithium stearate

Biodegradability: Material is readily biodegradable. Passes OECD test(s) for ready biodegradability.

Based on data from similar materials 10-day Window: Not applicable

Biodegradation: 78 %

Exposure time: 28 d

Method: OECD Test Guideline 301C

Bioaccumulative potential

Lithium stearate

Bioaccumulation: Based on data from similar materials No relevant data found.

Bioconcentration factor (BCF): 0.12 Fish

Lithium stearate

Bioaccumulation: Based on data from similar materials No relevant data found.

Bioconcentration factor (BCF): 0.12 Fish

Mobility in Soil

Lithium stearate

No relevant data found.

Lithium stearate

No relevant data found.

Results of PBT and vPvB assessment

Lithium stearate

This substance is not considered to be persistent, bioaccumulating and toxic (PBT). This substance is not considered to be very persistent and very bioaccumulating (vPvB).

Lithium stearate

This substance is not considered to be persistent, bioaccumulating and toxic (PBT). This substance is not considered to be very persistent and very bioaccumulating (vPvB).

Other adverse effects

Lithium stearate

This substance is not on the Montreal Protocol list of substances that deplete the ozone layer.

Lithium stearate

This substance is not on the Montreal Protocol list of substances that deplete the ozone layer.

13. DISPOSAL CONSIDERATIONS

Disposal methods: Do not dump into any sewers, on the ground, or into any body of water. This product, when being disposed of in its unused and uncontaminated state should be treated as a hazardous waste according to EC Directive 2008/98/EC. Any disposal practices must be in compliance with all national and provincial laws and any municipal or local by-laws governing hazardous waste. For used, contaminated and residual materials additional evaluations may be required.

14. TRANSPORT INFORMATION

Classification for ROAD and Rail transport:

Not regulated for transport

Classification for SEA transport (IMO-IMDG):

Not regulated for transport

**Transport in bulk
according to Annex I or II
of MARPOL 73/78 and the
IBC or IGC Code**

Consult IMO regulations before transporting ocean bulk

Classification for AIR transport (IATA/ICAO):

Not regulated for transport

This information is not intended to convey all specific regulatory or operational requirements/information relating to this product. Transportation classifications may vary by container

volume and may be influenced by regional or country variations in regulations. Additional transportation system information can be obtained through an authorized sales or customer service representative. It is the responsibility of the transporting organization to follow all applicable laws, regulations and rules relating to the transportation of the material.

15. REGULATORY INFORMATION

In the following ordinances and regulations, there are corresponding requirements on safety use, storage, transportation, disposal, classification, label and etc. of chemicals.
Waste Disposal (Chemical Waste) (General) Regulation

16. OTHER INFORMATION

Revision

Identification Number: 4015928 / 1762 / Issue Date: 13.11.2018 / Version: 2.0

Most recent revision(s) are noted by the bold, double bars in left-hand margin throughout this document.

Legend

ACGIH	USA. ACGIH Threshold Limit Values (TLV)
HK OEL	Code of Practice on Control of Air Impurities (Chemical Substances) in the Workplace
OEL-TWA	Time weighted Average
TWA	8-hour, time-weighted average

Full text of other abbreviations

AICS - Australian Inventory of Chemical Substances; ANTT - National Agency for Transport by Land of Brazil; ASTM - American Society for the Testing of Materials; bw - Body weight; CMR - Carcinogen, Mutagen or Reproductive Toxicant; CPR - Controlled Products Regulations; DIN - Standard of the German Institute for Standardisation; DSL - Domestic Substances List (Canada); ECx - Concentration associated with x% response; ELx - Loading rate associated with x% response; EmS - Emergency Schedule; ENCS - Existing and New Chemical Substances (Japan); ErCx - Concentration associated with x% growth rate response; ERG - Emergency Response Guide; GHS - Globally Harmonized System; GLP - Good Laboratory Practice; IARC - International Agency for Research on Cancer; IATA - International Air Transport Association; IBC - International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk; IC50 - Half maximal inhibitory concentration; ICAO - International Civil Aviation Organization; IECSC - Inventory of Existing Chemical Substances in China; IMDG - International Maritime Dangerous Goods; IMO - International Maritime Organization; ISHL - Industrial Safety and Health Law (Japan); ISO - International Organisation for Standardization; KECI - Korea Existing Chemicals Inventory; LC50 - Lethal Concentration to 50 % of a test population; LD50 - Lethal Dose to 50% of a test population (Median Lethal Dose); MARPOL - International Convention for the Prevention of Pollution from Ships; n.o.s. - Not Otherwise Specified; Nch - Chilean Norm; NO(A)EC - No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NOELR - No Observable Effect Loading Rate; NOM - Official Mexican Norm; NTP - National Toxicology Program; NZIoC - New Zealand Inventory of Chemicals; OECD - Organization for Economic Co-operation and Development; OPPTS - Office of Chemical Safety and Pollution

Prevention; PBT - Persistent, Bioaccumulative and Toxic substance; PICCS - Philippines Inventory of Chemicals and Chemical Substances; (Q)SAR - (Quantitative) Structure Activity Relationship; REACH - Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals; SADT - Self-Accelerating Decomposition Temperature; SDS - Safety Data Sheet; TCSI - Taiwan Chemical Substance Inventory; TDG - Transportation of Dangerous Goods; TSCA - Toxic Substances Control Act (United States); UN - United Nations; UNRTDG - United Nations Recommendations on the Transport of Dangerous Goods; vPvB - Very Persistent and Very Bioaccumulative; WHMIS - Workplace Hazardous Materials Information System

ROHM AND HAAS HK DONGGUAN HOLDING LTD. urges each customer or recipient of this (M)SDS to study it carefully and consult appropriate expertise, as necessary or appropriate, to become aware of and understand the data contained in this (M)SDS and any hazards associated with the product. The information herein is provided in good faith and believed to be accurate as of the effective date shown above. However, no warranty, express or implied, is given. Regulatory requirements are subject to change and may differ between various locations. It is the buyer's/user's responsibility to ensure that his activities comply with all federal, state, provincial or local laws. The information presented here pertains only to the product as shipped. Since conditions for use of the product are not under the control of the manufacturer, it is the buyer's/user's duty to determine the conditions necessary for the safe use of this product. Due to the proliferation of sources for information such as manufacturer-specific (M)SDSs, we are not and cannot be responsible for (M)SDSs obtained from any source other than ourselves. If you have obtained an (M)SDS from another source or if you are not sure that the (M)SDS you have is current, please contact us for the most current version.
HK

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Product name : MM AIRBRAKE SYSTEM ANTIFREEZE 4/1GA
Product code : M2834

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Company name of supplier : Niteo Products, LLC
Address : Dallas TX 75225
Email Address : EHS@niteoproducts.com
Telephone : 1-844-696-4836
Emergency telephone number : 1-800-424-9300 / 1-703-741-5970

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Recommended use : Anti-freezing agents
Restrictions on use : Use only outdoors or in a well-ventilated area.

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Flammable liquids : Category 2
Acute toxicity (Oral) : Category 3
Acute toxicity (Inhalation) : Category 3
Acute toxicity (Dermal) : Category 3
Specific target organ toxicity - single exposure : Category 1 (Central nervous system, Eyes)

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Hazard pictograms :   

Signal word : Danger
Hazard statements : Highly flammable liquid and vapour.

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Toxic if swallowed, in contact with skin or if inhaled.
Causes damage to organs (Central nervous system, Eyes).

Precautionary statements :

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Keep away from heat/sparks/open flames/hot surfaces. No smoking.
Keep container tightly closed.
Ground/bond container and receiving equipment.
Use explosion-proof electrical/ ventilating/ lighting equipment.
Use only non-sparking tools.
Take precautionary measures against static discharge.
Do not breathe dust/ fume/ gas/ mist/ vapours/ spray.
Wash skin thoroughly after handling.
Do not eat, drink or smoke when using this product.
Use only outdoors or in a well-ventilated area.
Wear protective gloves/ eye protection/ face protection.

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IF SWALLOWED: Immediately call a POISON CENTER/doctor. Rinse mouth.
IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER/doctor.
IF exposed: Call a POISON CENTER or doctor/ physician. Take off contaminated clothing and wash before reuse.
In case of fire: Use dry sand, dry chemical or alcohol-resistant foam to extinguish.

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Store in a well-ventilated place. Keep container tightly closed.
Store in a well-ventilated place. Keep cool.
Store locked up.

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Dispose of contents/ container to an approved waste disposal plant.

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None known.

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Substance / Mixture : Mixture

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Chemical name	CAS-No.	Concentration (% w/w)
Methanol	67-56-1	>= 90 - < 100

Any concentration shown as a range is to protect confidentiality or is due to batch variation.

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- General advice : Move out of dangerous area.
Consult a physician.
Show this safety data sheet to the doctor in attendance.
Do not leave the victim unattended.

- If inhaled : If unconscious, place in recovery position and seek medical advice.
If symptoms persist, call a physician.

- In case of skin contact : If on clothes, remove clothes.
Call a physician or poison control centre immediately.
If on skin, rinse well with water.

- In case of eye contact : Flush eyes with water as a precaution.
Remove contact lenses.
Protect unharmed eye.
Keep eye wide open while rinsing.

- If swallowed : Get medical attention immediately.
Rinse mouth with water.
Do not give milk or alcoholic beverages.
Never give anything by mouth to an unconscious person.
If symptoms persist, call a physician.

- Most important symptoms and effects, both acute and delayed : Toxic if swallowed, in contact with skin or if inhaled.
Causes damage to organs.
This product contains methanol which can cause intoxication and central nervous system depression. Methanol is metabolized to formic acid and formaldehyde. These metabolites can cause metabolic acidosis, visual disturbances and blindness. Since metabolism is required for these toxic symptoms, their onset may be delayed from 6 to 30 hours following ingestion. Ethanol competes for the same metabolic pathway and has been used to prevent methanol metabolism. Ethanol administration is indicated in symptomatic patients or at blood methanol concentrations above 20 ug/dl. Methanol is effectively removed by hemodialysis.

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- Suitable extinguishing media : Water spray
Carbon dioxide (CO2)
Dry chemical
Alcohol-resistant foam

- Unsuitable extinguishing media : High volume water jet

- Specific hazards during fire-fighting : Do not allow run-off from fire fighting to enter drains or water courses.

- Hazardous combustion products : Carbon oxides

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- Specific extinguishing methods : Product is compatible with standard fire-fighting agents.
- Further information : Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations.
Use a water spray to cool fully closed containers.
- Special protective equipment for firefighters : In the event of fire, wear self-contained breathing apparatus.

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- Personal precautions, protective equipment and emergency procedures : Use personal protective equipment.
Remove all sources of ignition.
Ensure adequate ventilation.
Avoid breathing dust.
Beware of vapours accumulating to form explosive concentrations. Vapours can accumulate in low areas.
Evacuate personnel to safe areas.
Persons not wearing protective equipment should be excluded from area of spill until clean-up has been completed.
- Environmental precautions : Prevent further leakage or spillage if safe to do so.
Prevent product from entering drains.
Do not flush into surface water or sanitary sewer system.
If the product contaminates rivers and lakes or drains inform respective authorities.
- Methods and materials for containment and cleaning up : Contain spillage, and then collect with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and place in container for disposal according to local / national regulations (see section 13).

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- Advice on protection against fire and explosion : Take necessary action to avoid static electricity discharge (which might cause ignition of organic vapours).
Electrically bond and ground all containers, personnel and equipment before transfer or use of material. Special precautions may be necessary to dissipate static electricity for non-conductive containers. Use proper bonding and grounding during product transfer as described in National Fire Protection Association document NFPA 77.
Keep away from open flames, hot surfaces and sources of ignition.
Use only explosion-proof equipment.
Do not spray on a naked flame or any incandescent material.
- Advice on safe handling : Open drum carefully as content may be under pressure.
Avoid formation of aerosol.
Provide sufficient air exchange and/or exhaust in work rooms.

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Do not breathe vapours/dust.
 Do not smoke.
 Take precautionary measures against static discharges.
 Dispose of rinse water in accordance with local and national regulations.
 Container hazardous when empty.
 Smoking, eating and drinking should be prohibited in the application area.
 For personal protection see section 8.

Conditions for safe storage : Keep container tightly closed in a dry and well-ventilated place.
 Containers which are opened must be carefully resealed and kept upright to prevent leakage.
 Observe label precautions.
 No smoking.

Further information on storage stability : No decomposition if stored and applied as directed.

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Components	CAS-No.	Value type (Form of exposure)	Control parameters / Permissible concentration	Basis
Methanol	67-56-1	TWA	200 ppm	ACGIH
		STEL	250 ppm	ACGIH
		TWA	200 ppm 260 mg/m3	NIOSH REL
		ST	250 ppm 325 mg/m3	NIOSH REL
		TWA	200 ppm 260 mg/m3	OSHA Z-1
		STEL	250 ppm 325 mg/m3	OSHA P0
		TWA	200 ppm 260 mg/m3	OSHA P0

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Components	CAS-No.	Control parameters	Biological specimen	Sampling time	Permissible concentration	Basis
Methanol	67-56-1	Methanol	Urine	End of shift (As soon as possible after exposure ceases)	15 mg/l	ACGIH BEI

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applicable) or below levels that cause known, suspected or apparent adverse effects.

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Hand protection

Remarks : Wear resistant gloves (consult your safety equipment supplier). The suitability for a specific workplace should be discussed with the producers of the protective gloves. Discard gloves that show tears, pinholes, or signs of wear.

Eye protection : Not required under normal conditions of use. Wear splash-proof safety goggles if material could be misted or splashed into eyes.

Skin and body protection : Choose body protection according to the amount and concentration of the dangerous substance at the work place. Wear as appropriate:
 Impervious clothing
 Flame-resistant clothing
 Safety shoes
 Remove and wash contaminated clothing before re-use.

Hygiene measures : Handle in accordance with good industrial hygiene and safety practice.
 Avoid contact with skin, eyes and clothing.
 Wash hands before breaks and immediately after handling the product.

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Appearance : liquid
 Colour : blue
 Odour : pungent
 Odour Threshold : not determined
 pH : not determined
 Melting point/freezing point : not determined
 Boiling point/boiling range : 64.7 °C
 (1013.250 hPa)
 Value for Component
 Flash point : 12 °C
 Method: closed cup
 Value for Component
 Evaporation rate : not determined
 Flammability (solid, gas) : No data available

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Toxic if swallowed, in contact with skin or if inhaled.

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Acute oral toxicity : Acute toxicity estimate: 100.15 mg/kg
Method: Calculation method

Acute inhalation toxicity : Acute toxicity estimate: 3 mg/l
Exposure time: 4 h
Test atmosphere: vapour
Method: Calculation method

Acute dermal toxicity : Acute toxicity estimate: 300.45 mg/kg
Method: Calculation method

Components:

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Acute oral toxicity : LDLo (Humans): 300 mg/kg
Assessment: The component/mixture is toxic after single ingestion.

Acute inhalation toxicity : Test atmosphere: dust/mist
Assessment: The component/mixture is toxic after short term inhalation.

Acute dermal toxicity : LD50 (Rabbit): 12,800 mg/kg
Assessment: The component/mixture is toxic after single contact with skin.

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Not classified based on available information.

Components:

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Species: Rabbit
Result: No skin irritation

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Not classified based on available information.

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Remarks: Unlikely to cause eye irritation or injury.

Components:

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Species: Rabbit
Result: Possibly irritating to eyes

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Components:

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Test Type: Maximisation Test
Species: Guinea pig
Assessment: Does not cause skin sensitisation.
Method: OECD Test Guideline 406

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Not classified based on available information.

□□R□ No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

□ □□□ No component of this product present at levels greater than or equal to 0.1% is on OSHA's list of regulated carcinogens.

□ □□ No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

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Causes damage to organs (Central nervous system, Eyes).

Components:

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Target Organs: Central nervous system, Eyes
Assessment: The substance or mixture is classified as specific target organ toxicant, single exposure, category 1.

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Not classified based on available information.

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Not classified based on available information.

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Remarks: No data available

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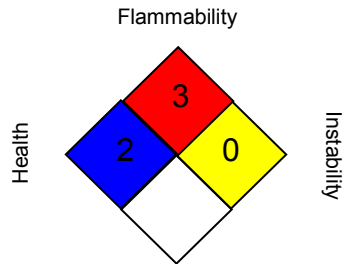
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Special hazard.

Revision Date : 09/04/2019

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

US / EN

SAFETY DATA SHEET



Issuing Date: 29-Apr-2015

Revision Date: 29-Apr-2015

Version 1

1. IDENTIFICATION

Product Name Mr. Clean Multi-Purpose Cleaner with Febreze Freshness (Meadows & Rain Scent)_new formula

Product ID: 97086254_RET_NG

Product Type: Finished Product - Consumer (Retail) Use Only

Recommended Use Hard Surface Cleaner

Manufacturer PROCTER & GAMBLE - Fabric and Home Care Division
Ivorydale Technical Centre
5289 Spring Grove Avenue
Cincinnati, Ohio 45217-1087 USA

Procter & Gamble Inc.
P.O. Box 355, Station A
Toronto, ON M5W 1C5
1-800-331-3774

E-mail Address pgsds.im@pg.com

Emergency Telephone Transportation (24 HR)
CHEMTREC - 1-800-424-9300
(U.S./ Canada) or 1-703-527-3887
Mexico toll free in country: 800-681-9531

2. HAZARD IDENTIFICATION

"Consumer Products", as defined by the US Consumer Product Safety Act and which are used as intended (typical consumer duration and frequency), are exempt from the OSHA Hazard Communication Standard (29 CFR 1910.1200). This SDS is being provided as a courtesy to help assist in the safe handling and proper use of the product.

This product is classified under 29CFR 1910.1200(d) and the Canadian Hazardous Products Regulation as follows:.

Not Classified.

Hazard Statements None

Hazard pictograms None

Precautionary Statements - Prevention None

Precautionary Statements - Response None

Precautionary Statements - Storage None

Precautionary Statements - Disposal None

Hazards not otherwise classified (HNOC) None

3. COMPOSITION/INFORMATION ON INGREDIENTS

Ingredients are listed according to 29CFR 1910.1200 Appendix D and the Canadian Hazardous Products Regulation

Hazardous ingredients None.

4. FIRST AID MEASURES

First aid measures for different exposure routes

Eye contact Rinse with plenty of water. Get medical attention immediately if irritation persists.

Skin contact Rinse with plenty of water. Get medical attention if irritation develops and persists.

Ingestion Drink 1 or 2 glasses of water. Do NOT induce vomiting. Get medical attention immediately if symptoms occur.

Inhalation Move to fresh air. If symptoms persist, call a physician.

Most important symptoms/effects, acute and delayed None under normal use conditions.

Indication of immediate medical attention and special treatment needed, if necessary

Notes to Physician Treat symptomatically.

5. FIRE-FIGHTING MEASURES

Suitable extinguishing media Dry chemical, CO₂, alcohol-resistant foam or water spray. Dry chemical. Alcohol-resistant foam.

Unsuitable Extinguishing Media None.

Special hazard None known.

Special protective equipment for fire-fighters As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

Specific hazards arising from the chemical None.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

Personal precautions	Use personal protective equipment. Do not get in eyes, on skin, or on clothing.
Advice for emergency responders	Use personal protective equipment as required.
Environmental precautions	Keep out of waterways. Do not discharge product into natural waters without pre-treatment or adequate dilution.

Methods and materials for containment and cleaning up

Methods for containment	Absorb with earth, sand or other non-combustible material and transfer to containers for later disposal. Prevent product from entering drains. Prevent further leakage or spillage if safe to do so.
Methods for cleaning up	Contain spillage, and then collect with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and place in container for disposal according to local / national regulations (see section 13).

7. HANDLING AND STORAGE

Precautions for safe handling

Advice on safe handling	Use personal protective equipment as required. Keep container closed when not in use. Never return spills in original containers for re-use. Keep out of the reach of children.
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Conditions for safe storage, including any incompatibilities

Storage Conditions	Keep containers tightly closed in a dry, cool and well-ventilated place.
Incompatible products	None known.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

Exposure Guidelines	No exposure limits noted for ingredient(s).
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Exposure controls

Engineering Measures	Distribution, Workplace and Household Settings: Ensure adequate ventilation Product Manufacturing Plant (needed at Product-Producing Plant ONLY): Where reasonably practicable this should be achieved by the use of local exhaust ventilation and good general extraction
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Personal Protective Equipment

Eye Protection	Distribution, Workplace and Household Settings: No special protective equipment required Product Manufacturing Plant (needed at Product-Producing Plant ONLY): Use appropriate eye protection
Hand Protection	Distribution, Workplace and Household Settings: No special protective equipment required Product Manufacturing Plant (needed at Product-Producing Plant ONLY): Protective gloves

Skin and Body Protection

Distribution, Workplace and Household Settings:

No special protective equipment required

Product Manufacturing Plant (needed at Product-Producing Plant ONLY):

Wear suitable protective clothing

Respiratory Protection

Distribution, Workplace and Household Settings:

No special protective equipment required

Product Manufacturing Plant (needed at Product-Producing Plant ONLY):

In case of insufficient ventilation wear suitable respiratory equipment

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical State @20°C

liquid

Appearance

colored liquid

Odor

Perfume

Odor threshold

No information available

Property

Values

Note

pH value

11.0

Melting/freezing point

0 °C / 32 °F

Boiling point/boiling range

100 °C / 212 °F

Flash point

> 93.3 °C / > 200 °F

ASTM D 93 PMCC Product is an aqueous solution containing <= 24% alcohol and > 50% water

Evaporation rate

No information available

Flammability (solid, gas)

No information available

Flammability Limits in Air

Upper flammability limit

No information available

Lower Flammability Limit

No information available

Vapor pressure

No information available

Vapor density

No information available

Relative density

0.99 g/cm³

Water solubility

completely soluble

Solubility in other solvents

No information available

Partition coefficient: n-octanol/water No information available

Autoignition temperature

No information available

Decomposition temperature

No information available

Viscosity of Product

No information available

VOC Content (%)

Products comply with US state and federal regulations for VOC content in consumer products.

10. STABILITY AND REACTIVITY

Reactivity

None under normal use conditions.

Stability

Stable under normal conditions.

Hazardous polymerization

Hazardous polymerization does not occur.

Hazardous Reactions

None under normal processing.

Conditions to Avoid

None under normal processing.

Materials to avoid

None in particular.

Hazardous Decomposition Products None under normal use.

11. TOXICOLOGICAL INFORMATION

Product Information

Information on likely routes of exposure

Inhalation	No known effect.
Skin contact	No known effect.
Ingestion	No known effect.
Eye contact	No known effect.

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Acute toxicity	No known effect.
Skin corrosion/irritation	No known effect.
Serious eye damage/eye irritation	No known effect.
Skin sensitization	No known effect.
Respiratory sensitization	No known effect.
Germ cell mutagenicity	No known effect.
Neurological Effects	No known effect.
Reproductive toxicity	No known effect.
Developmental toxicity	No known effect.
Teratogenicity	No known effect.
STOT - single exposure	No known effect.
STOT - repeated exposure	No known effect.
Target Organ Effects	No known effect.
Aspiration hazard	No known effect.
Carcinogenicity	No known effect.

12. ECOLOGICAL INFORMATION

Ecotoxicity

The product is not expected to be hazardous to the environment.

Persistence and degradability	No information available.
Bioaccumulative potential	No information available.
Mobility	No information available.
Other adverse effects	No information available.

13. DISPOSAL CONSIDERATIONS

Waste treatment

Waste from Residues / Unused Products	Disposal should be in accordance with applicable regional, national and local laws and regulations.
Contaminated packaging	Disposal should be in accordance with applicable regional, national and local laws and regulations.
California Hazardous Waste Codes (non-household setting)	331

14. TRANSPORT INFORMATION

<u>DOT</u>	Not regulated
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IMDG Not regulated

IATA Not regulated

15. REGULATORY INFORMATION

U.S. Federal Regulations

SARA 313

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product does not contain any chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372

CERCLA

This material, as supplied, contains one or more substances regulated as a hazardous substance under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302):

Chemical Name	CAS-No	Hazardous Substances RQs	Extremely Hazardous Substances RQs	CERCLA/SARA 302 TPQ
Sodium hydroxide	1310-73-2	1000 lb	-	

Clean Air Act, Section 112 Hazardous Air Pollutants (HAPs) (see 40 CFR 61)

This product does not contain any substances regulated as hazardous air pollutants (HAPS) under Section 112 of the Clean Air Act Amendments of 1990.

Clean Water Act

This product contains the following substances which are regulated pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42):

Chemical Name	CAS-No	CWA - Reportable Quantities	CWA - Toxic Pollutants	CWA - Priority Pollutants	CWA - Hazardous Substances
Sodium hydroxide	1310-73-2	1000 lb	-	-	X

California Proposition 65

This product is not subject to warning labeling under California Proposition 65.

U.S. State Regulations (RTK)

Chemical Name	CAS-No	Pennsylvania
2-Aminoethanol	141-43-5	X

International Inventories

United States

All intentionally-added components of this product(s) are listed on the US TSCA Inventory.

Canada

This product is in compliance with CEPA for import by P&G.

Legend

TSCA - United States Toxic Substances Control Act Section 8(b) Inventory

CEPA - Canadian Environmental Protection Act

16. OTHER INFORMATION

Issuing Date: 29-Apr-2015

Revision Date: 29-Apr-2015

Disclaimer

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text

End of SDS

SECTION 1: Identification
1.1. Identification

Product form : Mixture
 Product name : NIKAL®

1.2. Recommended use and restrictions on use

Use of the substance/mixture : HIGH TEMPERATURE ANTI-SEIZE COMPOUND

1.3. Supplier
Manufacturer

Jet-Lube
 930 Whitmore Drive
 Rockwall, Texas 75087 - USA
 T 1.972.771.1000
Regulatory@whitmores.com - www.jetlube.com

1.4. Emergency telephone number

Emergency number : For Chemical Emergency Call CHEMTREC 24hr/day 7days/week
 Within USA and Canada: 1.800.424.9300
 Outside USA and Canada: +1.703.527.3887
 (collect calls accepted)

SECTION 2: Hazard(s) identification
2.1. Classification of the substance or mixture
GHS US classification

Skin sensitization, Category 1	H317	May cause an allergic skin reaction
Carcinogenicity Category 2	H351	Suspected of causing cancer
Specific target organ toxicity (repeated exposure) Category 1	H372	Causes damage to organs through prolonged or repeated exposure

Full text of H statements : see section 16

2.2. GHS Label elements, including precautionary statements
GHS US labeling

Hazard pictograms (GHS US) :



Signal word (GHS US) :

: Danger

Hazard statements (GHS US) :

: H317 - May cause an allergic skin reaction
 H351 - Suspected of causing cancer
 H372 - Causes damage to organs through prolonged or repeated exposure

Precautionary statements (GHS US) :

: P201 - Obtain special instructions before use.
 P202 - Do not handle until all safety precautions have been read and understood.
 P260 - Do not breathe vapors.
 P261 - Avoid breathing vapors.
 P264 - Wash hands thoroughly after handling.
 P270 - Do not eat, drink or smoke when using this product.
 P272 - Contaminated work clothing must not be allowed out of the workplace.
 P280 - Wear eye protection, protective gloves.
 P302+P352 - If on skin: Wash with plenty of soap and water.
 P308+P313 - If exposed or concerned: Get medical advice/attention.
 P314 - Get medical advice/attention if you feel unwell.
 P321 - Specific treatment (see supplemental first aid instruction on this label).
 P333+P313 - If skin irritation or rash occurs: Get medical advice/attention.
 P363 - Wash contaminated clothing before reuse.
 P405 - Store locked up.
 P501 - Dispose of contents/container to hazardous or special waste collection point, in accordance with local, regional, national and/or international regulation.

2.3. Other hazards which do not result in classification

No additional information available

2.4. Unknown acute toxicity (GHS US)

Not applicable

SECTION 3: Composition/Information on ingredients

3.1. Substances

Not applicable

3.2. Mixtures

Name	Product identifier	%	GHS US classification
Distillates (petroleum), hydrotreated heavy naphthenic	(CAS-No.) 64742-52-5	60 - 70	Not classified
Nickel, metallic	(CAS-No.) 7440-02-0	15 - 20	Skin Sens. 1, H317 Carc. 2, H351 STOT RE 1, H372

Full text of hazard classes and H-statements : see section 16

SECTION 4: First-aid measures

4.1. Description of first aid measures

- First-aid measures general : IF exposed or concerned: Get medical advice/attention.
- First-aid measures after inhalation : Remove person to fresh air and keep comfortable for breathing.
- First-aid measures after skin contact : Wash skin with plenty of water. Take off contaminated clothing. If skin irritation or rash occurs: Get medical advice/attention.
- First-aid measures after eye contact : Rinse eyes with water as a precaution.
- First-aid measures after ingestion : Call a poison center/doctor/physician if you feel unwell.

4.2. Most important symptoms and effects (acute and delayed)

- Symptoms/effects after skin contact : May cause an allergic skin reaction.

4.3. Immediate medical attention and special treatment, if necessary

Treat symptomatically.

SECTION 5: Fire-fighting measures

5.1. Suitable (and unsuitable) extinguishing media

- Suitable extinguishing media : Water spray. Dry powder. Foam. Carbon dioxide.

5.2. Specific hazards arising from the chemical

- Hazardous decomposition products in case of fire : Toxic fumes may be released.

5.3. Special protective equipment and precautions for fire-fighters

- Protection during firefighting : Do not attempt to take action without suitable protective equipment. Self-contained breathing apparatus. Complete protective clothing.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

6.1.1. For non-emergency personnel

- Emergency procedures : Exercise caution. Spill area may be slippery. Do not breathe dust/fume/gas/mist/vapors/spray. Avoid contact with skin and eyes.

6.1.2. For emergency responders

- Protective equipment : Do not attempt to take action without suitable protective equipment. For further information refer to section 8: "Exposure controls/personal protection".

6.2. Environmental precautions

Avoid release to the environment.

6.3. Methods and material for containment and cleaning up

- Methods for cleaning up : Take up liquid spill into absorbent material. Notify authorities if product enters sewers or public waters.
- Other information : Dispose of materials or solid residues at an authorized site.

6.4. Reference to other sections

For further information refer to section 13.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

- Precautions for safe handling : Ensure good ventilation of the work station. Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Wear personal protective equipment. Do not breathe dust/fume/gas/mist/vapors/spray. Avoid contact with skin and eyes.
- Hygiene measures : Contaminated work clothing should not be allowed out of the workplace. Wash contaminated clothing before reuse. Do not eat, drink or smoke when using this product. Always wash hands after handling the product.

7.2. Conditions for safe storage, including any incompatibilities

- Storage conditions : Store locked up. Store in a well-ventilated place. Keep cool.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

NIKAL®	
No additional information available	
Distillates (petroleum), hydrotreated heavy naphthenic (64742-52-5)	
No additional information available	
Nickel, metallic (7440-02-0)	
USA - ACGIH - Occupational Exposure Limits	
Local name	Nickel, elemental
ACGIH TWA (mg/m³)	1.5 mg/m³ (I - Inhalable particulate matter)
Remark (ACGIH)	TLV® Basis: Dermatitis; pneumoconiosis. Notations: A5 (Not Suspected as a Human Carcinogen)
Regulatory reference	ACGIH 2019
USA - OSHA - Occupational Exposure Limits	
Local name	Nickel
OSHA PEL (TWA) (mg/m³)	1 mg/m³ metal and insoluble compounds (as Ni) 1 mg/m³ soluble compounds (as Ni)
Regulatory reference (US-OSHA)	OSHA Annotated Table Z-1

8.2. Appropriate engineering controls

- Appropriate engineering controls : Ensure good ventilation of the work station.
- Environmental exposure controls : Avoid release to the environment.

8.3. Individual protection measures/Personal protective equipment

Hand protection:

Neoprene or nitrile rubber gloves

Eye protection:

Chemical goggles or safety glasses

Skin and body protection:

Wear suitable protective clothing

Respiratory protection:

In case of insufficient ventilation, wear suitable respiratory equipment

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

- Physical state : Liquid
- Appearance : Paste.
- Color : Gray Metallic grey

Odor	: Petroleum-like odour
Odor threshold	: No data available
pH	: No data available
Melting point	: Not applicable
Freezing point	: No data available
Boiling point	: No data available
Flash point	: > 221 °C Open Cup
Relative evaporation rate (butyl acetate=1)	: No data available
Flammability (solid, gas)	: Not applicable.
Vapor pressure	: No data available
Relative vapor density at 20 °C	: No data available
Relative density	: No data available
Specific gravity / density	: 1.2
Solubility	: insoluble in water.
Partition coefficient n-octanol/water (Log Pow)	: No data available
Auto-ignition temperature	: No data available
Decomposition temperature	: No data available
Viscosity, kinematic	: > 25 mm ² /s @ 40° C
Viscosity, dynamic	: No data available
Explosion limits	: No data available
Explosive properties	: No data available
Oxidizing properties	: No data available

9.2. Other information

No additional information available

SECTION 10: Stability and reactivity

10.1. Reactivity

The product is non-reactive under normal conditions of use, storage and transport.

10.2. Chemical stability

Stable under normal conditions.

10.3. Possibility of hazardous reactions

No dangerous reactions known under normal conditions of use.

10.4. Conditions to avoid

None under recommended storage and handling conditions (see section 7).

10.5. Incompatible materials

No additional information available

10.6. Hazardous decomposition products

Under normal conditions of storage and use, hazardous decomposition products should not be produced.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity (oral)	: Not classified
Acute toxicity (dermal)	: Not classified
Acute toxicity (inhalation)	: Not classified

Distillates (petroleum), hydrotreated heavy naphthenic (64742-52-5)

LD50 oral rat	> 5000 mg/kg body weight Animal: rat, Guideline: OECD Guideline 401 (Acute Oral Toxicity), Guideline: OECD Guideline 420 (Acute Oral Toxicity - Fixed Dose Method)
LD50 dermal rat	> 5000 mg/kg Sufficiently refined

Nickel, metallic (7440-02-0)

LD50 oral rat	> 9000 mg/kg body weight Animal: rat, Guideline: OECD Guideline 401 (Acute Oral Toxicity)
Skin corrosion/irritation	: Not classified

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Serious eye damage/irritation	: Not classified
Respiratory or skin sensitization	: May cause an allergic skin reaction.
Germ cell mutagenicity	: Not classified
Carcinogenicity	: Suspected of causing cancer.

Nickel, metallic (7440-02-0)	
IARC group	2B - Possibly carcinogenic to humans
National Toxicity Program (NTP) Status	Reasonably anticipated to be Human Carcinogen

Reproductive toxicity : Not classified

STOT-single exposure : Not classified

STOT-repeated exposure : Causes damage to organs through prolonged or repeated exposure.

Distillates (petroleum), hydrotreated heavy naphthenic (64742-52-5)	
LOAEL (oral,rat,90 days)	125 mg/kg body weight Animal: rat, Animal sex: male, Guideline: OECD Guideline 408 (Repeated Dose 90-Day Oral Toxicity in Rodents)

Nickel, metallic (7440-02-0)	
STOT-repeated exposure	Causes damage to organs through prolonged or repeated exposure.

Aspiration hazard : Not classified

Viscosity, kinematic : > 25 mm²/s @ 40° C

Symptoms/effects after skin contact : May cause an allergic skin reaction.

SECTION 12: Ecological information

12.1. Toxicity

Ecology - general : The product is not considered harmful to aquatic organisms or to cause long-term adverse effects in the environment.

Nickel, metallic (7440-02-0)	
LC50 fish 1	15.3 mg/l (Other, 96 h, Oncorhynchus mykiss, Semi-static system, Fresh water, Experimental value, Nickel ion)

12.2. Persistence and degradability

Nickel, metallic (7440-02-0)	
Persistence and degradability	Biodegradability in soil: not applicable. Biodegradability: not applicable.
Chemical oxygen demand (COD)	Not applicable (inorganic)
ThOD	Not applicable (inorganic)

12.3. Bioaccumulative potential

Nickel, metallic (7440-02-0)	
BCF other aquatic organisms 1	1555 (Other, Myrriophyllum sp., Fresh water, Experimental value, Nickel ion)
Partition coefficient n-octanol/water (Log Pow)	-0.57 (Estimated value)
Bioaccumulative potential	Potential for bioaccumulation (500 ≤ BCF ≤ 5000).

12.4. Mobility in soil

Nickel, metallic (7440-02-0)	
Ecology - soil	No (test)data on mobility of the substance available.

12.5. Other adverse effects

No additional information available

SECTION 13: Disposal considerations

13.1. Disposal methods

Waste treatment methods : Dispose of contents/container in accordance with licensed collector's sorting instructions.

SECTION 14: Transport information

Department of Transportation (DOT)

In accordance with DOT

Other information : Not Regulated in packages less than 55 gallons (208 l), based on Nickel RQ of 100lbs.

Transportation of Dangerous Goods

Not regulated

Transport by sea

Not regulated

Air transport

Not regulated

SECTION 15: Regulatory information

15.1. US Federal regulations

All components of this product are listed, or excluded from listing, on the United States Environmental Protection Agency Toxic Substances Control Act (TSCA) inventory

Chemical(s) subject to the reporting requirements of Section 313 or Title III of the Superfund Amendments and Reauthorization Act (SARA) of 1986 and 40 CFR Part 372.

Nickel, metallic	CAS-No. 7440-02-0	15 - 20%
Nickel, metallic (7440-02-0)		
CERCLA RQ	100 lb	

15.2. International regulations

CANADA

Distillates (petroleum), hydrotreated heavy naphthenic (64742-52-5)

Listed on the Canadian DSL (Domestic Substances List)

Nickel, metallic (7440-02-0)

Listed on the Canadian DSL (Domestic Substances List)

EU-Regulations

National regulations

Nickel, metallic (7440-02-0)

Listed on IARC (International Agency for Research on Cancer)

Listed as carcinogen on NTP (National Toxicology Program)

15.3. US State regulations

⚠ WARNING: This product can expose you to Nickel, metallic, which is known to the State of California to cause cancer. For more information go to www.P65Warnings.ca.gov.

SECTION 16: Other information

Full text of H-phrases:

H317	May cause an allergic skin reaction
H351	Suspected of causing cancer
H372	Causes damage to organs through prolonged or repeated exposure

NIKAL®

Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

SDS US (GHS HazCom 2012)

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.

MATERIAL SAFETY DATA SHEET

IDENTIFICATION

Prepared to U.S. OSHA, CMA, ANSI and Canadian WHMIS Standards

1. PRODUCT IDENTIFICATION

Product Name: Methyl Ethyl Ketone (MEK) - 100% Pure

Chemical Formula: C₅H₁₀O
Molecular Weight: 98.14 g/mol

Other Names: Not Applicable

Other Names: Not Applicable

Other Names: Not Applicable

Other Names: Not Applicable

The Material Safety Data Sheet is for this gas mixture supplied in cylinders with 33 cubic feet (935 liters) or less gas capacity (DOT - 39 cylinders). This MSDS has been developed for various gas mixtures with the composition of components within the ranges listed in Section 2 (Composition and Information on Ingredients). Refer to the product label for information on the actual composition of the product.

RECOMMENDED: RECOMMENDED: RECOMMENDED: RECOMMENDED: RECOMMENDED:	Calibration of Monitoring and Research Equipment CALGAZ 821 Chesapeake Drive Cambridge, MD 21613 CHEMTREC: 1-800-424-9300 1-410-228-6400 1-713/868-0440 1-800/231-1366
General MSDS Information Fax on Demand:	1-800/231-1366

2. HAZARD IDENTIFICATION

CHEMICAL NAME	CAS #	mole %	EXPOSURE LIMITS IN AIR					
			ACGIH-TLV		OSHA-PEL		NIOSH IDLH ppm	OTHER ppm
			TWA ppm	STEL ppm	TWA ppm	STEL ppm		
n-Hexane	110-54-3	0-0.48%	50 (skin)	NE	500 50 (Vacated 1989 PEL)	NE	1100 (Based on 10% of LEL)	NIOSH REL: TWA = 500 DFG MAKs: TWA = 50 (skin) PEAK = 8•MAK, 15, min., average value DFG MAK Pregnancy Risk Classification: C
n-Pentane	109-66-0	0-0.75%	600	750	1000 600 (Vacated 1989 PEL)	750 (Vacated 1989 PEL)	1500 (based on 10% of LEL)	NIOSH RELs: TWA = 120 STEL = 610 (ceiling) 15 minutes DFG MAKs: TWA = 1000 PEAK = 2•MAK 60 min., momentary value
Oxygen	7782-44-7	0.0-23.5%	There are no specific exposure limits for Oxygen. Oxygen levels should be maintained above 19.5%.					
Nitrogen	7727-37-9	Balance	There are no specific exposure limits for Nitrogen. Nitrogen is a simple asphyxiant (SA). Oxygen levels should be maintained above 19.5%.					

NE = Not Established. NIC = Notice of Intended Change. See Section 16 for Definitions of Terms Used. NOTE (1): ALL WHMIS required information is included in appropriate sections based on the ANSI Z400.1-1998 format. This gas mixture has been classified in accordance with the hazard criteria of the CPR and the MSDS contains all the information required by the CPR.

3. PHYSICAL AND CHEMICAL PROPERTIES

RECOMMENDED: This gas mixture is a colorless gas mixture which is either odorless, or which has a faint, solvent-like odor, if the solvent components (n-Pentane and n-Hexane) are present. Components of this gas mixture (n-Pentane and n-Hexane) can cause anesthetic or peripheral neuropathy effects. Additionally, releases of this gas mixture may produce oxygen-deficient atmospheres (especially in small, confined spaces or other poorly-ventilated environments); individuals in such atmospheres may be asphyxiated.

RECOMMENDED: The most significant route of over-exposure for this gas mixture is by inhalation. Due to the small size of an individual cylinder of this gas mixture, no unusual health effects from over-exposure to the product are anticipated under routine circumstances of use. A hazard associated with this gas mixture is the potential for anesthetic and peripheral neuropathy effects after inhalation over-exposures to n-Pentane and n-Hexane (components of this gas mixture). Specific human over-exposure data are available for n-Pentane and n-Hexane, as follows:

RECOMMENDED: Brief (10 minute) up to 5,000 ppm: Higher than 5,000 ppm: Long-Term:	RECOMMENDED: No symptoms. Exhilaration, dizziness and headache can occur. Can cause chronic neurological disorder causing damage to the nerves in the hands and feet (peripheral neuropathy).
RECOMMENDED: Brief (10 minute) at 1,500 ppm: 5000 ppm: Long term at 500 ppm:	RECOMMENDED: Irritation of the respiratory tract, nausea and headache. Dizziness and drowsiness can occur. Can affect the nerves in the arms and legs. Effects include numbing or tingling sensations in the fingers and toes, tiredness, muscle weakness, cramps and spasms in the leg, difficulty in holding objects or walking, abdominal pains, loss of appetite, weight loss. More serious exposures can cause damage to the nerves in the hands and feet (peripheral neuropathy).
Eyes and Vision:	Abnormal color perception and pigment changes in the eyes have been reported among industrial workers exposed to 423-1280 ppm for 5 years or more.
Blood Cells:	Mild forms of anemia have also been associated with exposure to hexane. These are of temporary nature.

3 **RD D**

Additionally, if mixtures of this gas mixture contain less than 19.5% Oxygen and are released in a small, poorly ventilated area (i.e. a small, confined space), an oxygen-deficient environment may occur. Individuals breathing such an atmosphere may experience symptoms which include headaches, ringing in ears, dizziness, drowsiness, unconsciousness, nausea, vomiting, and depression of all the senses. Under some circumstances of over-exposure, death may occur. The following effects associated with various levels of oxygen are as follows:

- 12-16% Oxygen: Breathing and pulse rate increased, muscular coordination slightly disturbed.
- 10-14% Oxygen: Emotional upset, abnormal fatigue, disturbed respiration.
- 6-10% Oxygen: Nausea, vomiting, collapse, or loss of consciousness.
- Below 6%: Convulsive movements, possible respiratory collapse, and death.

Over-exposure to this gas mixture may cause the following health effects:

Due to the small size of the individual cylinder of this gas mixture, no unusual health effects from exposure to the product are anticipated under routine circumstances of use. Inhalation over-exposures to components of this gas mixture (n-Pentane, and n-Hexane) can cause anesthetic effects and motor neuropathy (i.e. pain and tingling in feet and hands).

Chronic exposure of this gas mixture to the skin may cause dermatitis. Abnormal color perception and pigment changes in the eyes have been reported among persons exposed to 420 -1300 ppm of n-Hexane for five years. Additionally, long-term exposure to low levels of n-Hexane or n-Pentane can affect the nerves in the arms and legs. Effects include numbing or tingling sensation, tiredness, cramps, spasms in legs, difficulty holding objects or walking, loss of appetite and weight loss. Pentane isomers, such as n-Pentane, can cause sensitization of the heart to epinephrine. Refer to Section 11 (Toxicology Information) for additional information on the components of this gas mixture. Chronic exposure to oxygen-deficient atmospheres (below 18% oxygen in air) may effect the heart and nervous system.

ACUTE: Respiratory system, blood system, central nervous system effects. CHRONIC: Cardiovascular system, reproductive system, skin, central nervous system.

RD M RD D M	
RD (BLUE)	1
MM RD (RED)	0
RD (YELLOW)	0
PROTECTIVE EQUIPMENT	
EYES	RESPIRATORY
HANDS	BODY
See Section 8	
For Routine Industrial Use and Handling Applications	

RD M RD

Victim(s) who experience any adverse effect after over-exposure to this gas mixture must be taken for medical attention. Rescuers should be taken for medical attention if necessary. Take a copy of the label and the MSDS to physician or other health professional with victim(s).

No unusual health effects are anticipated after exposure to this gas mixture, due to the small cylinder size. If any adverse symptom develops after over-exposure to this gas mixture, remove victim(s) to fresh air as quickly as possible. Only trained personnel should administer supplemental oxygen and/or cardio-pulmonary resuscitation if necessary.

If irritation of the skin develops after exposure to this gas mixture, immediately begin decontamination with running water. Minimum flushing is for 15 minutes. Remove exposed or contaminated clothing, taking care not to contaminate eyes. Victim must seek immediate medical attention.

If irritation of the eye develops after exposure to this gas mixture, open victim's eyes while under gentle running water. Use sufficient force to open eyelids. Have victim "roll" eyes. Minimum flushing is for 15 minutes. Seek medical assistance immediately, preferably an ophthalmologist.

Acute or chronic respiratory conditions may be aggravated by over-exposure to the components of this gas mixture. Because of the presence of n-Hexane or n-Pentane in this gas mixture, central nervous system conditions, eye disorders, or skin problems may be aggravated by over-exposure to this gas mixture.

Administer oxygen, if necessary; treat symptoms; eliminate exposure. Be observant for the signs of pulmonary edema.

RD M RD

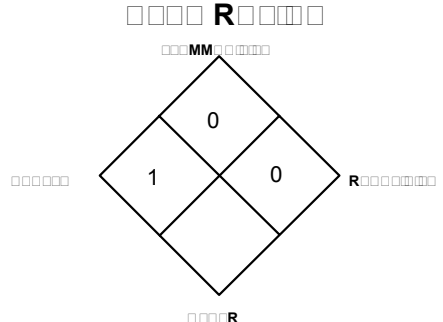
Not applicable.
M RD: Not applicable.
FLAMMABLE LIMITS (in air by volume, %):
Lower (LEL): Not applicable.
Upper (UEL): Not applicable.

Non-flammable gas mixture. Use extinguishing media appropriate for surrounding fire.

This gas mixture is not flammable; however, containers, when involved in fire, may rupture or burst in the heat of the fire.

Explosion Sensitivity to Mechanical Impact: Not Sensitive.
Explosion Sensitivity to Static Discharge: Not Sensitive.

Structural firefighters must wear Self-Contained Breathing Apparatus and full protective equipment.



DR MR

Due to the small size and content of the cylinder, an accidental release of this gas mixture presents significantly less risk Ammonia over-exposure, an oxygen deficient environment, and other safety hazards than a similar release from a larger cylinder. However, as with any chemical release, extreme caution must be used during emergency response procedures. In the event of a release in which the atmosphere is unknown, and in which other chemicals are potentially involved, evacuate immediate area. Such releases should be responded to by trained personnel using pre-planned procedures. Proper protective equipment should be used. In case of a leak, clear the affected area, protect people, and respond with trained personnel. Allow the gas mixture to dissipate. If necessary, monitor the surrounding area (and the original area of the release) for Ammonia and Oxygen. The concentration of Ammonia must be at acceptable levels (see Section 2, Composition on Information on Ingredients) and the atmosphere must have at least 19.5 percent oxygen before personnel can be allowed in the area without

D d

All work practices should minimize the release of gas mixture containing Ammonia. Eye wash stations/safety showers should be near areas where this gas mixture is used or stored. All work operations should be monitored in such a way that emergency personnel can be immediately contacted in the event of a release. Do not attempt to repair, adjust, or in any other way modify the cylinders containing this gas mixture. If there is a malfunction or another type of operational problem, contact nearest distributor immediately.

Cylinders should be firmly secured to prevent falling or being knocked-over. Cylinders must be protected from the environment, and preferably kept at room temperature (approximately 21°C [70°F]). Cylinders should be stored in dry, well-ventilated areas, away from sources of heat, ignition, and direct sunlight. Protect cylinders against physical damage. Full and empty cylinders should be segregated. Use a first-in, first-out inventory system to prevent full containers from being stored for long periods of time. These cylinders are not refillable.

Compressed gases can present significant safety hazards. During cylinder use, use equipment designed for these specific cylinders. Ensure all lines and equipment are rated for proper service pressure.

Follow practices indicated in Section 6 (Accidental Release Measures). Make certain that application equipment is locked and tagged-out safely. Always use product in areas where adequate ventilation is provided.

13 D R

Waste disposal must be in accordance with appropriate Federal, State, and local regulations. Cylinders with undesired residual product may be safely vented outdoors with the proper regulator. For further information, refer to Section 16 (Other Information).

1 R R M

Compressed gases, n.o.s. (*Oxygen, Nitrogen)* or the gas component with the next highest concentration next to Nitrogen.

2.2 (Non-Flammable Gas)

UN 1956

Not applicable.

Non-Flammable Gas

126

The components of this gas mixture are not classified by the DOT as Marine Pollutants (as defined by 49 CFR 172.101, Appendix B).

Cylinders should be transported in a secure position, in a well-ventilated vehicle. The transportation of compressed gas cylinders in automobiles or in closed-body vehicles can present serious safety hazards. If transporting these cylinders in vehicles, ensure these cylinders are not exposed to extremely high temperatures (as may occur in an enclosed vehicle on a hot day). Additionally, the vehicle should be well-ventilated during transportation.

DOT 39 Cylinders ship in a strong outer carton (overpack). Pertinent shipping information goes on the outside of the overpack. DOT 39 Cylinders do not have transportation information on the cylinder itself.

This gas is considered as Dangerous Goods, per regulations of Transport Canada.

Compressed gases, n.o.s. (*Oxygen, Nitrogen)* or the gas component with the next highest concentration next to Nitrogen.

2.2 (Non-Flammable Gas)

UN 1956

Not Applicable

Class 2.2 (Non-Flammable Gas)

None

0.12

None

None

75

121

Shipment of compressed gas cylinders via Public Passenger Road Vehicle is a violation of Canadian law (Transport Canada Transportation of Dangerous Goods Act, 1992).

1 R R M

The components of this gas mixture are subject to the reporting requirements of Sections 302, 304, and 313 of Title III of the Superfund Amendments and Reauthorization Act, as follows:

CHEMICAL NAME	SARA 302 (40 CFR 355, Appendix A)	SARA 304 (40 CFR Table 302.4)	SARA 313 (40 CFR 372.65)
n-Hexane	NO	NO	YES

There are no specific Threshold Planning Quantities for the components of this gas mixture. The default Federal MSDS submission and inventory requirement filing threshold of 10,000 lb (4,540 kg) may apply, per 40 CFR 370.20.

The components of this gas mixture are listed on the TSCA Inventory.

N-Hexane = 5000 lb (2270 kg)

- n-Pentane and n-Hexane are subject to the reporting requirements of CFR 29 1910.1000. These chemicals are listed on Table Z.1.
- Pentane is subject to the reporting requirements of Section 112(r) of the Clean Air Act. The Threshold Quantity for this gas is 10,000 lb (4554 kg).
- This gas mixture does not contain any Class I or Class II ozone depleting chemicals (40 CFR part 82).
- Nitrogen, Oxygen, and n-Hexane are not listed Regulated Substances, per 40 CFR, Part 68, of the Risk Management for Chemical Releases. n-Pentane is listed under this regulation in Table 3 as a Regulated Substance (Flammable), in quantities of 10,000 lbs (4,554 kg) or greater.

The components of this gas mixture are covered under the following specific State regulations:

<p>n-Pentane, n-Hexane.</p> <p>Nitrogen, n-Pentane, n-Hexane.</p> <p>Oxygen, n-Pentane, n-Hexane.</p> <p>n-Pentane, n-Hexane.</p> <p>30313 No.</p> <p>Oxygen, n-Pentane, n-Hexane.</p>	<p>n-Pentane, n-Hexane.</p> <p>n-Pentane, n-Hexane.</p> <p>Oxygen, Nitrogen, n-Pentane, n-Hexane.</p> <p>No.</p> <p>Oxygen, Nitrogen, n-Pentane, n-Hexane.</p>	<p>Oxygen, Nitrogen, n-Pentane, n-Hexane.</p> <p>n-Pentane, n-Hexane.</p> <p>n-Pentane, n-Hexane.</p> <p>n-Pentane, n-Hexane.</p>
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No component of this gas mixture is on the California Proposition 65 lists.

The components of this gas mixture are listed on the DSL Inventory.

The components of this gas mixture are not on the CEPA Priorities Substances Lists.

This gas mixture is categorized as a Controlled Product, Hazard Classes A and D2B, as per the Controlled Product Regulations.

DOT 39 cylinders ship as hazardous materials when full. Once the cylinders are relieved of pressure (empty) they are not considered hazardous material or waste. Residual gas in this type of cylinder is not an issue because toxic gas mixtures are prohibited. Calibration gas mixtures typically packaged in these cylinders are Nonflammable n.o.s., UN 1956. A small percentage of calibration gases packaged in DOT 39 cylinders are flammable or oxidizing gas mixtures.

For disposal of used DOT-39 cylinders, it is acceptable to place them in a landfill if local laws permit. Their disposal is no different than that employed with other DOT containers such as spray paint cans, household aerosols, or disposable cylinders of propane (for camping, torch etc.). When feasible, we recommended recycling for scrap metal content. CALGAZ will do this for any customer that wishes to return cylinders to us prepaid. All that is required is a phone call to make arrangements so we may anticipate arrival. Scrapping cylinders involves some preparation before the metal dealer may accept them. We perform this operation as a service to valued customers who want to participate.

M When two or more gases or liquefied gases are mixed, their hazardous properties may combine to create additional, unexpected hazards. Obtain and evaluate the safety information for each component before you produce the mixture. Consult an Industrial Hygienist or other trained person when you make your safety evaluation of the end product. Remember, gases and liquids have properties which can cause serious injury or death.

Further information about the handling of compressed gases can be found in the following pamphlets published by: Compressed Gas Association Inc. (CGA), 1725 Jefferson Davis Highway, Suite 1004, Arlington, VA 22202-4102. Telephone: (703) 412-0900.

- P-1 "Safe Handling of Compressed Gases in Containers"
- AV-1 "Safe Handling and Storage of Compressed Gases"
- "Handbook of Compressed Gases"

R CHEMICAL SAFETY ASSOCIATES, Inc.
 PO Box 3519, La Mesa, CA 91944-3519
 619/670-0609



This Material Safety Data Sheet is offered pursuant to OSHA's Hazard Communication Standard, 29 CFR, 1910.1200. Other government regulations must be reviewed for applicability to this gas mixture. To the best of CALGAZ knowledge, the information contained herein is reliable and accurate as of this date; however, accuracy, suitability or completeness are not guaranteed and no warranties of any type, either express or implied, are provided. The information contained herein relates only to this specific product. If this gas mixture is combined with other materials, all component properties must be considered. Data may be changed from time to time. Be sure to consult the latest edition.



SAFETY DATA SHEET

Revision Date 11-May-2020

Version 8

1. IDENTIFICATION

Product identifier

Product Name 133H ANTI-SEIZE LUBRICANT 4OZ.

Other means of identification

Product Code 80071

Recommended use of the chemical and restrictions on use

Recommended Use Lubricant

Uses advised against No information available

Details of the supplier of the safety data sheet

Manufacturer Address

ITW Permatex
6875 Parkland Blvd.
Solon, Ohio 44139 USA
Telephone: 1-87-Permatex
(866) 732-9502

24-hour emergency phone number

Chem-Tel: 800-255-3924
International Emergency:
00+1+ 813-248-0585
Contract Number: MIS0003453

May Also Be Distributed by:

ITW Permatex Canada
101-2360 Bristol Circle
Oakville, ON Canada L6H 6M5
Telephone: (800) 924-6994

E-mail address: mail@permatex.com

2. HAZARDS IDENTIFICATION

Classification

OSHA Regulatory Status

This chemical is considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200)

Acute toxicity - Oral	Category 4
Carcinogenicity	Category 1B

Label elements

Emergency Overview

Signal word

Danger

Harmful if swallowed
May cause cancer

**Appearance** Silver**Physical state** Paste Liquid**Odor** Petroleum**Precautionary Statements - Prevention**

Obtain special instructions before use
 Do not handle until all safety precautions have been read and understood
 Use personal protective equipment as required
 Wash face, hands and any exposed skin thoroughly after handling
 Do not eat, drink or smoke when using this product

Precautionary Statements - Response

IF exposed or concerned: Get medical advice/attention

IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell
 Rinse mouth

Precautionary Statements - Storage

Store locked up

Precautionary Statements - Disposal

Dispose of contents/container to an approved waste disposal plant

Hazards not otherwise classified (HNOC)

Not applicable

Other Information

May be harmful in contact with skin.

Unknown acute toxicity

0% of the mixture consists of ingredient(s) of unknown toxicity

3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Name	CAS No	Weight-%
CALCIUM OXIDE	1305-78-8	10 - 30
GRAPHITE	7782-42-5	10 - 30
ALUMINIUM POWDER	7429-90-5	5 - 10
PARAFFIN OILS (PETROLEUM), CATALYTIC DEWAXED LIGHT	64742-71-8	3 - 7

4. FIRST AID MEASURES

Description of first aid measures**General advice**

If symptoms persist, call a physician.

Eye contact

Immediately flush with plenty of water. After initial flushing, remove any contact lenses and continue flushing for at least 15 minutes. Keep eye wide open while rinsing. If symptoms persist, call a physician.

Skin contact

Immediate medical attention is not required. Wash off immediately with soap and plenty of water while removing all contaminated clothes and shoes. If skin irritation persists, call a

physician.

Inhalation	Immediate medical attention is not required. If symptoms persist, call a physician. Move to fresh air in case of accidental inhalation of vapors or decomposition products.
Ingestion	IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell. Rinse mouth. Clean mouth with water and drink afterwards plenty of water. Never give anything by mouth to an unconscious person. Call a physician. Do NOT induce vomiting.
Self-protection of the first aider	Use personal protective equipment as required.

Most important symptoms and effects, both acute and delayed

Symptoms See section 2 for more information.

Indication of any immediate medical attention and special treatment needed

Note to physicians Treat symptomatically.

5. FIRE-FIGHTING MEASURES

Suitable extinguishing media

Use, Use dry chemical, Carbon dioxide (CO₂), Water spray (fog), Alcohol resistant foam

Unsuitable extinguishing media

Water

Specific hazards arising from the chemical

Keep product and empty container away from heat and sources of ignition. Risk of ignition.

Explosion data

Sensitivity to Mechanical Impact None.

Sensitivity to Static Discharge None.

Protective equipment and precautions for firefighters

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

Personal precautions Avoid contact with eyes and skin. Wash thoroughly after handling. Use personal protective equipment as required. Evacuate personnel to safe areas. Keep people away from and upwind of spill/leak. Remove all sources of ignition. Pay attention to flashback. Take precautionary measures against static discharges.

Environmental precautions

Environmental precautions See section 12 for additional ecological information. Prevent further leakage or spillage if safe to do so. Prevent product from entering drains.

Methods and material for containment and cleaning up

Methods for containment Prevent further leakage or spillage if safe to do so.

Methods for cleaning up Use personal protective equipment as required. Dam up. Cover liquid spill with sand, earth or other non-combustible absorbent material. Take up mechanically, placing in appropriate containers for disposal. Clean contaminated surface thoroughly. Soak up with inert absorbent material. Pick up and transfer to properly labeled containers. Take precautionary measures against static discharges.

Prevention of secondary hazards Clean contaminated objects and areas thoroughly observing environmental regulations.

7. HANDLING AND STORAGE

Precautions for safe handling

Advice on safe handling

Use with local exhaust ventilation. All equipment used when handling the product must be grounded. Keep away from heat/sparks/open flames/hot surfaces. - No smoking. Use personal protective equipment as required. Do not breathe dust/fume/gas/mist/vapors/spray. Take necessary action to avoid static electricity discharge (which might cause ignition of organic vapors).

Conditions for safe storage, including any incompatibilities

Storage Conditions

Keep containers tightly closed in a cool, well-ventilated place. Keep away from heat. Keep in properly labeled containers.

Incompatible materials

Strong oxidizing agents, Acids, Alkalis, Amines

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

Exposure Guidelines

Chemical Name	ACGIH TLV	OSHA PEL	NIOSH IDLH
CALCIUM OXIDE 1305-78-8	TWA: 2 mg/m ³	TWA: 5 mg/m ³ (vacated) TWA: 5 mg/m ³ not in effect as a result of reconsideration	IDLH: 25 mg/m ³ TWA: 2 mg/m ³
GRAPHITE 7782-42-5	TWA: 2 mg/m ³ respirable particulate matter all forms except graphite fibers	TWA: 15 mg/m ³ total dust synthetic TWA: 5 mg/m ³ respirable fraction synthetic (vacated) TWA: 2.5 mg/m ³ respirable dust natural (vacated) TWA: 10 mg/m ³ total dust synthetic (vacated) TWA: 5 mg/m ³ respirable fraction synthetic TWA: 15 mppcf natural	IDLH: 1250 mg/m ³ TWA: 2.5 mg/m ³ natural respirable dust
ALUMINIUM POWDER 7429-90-5	TWA: 1 mg/m ³ respirable particulate matter	TWA: 15 mg/m ³ total dust TWA: 5 mg/m ³ respirable fraction (vacated) TWA: 15 mg/m ³ total dust (vacated) TWA: 5 mg/m ³ respirable fraction (vacated) TWA: 5 mg/m ³ Al Aluminum	TWA: 10 mg/m ³ total dust TWA: 5 mg/m ³ respirable dust TWA: 5 mg/m ³ Al

NIOSH IDLH *Immediately Dangerous to Life or Health*

Other Information

Vacated limits revoked by the Court of Appeals decision in AFL-CIO v. OSHA, 965 F.2d 962 (11th Cir., 1992).

Appropriate engineering controls

Engineering Controls

Showers
Eyewash stations
Ventilation systems

Individual protection measures, such as personal protective equipment

Eye/face protection

Tight sealing safety goggles.

Skin and body protection

Wear protective natural rubber, nitrile rubber, Neoprene™ or PVC gloves.

Respiratory protection

Use NIOSH-approved air-purifying respirator with organic vapor cartridge or canister, as

appropriate.

General Hygiene Considerations When using do not eat, drink or smoke. Regular cleaning of equipment, work area and clothing is recommended.

9. PHYSICAL AND CHEMICAL PROPERTIES

9.1. Information on basic physical and chemical properties

Physical state	Paste Liquid
Appearance	Silver
Odor	Petroleum
Odor threshold	No information available

<u>Property</u>	<u>Values</u>	<u>Remarks • Method</u>
pH	No information available	
Melting point / freezing point	No information available	
Boiling point / boiling range	No information available	
Flash point	> 95 °C / > 203 °F	Tag Closed Cup
Evaporation rate	< 1	Butyl acetate = 1
Flammability (solid, gas)	No information available	
Flammability Limit in Air		
Upper flammability limit:	No information available	
Lower flammability limit:	No information available	
Vapor pressure	<5 mm Hg	
Vapor density	>1	Air = 1
Relative density	1.17	
Water solubility	Negligible	
Solubility(ies)	No information available	
Partition coefficient	No information available	
Autoignition temperature	No information available	
Decomposition temperature	No information available	
Kinematic viscosity	No information available	
Dynamic viscosity	No information available	
Explosive properties	No information available	
Oxidizing properties	No information available	
 Other Information		
Softening point	No information available	
Molecular weight	No information available	
VOC Content (%)	0	
Density	No information available	
Bulk density	No information available	
SADT (self-accelerating decomposition temperature)	No information available	

10. STABILITY AND REACTIVITY

Reactivity
No information available

Chemical stability
Stable under normal conditions

Possibility of Hazardous Reactions
None under normal processing.

Conditions to avoid
Heat, flames and sparks.

Incompatible materials
Strong oxidizing agents, Acids, Alkalis, Amines

Hazardous Decomposition Products

Carbon oxides

11. TOXICOLOGICAL INFORMATION**Information on likely routes of exposure**

Inhalation	May cause irritation of respiratory tract.
Eye contact	Contact with eyes may cause irritation. May cause redness and tearing of the eyes.
Skin contact	May cause skin irritation and/or dermatitis.
Ingestion	Harmful if swallowed.

Chemical Name	Oral LD50	Dermal LD50	Inhalation LC50
CALCIUM OXIDE 1305-78-8	= 500 mg/kg (Rat)	-	-
GRAPHITE 7782-42-5	-	-	> 2000 mg/m ³ (Rat) 4 h

Information on toxicological effects

Symptoms No information available.

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Skin corrosion/irritation	Irritating to skin.
Serious eye damage/eye irritation	Irritating to eyes.
Sensitization	No information available.
Germ cell mutagenicity	No information available.
Carcinogenicity	The table below indicates whether each agency has listed any ingredient as a carcinogen.

Chemical Name	ACGIH	IARC	NTP	OSHA
PARAFFIN OILS (PETROLEUM), CATALYTIC DEWAXED LIGHT 64742-71-8	A2	Group 1	Known	X

ACGIH (American Conference of Governmental Industrial Hygienists)

A2 - *Suspected Human Carcinogen*

IARC (International Agency for Research on Cancer)

Group 1 - *Carcinogenic to Humans**Not classifiable as a human carcinogen*

NTP (National Toxicology Program)

Known - *Known Carcinogen*

OSHA (Occupational Safety and Health Administration of the US Department of Labor)

X - *Present*

Target Organ Effects Central Vascular System (CVS), Eyes, Respiratory system, Skin.

The following values are calculated based on chapter 3.1 of the GHS document .

ATEmix (oral)	1624 mg/kg
ATEmix (dermal)	3946 mg/kg
ATEmix (inhalation-vapor)	32255 mg/l

12. ECOLOGICAL INFORMATION**Ecotoxicity**

0.10105 % of the mixture consists of component(s) of unknown hazards to the aquatic environment

Persistence and degradability

No information available.

Bioaccumulation

No information available.

Mobility

No information available.

Other adverse effects

No information available

13. DISPOSAL CONSIDERATIONS**Waste treatment methods**

Disposal of wastes	Disposal should be in accordance with applicable regional, national and local laws and regulations.
Contaminated packaging	Do not reuse container.
US EPA Waste Number	Not applicable

This product contains one or more substances that are listed with the State of California as a hazardous waste.

Chemical Name	California Hazardous Waste Status
CALCIUM OXIDE 1305-78-8	Corrosive
ALUMINIUM POWDER 7429-90-5	Ignitable powder

14. TRANSPORT INFORMATION**DOT**

Proper shipping name: Not regulated

IATA

Proper shipping name: Not regulated

IMDG

Proper shipping name: Not regulated

15. REGULATORY INFORMATION**International Inventories**

TSCA	Complies
DSL/NDSL	Complies
EINECS/ELINCS	Complies
ENCS	Does not comply
IECSC	Complies
KECL	Complies
PICCS	Complies
AICS	Complies

Legend:

TSCA - United States Toxic Substances Control Act Section 8(b) Inventory
DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List
EINECS/ELINCS - European Inventory of Existing Chemical Substances/European List of Notified Chemical Substances
ENCS - Japan Existing and New Chemical Substances
IECSC - China Inventory of Existing Chemical Substances

KECL - Korean Existing and Evaluated Chemical Substances
 PICCS - Philippines Inventory of Chemicals and Chemical Substances
 AICS - Australian Inventory of Chemical Substances

US Federal Regulations

SARA 313

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product contains a chemical or chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372

Chemical Name	SARA 313 - Threshold Values %
ALUMINIUM POWDER - 7429-90-5	1.0

SARA 311/312 Hazard Categories

Acute health hazard	Yes
Chronic Health Hazard	No
Fire hazard	No
Sudden release of pressure hazard	No
Reactive Hazard	No

CWA (Clean Water Act)

This product contains the following substances which are regulated pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42)

CERCLA

This material, as supplied, contains one or more substances regulated as a hazardous substance under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302)

US State Regulations

California Proposition 65

This product contains the following Proposition 65 chemicals

U.S. State Right-to-Know Regulations

Chemical Name	New Jersey	Massachusetts	Pennsylvania
CALCIUM OXIDE 1305-78-8	X	X	X
GRAPHITE 7782-42-5	X	X	X
ALUMINIUM POWDER 7429-90-5	X	X	X
PARAFFIN OILS (PETROLEUM), CATALYTIC DEWAXED LIGHT 64742-71-8	-	X	-
COPPER 7440-50-8	X	X	X

U.S. EPA Label Information

EPA Pesticide Registration Number Not applicable

WHMIS Hazard Class

D2A - Very toxic materials

16. OTHER INFORMATION, INCLUDING DATE OF PREPARATION OF THE LAST REVISION

<u>NFPA</u>	Health hazards 2	Flammability 1	Instability 0	-
<u>HMIS</u>	Health hazards 2	Flammability 1	Physical hazards 0	Personal protection B

NFPA (National Fire Protection Association)
 HMIS (Hazardous Material Information System)

Revision Date 11-May-2020

Disclaimer

Illinois Tool Works Inc. believes the information contained in this data sheet is accurate as of the date compiled.

However, Illinois Tool Works Inc. makes no warranty, express or implied, as to the accuracy, reliability or completeness of the information. User is responsible for evaluating whether such information or this product is fit for a particular purpose and suitable for a particular use or application. The information in this data sheet may not be valid if this product is used in combination with other products or in processes for which it was not designed. Illinois Tool Works Inc. disclaims any liability for consequential or incidental damages of any kind, including lost profits, arising from the sale or use of this product. Ensure you have the most current version of this data sheet by contacting us or reviewing our web site.

End of Safety Data Sheet

MATERIAL SAFETY DATA SHEET FOR PROSTAR® SOLVENT ANTI-SPATTER

SECTION 1. PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME : PROSTAR® SOLVENT ANTI-SPATTER
PRODUCT IDENTIFIER : HEAVY DUTY ANTI-SPATTER
PRODUCT USE : PREVENTS SPATTER BUILD UP
ITEM CODE(S) : PRS50000, PRS50001, PRS50010
REPLACES (CAT528-155, CAT528-160, CAT528-170)
UPC BAR CODE(S) : 699913-11180, 699913-11185, 699913-11190
ADDRESS : PRAXAIR DISTRIBUTION INC
DANBURY, CT 06810-5113
PREPARED BY : CANTESCO CORPORATION / QUALITY MANAGER
TELEPHONE : (905) 624-5463
EMERGENCY TELEPHONE : (613) 996-6666 (CANUTEC – Call collect)
PREPARATION DATE : JULY 1, 2012
OSHA REGULATORY STATUS : REGULATED
WHMIS CLASSIFICATION : D1B, D2A, A

SECTION 2. COMPOSITION / INFORMATION ON INGREDIENTS

HAZARDOUS INGREDIENTS	CAS	OSHA PEL	ACGIH TLV	LD50 SPECIES/ROUTE	LC50 SPECIES/ROUTE	%WT
METHYLENE CHLORIDE	0000075-09-2	25 ppm	50 ppm	1,600 mg/Kg rat/oral	14,400 ppm rats/inhale	90 - 100%

SECTION 3. HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW

POISON. CONTENTS UNDER PRESSURE. STORE BELOW 120°F(49°C), OUT OF SUNLIGHT AND AWAY FROM HEAT SOURCES. DO NOT PUNCTUE OR INCINERATE. AVOID CONTACT WITH SKIN AND EYES. VAPOR HARMFUL. INTENTIONAL MISUSE BY DELIBERATELY CONCENTRATING AND INHALING THE CONTENTS MAY BE HARMFUL OR FATAL.

EYE: Liquid or vapors may cause redness, burning, tearing, swelling and/or pain.

SKIN: Frequent or prolonged contact can result in defatting and drying of the skin which may result in skin irritation and dermatitis (rash).

INGESTION: Due to being an aerosol, product does not lend itself to ingestion. Should ingestion occur, it may cause irritation to membranes of the mouth, throat and gastrointestinal tract, resulting in vomiting and/or cramps.

INHALATION: Prolonged or repeated overexposure is anesthetic. May cause irritation of the respiratory tract, or acute nervous system depression characterized by headache, dizziness, staggering gait, or confusion.

EFFECTS OF ACUTE EXPOSURE: N/Av

EFFECTS OF CHRONIC EXPOSURE: Repeated exposure to high concentrations may produce adverse effects on the liver and kidney. Chronic inhalation studies in mice have shown increases in lung and liver tumours, when exposed to concentrations of methylene chloride well in excess of the occupational exposure limit

OTHER IMPORTANT HAZARDS: N/Av

SUGGESTED HMIS RATING: HEALTH | 3 | FLAMMABILITY | 0 | REACTIVITY | 0 | PERSONAL PROTECTION | C |

SECTION 4. FIRST AID MEASURES

INHALATION: Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Seek medical attention if symptoms persist or if unconscious.

INGESTION: Unlikely due to being in aerosol form. Should actual ingestion occur, do not induce vomiting! Drink a glass of water or milk to dilute. Call a physician or poison control center immediately. Never give anything by mouth to an unconscious person.

EYE CONTACT: Immediately flush with plenty of clear water for at least 15 minutes. Make sure to flush under the eyelids. Consult a physician for definitive treatment.

SKIN CONTACT: Remove with soap and water. Continue flushing with water for several minutes. Use skin cream to counter resulting dryness. Consult a physician if irritation continues or if large skin area is affected.

SECTION 5. FIRE FIGHTING MEASURES

CONDITIONS OF FLAMMABILITY: Heat, sparks, flame, red hot metal.

MEANS OF EXTINCTION: For warehouse and storage conditions, use NFPA Class B extinguishers (CO₂, dry chemical or universal aqueous film forming foam).

SPECIAL FIRE FIGHTING PROCEDURES: Use water spray to cool fire exposed aerosol containers for containers can rupture violently from heat developed pressure.

UNUSUAL FIRE AND EXPLOSION HAZARDS: Contents under pressure. In addition, when liquid or vapor comes into contact with flames or red hot metal, products of combustion will be created. Firemen should wear self-contained breathing apparatus.

FLASH POINT / DETERMINATION: None

UPPER FLAMMABLE LIMIT: N/Av

LOWER FLAMMABLE LIMIT: N/Av

AUTO-IGNITION TEMPERATURE: N/Av

HAZARDOUS COMBUSTION PRODUCTS: N/Av

EXPLOSION DATA - SENSITIVITY TO MECHANICAL IMPACT: N/Av

EXPLOSION DATA - SENSITIVITY TO STATIC DISCHARGE: N/Av

SECTION 6. ACCIDENTAL RELEASE MEASURES

LEAK / SPILL RESPONSE: Product is an aerosol, therefore spills and leaks are unlikely. In case of rupture, released content should be contained as any other solvent spill. Spills from aerosol cans are unlikely and are generally of small volume. Large spills are therefore not normally considered a problem. In case of actual rupture, avoid breathing vapors and ventilate area well. Remove all sources of ignition and use non-sparking equipment. Soak up material with inert absorbent and place in safety containers for proper disposal.

SPECIAL INSTRUCTIONS: Aerosol products represent a limited hazard and will not spill or leak unless ruptured. In case of rupture contents are generally evacuated from the can rapidly. Area should be ventilated immediately and continuous ventilation provided until all fumes and vapors have been removed. Aerosol cans should never be incinerated or burned. See Section 13 for disposal considerations.

SECTION 7. HANDLING AND STORAGE

HANDLING PROCEDURES / EQUIPMENT: Avoid prolonged or repeated skin contact. Avoid breathing vapors.

STORAGE REQUIREMENTS: Store in area below 120°F (49°C). Do not incinerate (burn) containers. Assure can is in a secure place to prevent knocking over and accidental rupture. Always replace overcap when not in use. For store of pallet quantities, compliance with ANSI/NFPA 30B is recommended.

SECTION 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

EYE PROTECTION: Safety glasses with side shields are recommended as a minimum for any type of industrial chemical handling. Where eye contact could occur, chemical splash proof goggles are recommended.

SKIN PROTECTION: For brief contact, no precautions other than clean body-covering clothing should be needed. When prolonged or repeated contact could occur, use protective clothing such as Sol-Vex® gloves or other clothing impervious to the ingredient listed in Section 2.

ENGINEERING CONTROLS: General ventilation (typically 10 air changes for hour) should be used. Ventilation rates should be matched to conditions. Local exhaust ventilation or an enclosed handling system, may be needed to control air contamination below that of the lowest TLV/PEL rated ingredient from Section 2.

EXPOSURE GUIDELINE LEVELS: Since this product is a mixture, an OSHA or ACGIH exposure value is not available. In determination of any exposure procedures, protection or testing use the lowest rated ingredient in Section 2.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

PHYSICAL STATE	: Liquid / Gas
ODOR AND APPEARANCE	: Clear to white liquid with a paint-like odor
ODOR THRESHOLD	: N/Av
SPECIFIC GRAVITY (H ₂ O=1)	: Below 1.0
VAPOUR PRESSURE (mm HG)	: N/Av
VAPOUR DENSITY (AIR=1)	: Above 1.0
EVAPORATION RATE (BA=1)	: N/Av
BOILING POINT (°F)	: Propellant <0°F (<-18°C)
FREEZING POINT (°F)	: N/Av
pH	: N/Av
COEFFICIENT OF WATER/OIL DISTRIBUTION	: N/Av
DENSITY	: N/Av
SOLUBILITY IN WATER	: Negligible
% VOLATILE BY VOLUME	: 20.0% Wt Max
VOC'S	: N/Av

SECTION 10. STABILITY AND REACTIVITY

STABILITY: Stable.

CONDITIONS TO AVOID: Heat, sparks, flame, red hot metal.

MATERIALS TO AVOID (INCOMPATIBILITIES): Strong oxidizing materials.

CONDITIONS OF REACTIVITY: N/Av

HAZARDOUS DECOMPOSITION BYPRODUCTS: Oxides of carbon, HCl fumes and possible trace amounts of phosgene.

HAZARDOUS POLYMERIZATION: Will not occur.

SECTION 11. TOXICOLOGICAL INFORMATION

LD50: Oral 1600 mg/kg – rats (Methylene Chloride)

LC50: Inhalation 14,400 ppm – rats – 7 hrs (Methylene Chloride)

ROUTES OF ENTRY: INHALATION[Y] EYE CONTACT[Y] SKIN CONTACT[Y] SKIN ABSORPTION[Y] INGESTION[N]

EXPOSURE LIMITS: Since this product is a mixture, an OSHA or ACGIH exposure value is not available. In determination of any exposure procedures, protection or testing use the lowest rated ingredient in Section 2.

IRRITANCY OF PRODUCT: N/Av

SENSITIZATION TO PRODUCT / MEDICAL CONDITIONS AGGRAVATED: N/Av

CARCINOGENICITY: This product contains Methylene Chloride which has been shown to cause cancer in certain laboratory animals when exposed to high vapor concentration over an extended period of time. While not proven to be carcinogenic to humans, if it should be found to be so, risk to health would depend on level and duration of exposure. Exposure to vapor should be minimized until risk to humans has been determined. IARC has classified methylene chloride as a Group 2B carcinogenic substance. ACGIH classifies methylene chloride as an A3 – Animal Carcinogen.

TERATOGENICITY / MUTAGENICITY / REPRODUCTIVE TOXICITY: N/Av

TOXICOLOGICAL DATA: N/Av

SECTION 12. ECOLOGICAL INFORMATION

ENVIRONMENTAL EFFECTS: This product has not been tested for environmental effects.

IMPORTANT ENVIRONMENTAL CHARACTERISTICS: N/Av

AQUATIC TOXICITY: Maybe toxic to aquatic organisms.

SECTION 13. DISPOSAL CONSIDERATIONS

An aerosol container that does not contain a significant amount of liquid would meet the definition of scarp metal (40 CFR 261.1(c)(6)), and would be exempt from RCRA regulation under 40 CFR 261.6(a)(3)(iv) if it is to be recycled. If containers are to be disposed of (not recycled) it must be managed under all applicable RCRA and state regulations.

SECTION 14. TRANSPORTATION INFORMATION

SPECIAL SHIPPING INFORMATION	:	N/Av
DOT HM-181 SHIPPING INFORMATION		
PROPER SHIPPING NAME	:	Consumer Commodity
HAZARD CLASS OR DIVISION	:	ORM-D
UN NUMBER	:	1950
PACKAGING GROUP	:	none
LABEL(S) REQUIRED	:	none
TDG SHIPPING INFORMATION		
TDG SHIPPING NAME	:	Aerosols, Nonflammable Limited Quantity
TDG CLASSIFICATION	:	2.2
UN NUMBER	:	1950
PACKING GROUP	:	none
LABEL(S) REQUIRED	:	none
NAERG	:	126
EMERGENCY TELEPHONE NUMBER	:	(613) 996-6666
INTERNATIONAL TRANSPORT INFORMATION		
PROPER SHIPPING NAME	:	Consumer Commodity
CLASS OR DIVISION	:	none
SUBSIDIARY RISK	:	none
HAZARDOUS LABEL(S)	:	none
PACKAGING GROUP	:	none
UN OR ID NUMBER	:	ID8000

SECTION 15. REGULATORY INFORMATION

TOXIC SUBSTANCES CONTROL ACT (TSCA): The product on this MSDS, or all of its components, is listed under TSCA.

SARA TITLE III, SECTION 313: The following ingredients are subject to the reporting requirements of section 313 of Title III of the Superfund and Reauthorization Act of 1986 and 40 CFR Part 372: Methylene Chloride (90.5%)

CLEAN AIR ACT (CAA): The following ingredients appear on the List of Hazardous Air Pollutants (HAP – 42 USC 7412, Title I, Part A, p112): None

CLEAN WATER ACT (CWA): The following ingredients appear on the CWA List of Hazardous Substances (40 CFR 116.4): None

CALIFORNIA PROPOSITION 65: The following ingredients appear on the Proposition 65 list(s): Methylene Chloride (C)

CANADIAN WORKPLACE HAZARDOUS MATERIALS INFORMATION SYSTEM (WHMIS): This MSDS has been prepared according to the hazard criteria of the Controlled Products Regulations (CPR) and the MSDS contains all of the information required by the CPR.

DOMESTIC SUBSTANCES LIST (DSL): The product on this MSDS, or all of its components, is included in the DSL.

SECTION 16. OTHER INFORMATION

N/E	Not Established
N/Av	Not Available
N/Ap	Not Applicable
IARC	International Agency for Research on Cancer
ACGIH	American Conference of Governmental Industrial Hygienists
NIOSH	National Institute for Occupational Health and Safety
TLV-TWA	Threshold Limit Values, Time Weighted Average
NAERG	North American Emergency Response Guidebook
WHMIS	Workplace Hazardous Materials Information System

This MSDS format meets ANSI Z400.1-1998, OSHA 1910.1200 and WHMIS requirements. Praxair Distribution Inc provides the information contained herein in good faith but makes no representation as to its comprehensiveness or accuracy. This document is intended only as a guide to the appropriate precautionary handling of the material by a properly trained person using this product. Product use and conditions of use are beyond the control of Praxair Distribution Inc. Warranty of materials is limited to test results of product performance as detailed in certificates of compliance. Interpretation of test results is the responsibility of end-user. No other warranties, expressed or implied, are made..

		<table border="1" style="width: 100%; border-collapse: collapse;"> <tr><th colspan="2">HMIS</th></tr> <tr><td>Health</td><td style="text-align: center;">3</td></tr> <tr><td>Fire</td><td style="text-align: center;">1</td></tr> <tr><td>Reactivity</td><td style="text-align: center;">1</td></tr> </table>	HMIS		Health	3	Fire	1	Reactivity	1
HMIS										
Health	3									
Fire	1									
Reactivity	1									
MATERIAL SAFETY DATA SHEET										

Meets requirements of 29 CFR 1910.1200
(Federal Hazard Communication Standard)

SECTION I

Manufacturer's Name: Relton Corporation Address: 317 Rolyn Place, Arcadia, CA 91007-2838	<u>Emergency Response</u> for Spill, Leak, Fire, Exposure or Accident: CHEMTREC, Ph.# (800) 424-9300 For non-emergency product information: RELTON CORP., Ph.# (213) 681-2551 (800) 423-1505
Chemical Name and Synonyms: mixture containing predominantly 1,1,1-Trichloroethane (methyl chloroform)	Trade Name and Synonyms: Original Rapid Tap®
Chemical Family: Inhibited Chlorinated Hydrocarbon	Formula: Mixture (See Section II)
DOT: Shipping Name: 1,1,1-Trichloroethane UN Number: UN2831 Hazard Class: 6.1 Packaging Group III	

SECTION II - INGREDIENTS

	CAS Registry No.	% Vol	OSHA PEL
1,1,1 -Trichloroethane (methyl chloroform)	71-55-6	< 80	350 ppm
Glycol Methylene Ether	646-06-0	< 2	NA
sec Butanol	78-92-2	< 1.5	150 PPM
Aliphatic Polyol - Trade Secret	--	< 10	NE
Cinamon Oil Perfume	--	Trace	NE

(See Section V for Health Data)

Data is based on testing mixture as a whole. Neither the mixture nor any of its ingredients is on the carcinogen or suspected-carcinogen list of the NTP, the IARC, or OSHA. Contains no Calif. Prop. 65 substance. Original Rapid Tap is subject to SARA Section 313 reporting.

SECTION III - PHYSICAL DATA

BOILING POINT (°): 72° C 162° F	SPECIFIC GRAVITY (H ₂ O=1) @ 25° C 1.17
VAPOR PRESSURE (mm Hg) @ 20° C: 100	
VAPOR DENSITY (AIR=1): 4.6	EVAPORATION RATE (1,1,1-Trichloroethane=1): 1.3
SOLUBILITY IN WATER: .07g/100g @25° C: Slight	Non-exempt VOC: 29.2g per liter (Rotovac Stripping @ 50° C)
APPEARANCE AND ODOR Liquid - clear, amber; cinnamon odor	

SECTION IV - FIRE AND EXPLOSION HAZARD DATA

Flash Point (Method Used): None to boiling(162° F) TCC (162° F) COC	Flammable Limits @ 25° C: in air (% by vol.)	LFL 8.	UFL 10.5
EXTINGUISHING MEDIA Water Fog			
Special Fire Fighting Procedures: Avoid exposure to open flame; use self-contained respiratory equipment. However, Rapid Tap is not considered a flammable-liquid hazard in normal use.			
UNUSUAL FIRE AND EXPLOSION HAZARDS Products of combustion in open flame: CO ₂ , CO, HCl, COCl ₂			

(Continued on reverse side)

NE=not established NF=not found NA=not applicable ND=not determined

WARNING: Contains Methyl Chloroform, a substance which harms public health and environment by destroying ozone in the upper atmosphere.

☐ SECTION V - HEALTH HAZARD DATA

Threshold Limit Value (TLV) of Rapid Tap® as a mixture containing 1,1,1 -Trichloroethane: 350 ppm

Routes of Entry: inhalation (major potential route of entry), skin, eyes, ingestion (unlikely)

Effects of Overexposure:

Acute:

Inhalation: minimal anesthetic or narcotic effects in the range of 500 to 1,000 PPM 1,1,1- Trichloroethane. Progressively higher levels over 1,000 ppm may cause dizziness, drunkenness, and uncoordination. Concentrations as low as 10,000 ppm can cause unconsciousness, irregular heartbeats, and even death.

Skin: defatting, drying, and slight irritation. (Absorption is minimal in acute exposure; LD50 for rabbits is approximately 15,000 mg/kg.)

Eyes: temporary irritation from vapors; liquid can cause temporary irritation and slight corneal injury.

Ingestion: unlikely route of entry; single-dose toxicity is low. LD50 for rats ranges from 7,950 to 15,800 mg/kg. If aspirated (liquid enters the lung), liquid may be rapidly absorbed through the lungs and may cause chemical pneumonia and liver damage. Nausea, vomiting, diarrhea, and fatigue are signs of poisoning through ingestion of 1,1,1-Trichloroethane.

Chronic:

Inhalation: Chronic overexposure has caused liver toxic effects in experimental animals and congestion of bronchial vessels and passive congestion throughout the lungs of a human. 1,1,1 -Trichloroethane did not cause cancer in long-term animal studies, and is not on the OSHA, IARC, or NTP carcinogen lists. Two of three studies of 1,1,1 -Trichloroethane indicated no reproductive toxicity; the third study noted delays in normal development, but these delays did not affect later life.

Skin: Contact: Prolonged or repeated exposure may cause irritation, drying, or flaking of skin.

Absorption: Absorption is unlikely and would occur only as a result of such contact as prolonged immersion of the hand, etc. Alveolar traces of 1,1,1 -Trichloroethane were found after 10 minutes of such (experimental) immersion. (The LD50 for rabbits is approximately 15,000 mg/kg for 1,1,1-Trichloroethane.)

Eye: Initial irritation may become corneal injury with prolonged or repeated exposure.

Ingestion: Ingestion (swallowing) is likely to occur only on an acute basis; chronic ingestion problems are improbable. The primary problem could occur from aspiration of 1,1,1- Trichloroethane if vomiting occurs. (See Acute effects of Ingestion, above.)

First Aid:

Inhalation: remove to fresh air

Skin: wash with soap and water

Eye: flush with water and call doctor

Ingestion: do not induce vomiting; call doctor; (Doctor: maintain adequate oxygenation; do not give sympathomimetic amines such as epinephrine, which may cause arrhythmia's.)

Original Rapid Tap®

 SECTION VI - REACTIVITY DATA

STABILITY	UNSTABLE		CONDITIONS TO AVOID: Exposure to high temperature sources (open flame, welding arcs, etc.), which induce thermal decomposition
	STABLE	X	
INCOMPATIBILITY (materials to avoid): Avoid mixing with water (forms HCl) Avoid use with aluminum. Avoid contact with caustic soda or other strong alkali.			
HAZARDOUS DECOMPOSITION PRODUCTS: CO ₂ CO, HCl, COCl ₂			
HAZARDOUS POLYMERIZATION	MAY OCCUR		CONDITIONS TO AVOID: NA
	WILL NOT OCCUR	X	

 SECTION VII - SPILL OR LEAK PROCEDURES

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED. Prevent contact with open flame. Small leaks: mop, wipe, or soak up immediately and remove absorbent material outdoors. Large spills: evacuate area; contain liquid and transfer to closed metal containers. Keep out of water supply.
WASTE DISPOSAL METHOD For small amounts: none needed; material will evaporate, leaving very slight oily coating. For large amounts: considered a toxic waste #U226 under RCRA 40 CFR 261.33; incinerate or landfill in permitted hazardous waste facility.

 SECTION VIII - SPECIAL PROTECTION INFORMATION

RESPIRATORY PROTECTION (specify type) Below 350 ppm - none** Normal ventilation: Limit concentration to TLV.	
Ventilation: Local exhaust: At point of cutting-tool contact. Mechanical (General): NA	Special: NA Other : NA
PROTECTIVE GLOVES: Not under normal use, when skin contact is minimal.	EYE PROTECTION: Protective goggles to guard against splashing.
OTHER PROTECTIVE EQUIPMENT: None Needed	

 SECTION IX - SPECIAL PRECAUTIONS

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORING: None necessary-except to store away from open flame and in a cool, dry place. Do not torch-cut drums which contain or have contained Rapid Tap until the fluid and vapors have been completely expelled.
OTHER PRECAUTIONS Use with adequate ventilation

** If no environmental control exists, use full face mask with organic canister for levels up to 2% for 1/2 hr. or less. Above 2% and for emergencies, use a self-contained breathing apparatus.

RELTON CORPORATION



317 ROLYN PLACE ARCADIA, CALIFORNIA 91007-2838
Phone: (213) 681-2551 (800) 423-1505
Emerg: Chemtrec - (800) 424-9300

Prepared: 12/23/85 Updated: 11/12/93
Updated: 08/01/86 Updated: 10/09/95
Updated: 01/01/89 Updated: 11/25/96
Updated: 01/01/92 Updated: 07/22/05
06/01/10

Robert E. Pratt

by Dr. Robert E. Pratt,
consulting chemist

Updated: 01/10/11

Updated: 01/10/14

SAFETY DATA SHEET

SECTION 1 : IDENTIFICATION

Product identifier used on the label:

Product Name: **Raw Natural Gas, Sweet**
SDS Manufacturer Number: 775374

Other means of identification:

Synonyms: Raw Gas; Sweet Raw Gas; Sweet Natural Gas; Wellhead Natural Gas, Sweet

Recommended use of the chemical and restrictions on use:

Product Use/Restriction: Feedstock

Chemical manufacturer address and telephone number:

Manufacturer Name: Conoco Phillips
Address: 600 N. Dairy Ashford
Houston, TX 77079-1175
Website: www.conocophillips.com
General Phone Number: 855-244-0762.....E-mail: SDS@conocophillips.com

Emergency phone number:

Emergency Phone Number: Chemtrec: 800-424-9300 (24 Hours)

SECTION 2 : HAZARD(S) IDENTIFICATION

Classification of the chemical in accordance with CFR 1910.1200(d)(f):

GHS Pictograms:



Signal Word: DANGER.

GHS Class: Flammable gases, Category 1.
Carcinogenicity, Category 1A.
Compressed gases under pressure. .
Hazard not otherwise classified.

Hazard Statements: H220 - Extremely flammable gas.
H350 - May cause cancer.
H280 - Contains gas under pressure; may explode if heated.

Precautionary Statements: P201 - Obtain special instructions before use.
P202 - Do not handle until all safety precautions have been read and understood.
P210 - Keep away from heat/sparks/open flames/hot surfaces. — No smoking.
P280 - Wear protective gloves/protective clothing/eye protection/face protection.
P308+P313 - IF exposed or concerned: Get medical advice/attention.
P377 - Leaking gas fire: Do not extinguish, unless leak can be stopped safely.
P381 - Eliminate all ignition sources if safe to do so.
P403 - Store in a well-ventilated place.
P405 - Store locked up.
P410+P403 - Protect from sunlight. Store in a well-ventilated place.
P501 - Dispose of contents/container in accordance with Local, State, Federal and Provincial regulations.

Hazards not otherwise classified that have been identified during the classification process:

OSHA Class: May contain or release poisonous hydrogen sulfide gas

Natural gas

Carcinogenicity: May cause cancer.

Signs/Symptoms: Light hydrocarbon gases are simple asphyxiants and can cause anesthetic effects at high concentrations. Symptoms of overexposure, which are reversible if exposure is stopped, can include shortness of breath, drowsiness, headaches, confusion, decreased coordination, visual disturbances and vomiting. Continued exposure can lead to hypoxia (inadequate oxygen), rapid breathing, cyanosis (bluish discoloration of the skin), numbness of the extremities, unconsciousness and death.

This material contains hydrogen sulfide, a poisonous gas with the smell of rotten eggs. The smell disappears rapidly because of olfactory fatigue so odor may not be a reliable indicator of exposure. Effects of overexposure include irritation of the eyes, nose, throat and respiratory tract, blurred vision, photophobia (sensitivity to light), and pulmonary edema (fluid accumulation in the lungs). Severe exposures can result in nausea, vomiting, muscle weakness or cramps, headache, disorientation and other signs of nervous system depression, irregular heartbeats, convulsions, respiratory failure, and death.

Benzene

Carcinogenicity: Benzene is an animal carcinogen and is known to produce acute myelogenous leukemia (a form of cancer) in humans. Benzene has been identified as a human carcinogen by IARC, the US National Toxicology Program and the US-Occupational Safety and Health Administration.

SECTION 3 : COMPOSITION/INFORMATION ON INGREDIENTS

Mixtures:

Chemical Name	CAS#	Ingredient Percent	EC Num.
Natural gas	8006-14-2	100 %	
Benzene	71-43-2	<0.2 %	

Notes : ¹ All concentrations are percent by weight unless ingredient is a gas. Gas concentrations are in percent by volume.

Crude oil, natural gas and natural gas condensate can contain minor amounts of sulfur, nitrogen and oxygen containing organic compounds as well as trace amounts of heavy metals like mercury, arsenic, nickel, and vanadium. Composition can vary depending on the source of crude.

SECTION 4 : FIRST AID MEASURES

Description of necessary measures:

Eye Contact:	For contact with the liquefied gas, remove contact lenses if present and easy to do, hold eyelids apart and gently flush the affected eye(s) with lukewarm water. Seek immediate medical attention.
Skin Contact:	Liquefied gases may cause cryogenic burns or injury. Treat burned or frostbitten skin by flushing or immersing the affected area(s) in lukewarm water. Do not rub affected area. Do not remove clothing that adheres due to freezing. After sensation has returned to the frostbitten skin, keep skin warm, dry, and clean. If blistering occurs, apply a sterile dressing. Seek immediate medical attention.
Inhalation:	(Breathing): First aid is not normally required. If breathing difficulties develop, move victim away from source of exposure and into fresh air in a position comfortable for breathing. Seek immediate medical attention.
Ingestion:	(Swallowing): This material is a gas under normal atmospheric conditions and ingestion is unlikely.

Indication of immediate medical attention and special treatment needed:

Note to Physicians:	<p>At high concentrations hydrogen sulfide may produce pulmonary edema, respiratory depression, and/or respiratory paralysis. The first priority in treatment should be the establishment of adequate ventilation and the administration of 100% oxygen. Animal studies suggest that nitrites are a useful antidote, however, documentation of the efficacy of nitrites in humans is lacking. If the diagnosis of hydrogen sulfide poisoning is confirmed and if the patient does not respond rapidly to supportive care, the use of nitrites may be an effective antidote if delivered within the first few minutes of exposure. For adults the dose is 10 mL of a 3% NaNO₂ solution (0.5 gm NaNO₂ in 15 mL water) I.V. over 2-4 minutes. The dosage should be adjusted in children or in the presence of anemia, and methemoglobin levels, arterial blood gases, and electrolytes should be monitored closely.</p> <p>Federal regulations (29 CFR 1910.1028) specify medical surveillance programs for certain exposures to benzene above the action level or PEL (specified in Section (i)(1)(i) of the Standard). In addition, employees exposed in an emergency situation shall, as described in Section (i)(4)(i), provide a urine sample at the end of the shift for measurement of urine phenol.</p>
Notes :	<p>Most important symptoms and effects :</p> <p>Acute: Anesthetic effects at high concentrations.</p> <p>Delayed: None known or anticipated. See Section 11 for information on effects from chronic exposure, if any.</p> <p>Other Comments: Before attempting rescue, first responders should be alert to the possible presence of hydrogen sulfide, a poisonous gas with the smell of rotten eggs, and should consider the need for respiratory protection (see Section 8). Remove casualty to fresh air as quickly as possible. Immediately begin artificial respiration if breathing has ceased. Consider whether oxygen administration is needed. Obtain medical advice for further treatment.</p>

SECTION 5 : FIRE FIGHTING MEASURES

Suitable and unsuitable extinguishing media:

Suitable Extinguishing Media:	Dry chemical or carbon dioxide is recommended. Carbon dioxide can displace oxygen. Use caution when applying carbon dioxide in confined spaces.
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Specific hazards arising from the chemical:

Hazardous Combustion Byproducts:	Combustion may yield smoke, carbon monoxide, and other products of incomplete combustion. Hydrogen sulfide and oxides of nitrogen and sulfur may also be formed.
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Unusual Fire Hazards: Extremely flammable. Contents under pressure. This material can be ignited by heat, sparks, flames, or other sources of ignition (e.g., static electricity, pilot lights, mechanical/electrical equipment, and electronic devices such as cell phones, computers, calculators, and pagers which have not been certified as intrinsically safe). Vapors may travel considerable distances to a source of ignition where they can ignite, flash back, or explode. May create vapor/air explosion hazard indoors, in confined spaces, outdoors, or in sewers. If container is not properly cooled, it can rupture in the heat of a fire. Drains can be plugged and valves made inoperable by the formation of ice if rapid evaporation of large quantities of the liquefied gas occurs. Do not allow run-off from fire fighting to enter drains or water courses - may cause explosion hazard in drains and may reignite. Hazardous combustion/decomposition products, including hydrogen sulfide, may be released by this material when exposed to heat or fire. Use caution and wear protective clothing, including respiratory protection.

Fire Fighting Instructions: For fires beyond the initial stage, emergency responders in the immediate hazard area should wear protective clothing. When the potential chemical hazard is unknown, in enclosed or confined spaces, a self contained breathing apparatus should be worn. In addition, wear other appropriate protective equipment as conditions warrant (see Section 8).

Isolate immediate hazard area and keep unauthorized personnel out. Stop spill/release if it can be done safely. If this cannot be done, allow fire to burn. Move undamaged containers from immediate hazard area if it can be done safely. Stay away from ends of container. Water spray may be useful in minimizing or dispersing vapors and to protect personnel. Cool equipment exposed to fire with water, if it can be done safely.

NFPA Ratings:

NFPA Health: 1
NFPA Flammability: 4
NFPA Reactivity: 0



Notes : NFPA 704 Hazard Class:
(0-Minimal, 1-Slight, 2-Moderate, 3-Serious, 4-Severe)

See Section 9 for Flammable Properties including Flash Point and Flammable (Explosive) Limits

SECTION 6 : ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures:

Personnel Precautions: Extremely flammable. May contain poisonous hydrogen sulfide gas. If the presence of dangerous amounts of H2S around the spilled product is suspected, additional or special actions may be warranted, including access restrictions and use of protective equipment. Spillages of liquid product will create a fire hazard and may form an explosive atmosphere. Keep all sources of ignition and hot metal surfaces away from spill/release if safe to do so. The use of explosion-proof electrical equipment is recommended. Beware of accumulation of gas in low areas or contained areas, where explosive concentrations may occur. Prevent from entering drains or any place where accumulation may occur. Ventilate area and allow to evaporate. Stay upwind and away from spill/release. Avoid direct contact with material. For large spillages, notify persons down wind of the spill/release, isolate immediate hazard area and keep unauthorized personnel out. Wear appropriate protective equipment, including respiratory protection, as conditions warrant (see Section 8). See Sections 2 and 7 for additional information on hazards and precautionary measures.

Environmental precautions:

Environmental Precautions: Stop spill/release if it can be done safely. Water spray may be useful in minimizing or dispersing vapors. If spill occurs on water notify appropriate authorities and advise shipping of any hazard. Spills into or upon navigable waters, the contiguous zone, or adjoining shorelines that cause a sheen or discoloration on the surface of the water, may require notification of the National Response Center (phone number 800-424-8802).

Methods and materials for containment and cleaning up:

Spill Cleanup Measures: Notify relevant authorities in accordance with all applicable regulations.

Recommended measures are based on the most likely spillage scenarios for this material; however local conditions and regulations may influence or limit the choice of appropriate actions to be taken.

SECTION 7 : HANDLING and STORAGE

Precautions for safe handling:

Handling: Precautions for safe handling: Keep away from ignition sources such as heat/sparks/open flame - No smoking. Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Take precautionary measures against static discharge. Use good personal hygiene practices and wear appropriate personal protective equipment (see section 8).

Contents under pressure. The use of explosion-proof electrical equipment is recommended and may be required (see appropriate fire codes). Refer to NFPA-70 and/or API RP 2003 for specific bonding/grounding requirements. Electrostatic charge may accumulate and create a hazardous condition when handling or processing this material. To avoid fire or explosion, dissipate static electricity during transfer by grounding and bonding containers and equipment before transferring material. Do not enter confined spaces such as tanks or pits without following proper entry procedures such as ASTM D-4276 and 29CFR 1910.146. Cold burns may occur during filling operations. Containers and delivery lines may become cold enough to present cold burn hazard.

Mercury and other heavy metals may be present in trace quantities in crude oil, raw natural gas, and condensates. Production and processing of these materials can lead to "drop-out" of elemental mercury in enclosed vessels and pipe work, typically at the low point of any process equipment because of its density. Mercury may also occur in other process system deposits such as sludges, sands, scales, waxes, and filter media. Personnel engaged in work with equipment where mercury deposits might occur (confined space entry, sampling, opening drain valves, draining process lines, etc), may be exposed to a mercury hazard (see sections 3 and 8).

Conditions for safe storage, including any incompatibilities:

Storage: Conditions for safe storage: Keep container(s) tightly closed and properly labeled. This material may contain or release poisonous hydrogen sulfide gas. In a tank, barge, or other closed container, the vapor space above this material may accumulate hazardous concentrations of hydrogen sulfide. Check atmosphere for oxygen content, H2S, and flammability prior to entry. Use and store this material in cool, dry, well-ventilated areas away from heat, direct sunlight, hot metal surfaces, and all sources of ignition. Store only in approved containers. Post area "No Smoking or Open Flame." Keep away from any incompatible material (see Section 10). Protect container(s) against physical damage. Outdoor or detached storage is preferred. Indoor storage should meet OSHA standards and appropriate fire codes.

"Empty" containers retain residue and may be dangerous. Do not pressurize, cut, weld, braze, solder, drill, grind, or expose such containers to heat, flame, sparks, or other sources of ignition. They may explode and cause injury or death. Avoid exposing any part of a compressed-gas cylinder to temperatures above 125 deg F (51.6 deg C). Gas cylinders should be stored outdoors or in well ventilated storerooms at no lower than ground level and should be quickly removable in an emergency.

SECTION 8: EXPOSURE CONTROLS, PERSONAL PROTECTION

EXPOSURE GUIDELINES:

Information related to product mixture :

Guideline Info: State, local or other agencies or advisory groups may have established more stringent limits. Consult an industrial hygienist or similar professional, or your local agencies, for further information.

Natural gas :

Guideline ACGIH: TWA: 1000 ppm as Aliphatic Hydrocarbons C1-4

Benzene :

Guideline ACGIH: STEL: 2.5 ppm TWA: 0.5 ppm Skin

Guideline OSHA: Ceiling: 25 ppm STEL: 5 ppm TWA: 10 ppm TWA: 1 ppm

Appropriate engineering controls:

Engineering Controls: If current ventilation practices are not adequate to maintain airborne concentrations below the established exposure limits, additional engineering controls may be required.

Individual protection measures:

Eye/Face Protection: The use of eye protection (such as splash goggles) that meets or exceeds ANSI Z.87.1 is recommended when there is potential liquid contact to the eye. Depending on conditions of use, a face shield may be necessary.

Skin Protection Description: The use of skin protection is not normally required; however, good industrial hygiene practice suggests the use of gloves or other appropriate skin protection whenever working with chemicals. Wear thermal insulating gloves and face shield or eye protection when working with materials that present thermal hazards (hot or cold).

Hand Protection Description: The use of skin protection is not normally required; however, good industrial hygiene practice suggests the use of gloves or other appropriate skin protection whenever working with chemicals. Wear thermal insulating gloves and face shield or eye protection when working with materials that present thermal hazards (hot or cold).

Respiratory Protection: A NIOSH approved, self-contained breathing apparatus (SCBA) or equivalent operated in a pressure demand or other positive pressure mode should be used in situations of oxygen deficiency (oxygen content less than 19.5 percent), unknown exposure concentrations, or situations that are immediately dangerous to life or health (IDLH).

A respiratory protection program that meets or is equivalent to OSHA 29 CFR 1910.134 and ANSI Z88.2 should be followed whenever workplace conditions warrant a respirator's use.

If benzene concentrations equal or exceed applicable exposure limits, OSHA requirements for personal protective equipment, exposure monitoring, and training may apply (29CFR1910.1028 - Benzene).

Workplace monitoring plans should consider the possibility that heavy metals such as mercury may concentrate in processing vessels and equipment presenting the possibility of exposure during various sampling and maintenance operations. Implement appropriate respiratory protection and the use of other protective equipment as dictated by monitoring results (See Sections 2 and 7).

Notes : Suggestions provided in this section for exposure control and specific types of protective equipment are based on readily available information. Users should consult with the specific manufacturer to confirm the performance of their protective equipment. Specific situations may require consultation with industrial hygiene, safety, or engineering professionals.

SECTION 9 : PHYSICAL and CHEMICAL PROPERTIES

PHYSICAL AND CHEMICAL PROPERTIES:

Physical State:	Form: Liquefied Gas
Color:	Colorless
Odor:	Slight
Odor Threshold:	No Data
Boiling Point:	-250 to -160 deg F/-157 to -107 deg C
Melting Point:	No Data
Specific Gravity:	(water=1): No data
Solubility:	Very slight
Vapor Density:	(air=1): 0.60
Percent Volatile:	100% (by volume)
Evaporation Rate:	(nBuAc=1): No data
pH:	Not Applicable
Coefficient of Water/Oil Distribution:	Partition Coefficient (n-octanol/water) (Kow): No data
Flash Point:	-306 deg F/-188 deg C
Flash Point Method:	(estimate)
Lower Flammable/Explosive Limit:	(vol % in air): 5.0
Upper Flammable/Explosive Limit:	(vol % in air): 17.0

Auto Ignition Temperature: No Data

9.2. Other information:

Notes : Note: Unless otherwise stated, values are determined at 20 deg C (68 deg F) and 760 mm Hg (1 atm). Data represent typical values and are not intended to be specifications.

SECTION 10 : STABILITY and REACTIVITY

Chemical Stability:

Chemical Stability: Stable under normal ambient and anticipated conditions of use.

Possibility of hazardous reactions:

Hazardous Polymerization: Not known to occur.

Conditions To Avoid:

Conditions to Avoid: Avoid all possible sources of ignition. Heat will increase pressure in the storage tank.

Incompatible Materials:

Incompatible Materials: Materials to Avoid: Avoid contact with acids, aluminum chloride, chlorine, chlorine dioxide, halogens and oxidizing agents.

Hazardous Decomposition Products:

Special Decomposition Products: Not anticipated under normal conditions of use.

SECTION 11 : TOXICOLOGICAL INFORMATION

TOXICOLOGICAL INFORMATION:

Natural gas :

Eye: Not expected to be irritating. Contact with the liquefied or pressurized gas may cause momentary freezing followed by swelling and eye damage.

Skin: Skin Absorption:
Hazard: Skin absorption is not anticipated
LD50 Data: Not Applicable

Not expected to be irritating. Contact with the liquefied or pressurized gas may cause frostbite (cold burn).

Inhalation: Hazard: Unlikely to be harmful
Additional Information: Asphyxiant. High concentrations in confined spaces may limit oxygen available for breathing. See Signs and Symptoms.
LC50: > 20,000 ppm

Ingestion: Ingestion (Swallowing):
Hazard: Ingestion is not anticipated
LD50 Data: Not Applicable

Sensitization: Skin Sensitization: Skin contact is not anticipated.
Respiratory Sensitization: Not expected to be a respiratory sensitizer.

Carcinogenicity: May cause cancer.

Mutagenicity: Germ Cell Mutagenicity: Not expected to cause heritable genetic effects.

Reproductive Toxicity: Not expected to cause reproductive toxicity.

Other Toxicological Information: Signs and Symptoms: Light hydrocarbon gases are simple asphyxiants and can cause anesthetic effects at high concentrations. Symptoms of overexposure, which are reversible if exposure is stopped, can include shortness of breath, drowsiness, headaches, confusion, decreased coordination, visual disturbances and vomiting. Continued exposure can lead to hypoxia (inadequate oxygen), rapid breathing, cyanosis (bluish discoloration of the skin), numbness of the extremities, unconsciousness and death.

This material contains hydrogen sulfide, a poisonous gas with the smell of rotten eggs. The smell disappears rapidly because of olfactory fatigue so odor may not be a reliable indicator of exposure. Effects of overexposure include irritation of the eyes, nose, throat and respiratory tract, blurred vision, photophobia (sensitivity to light), and pulmonary edema (fluid accumulation in the lungs). Severe exposures can result in nausea, vomiting, muscle weakness or cramps, headache, disorientation and other signs of nervous system depression, irregular heartbeats, convulsions, respiratory failure, and death.

Other Comments: High concentrations may reduce the amount of oxygen available for breathing, especially in confined spaces. Hypoxia (inadequate oxygen) during pregnancy may have adverse effects on the developing fetus.

Target Organ Single Exposures: Not expected to cause organ effects from single exposure.

Target Organ Repeated Exposures: Not expected to cause organ effects from repeated exposure.

Aspiration: Not Applicable

Benzene :

Carcinogenicity: Benzene is an animal carcinogen and is known to produce acute myelogenous leukemia (a form of cancer) in humans. Benzene has been identified as a human carcinogen by IARC, the US National Toxicology Program and the US Occupational Safety and Health Administration.

Mutagenicity: Germ Cell Mutagenicity: Benzene exposure has resulted in chromosomal aberrations in human lymphocytes and animal bone marrow cells. Exposure has also been associated with chromosomal aberrations in sperm cells in human and animal studies.

Reproductive Toxicity: Some studies in occupationally exposed women have suggested benzene exposure increased risk of miscarriage and stillbirth and decreased birth weight and gestational age. The size of the effects

detected in these studies was small, and ascertainment of exposure and outcome in some cases relied on self-reports, which may limit the reliability of these results.

Target Organ Repeated Exposures:

Prolonged or repeated exposures to benzene vapors can cause damage to the blood and blood forming organs, including disorders like leukopenia, thrombocytopenia, and aplastic anemia.

SECTION 12 : ECOLOGICAL INFORMATION

Information related to product mixture :

Ecotoxicity:

Ecotoxicity:

Petroleum gases will readily evaporate from the surface and would not be expected to have significant adverse effects in the aquatic environment. Classification: No classified hazards.

Persistence and degradability:

Biodegradation:

Persistence and Degradability: The hydrocarbons in this material are expected to be inherently biodegradable. In practice, hydrocarbon gases are not likely to remain in solution long enough for biodegradation to be a significant loss process. Hydrogen sulfide, if present in refinery gas streams, will be rapidly oxidized in water and insoluble sulfides precipitated from water when metallic radicals are present.

Bioaccumulative potential:

Bioaccumulation:

Since the log Kow values measured for refinery gas constituents are below 3, they are not regarded as having the potential to bioaccumulate.

Mobility in soil:

Mobility In Environmental Media:

Mobility in Soil: Due to the extreme volatility of petroleum gases, air is the only environmental compartment in which they will be found. In air, these hydrocarbons undergo photodegradation by reaction with hydroxyl radicals with half-lives ranging from 3.2 days for n-butane to 7 days for propane.

Other Adverse Effects:

None anticipated.

SECTION 13 : DISPOSAL CONSIDERATIONS

Description of waste:

Information related to product mixture :

Waste Disposal:

This material is a gas and would not typically be managed as a waste.

SECTION 14 : TRANSPORT INFORMATION

DOT Shipping Name:

Shipping Description: UN1971, Natural gas, compressed, 2.1
Non-Bulk Package Marking: Natural gas, compressed, UN1971
Non-Bulk Package Labeling: Flammable gas
Bulk Package/Placard Marking: Flammable gas / 1971
Packaging - References: 49 CFR 173.306; 173.302; 173.302 (Exceptions; Non-bulk; Bulk)
Emergency Response Guide: 115
Note: Methane, compressed may be substituted for Natural gas, compressed
The following alternate shipping description order may be used until January 1, 2013:
Proper Shipping name, Hazard Class or Division, (Subsidiary Hazard if any), UN or NA number, Packing Group
Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code: Not applicable
Other shipping description elements may be required for DOT compliance.

IATA Shipping Name:

UN/ID : UN1971
Proper Shipping Name: Natural gas, compressed
Hazard Class/Division: 2.1
Non-Bulk Package Marking: Natural gas, compressed, UN1971
Labels: Flammable gas
ERG Code: 10L
Note: Methane, compressed may be substituted for Natural gas, compressed
Packaging Instruction : LTD. QTY -Forbidden; Passenger Aircraft - Forbidden; Cargo Aircraft Only - 200
Max. Net Qty. Per Package: LTD. QTY -Forbidden; Passenger Aircraft - Forbidden; Cargo Aircraft Only - 150 kg

IMDG Shipping Name :

Shipping Description: UN1971, Natural gas, compressed, 2.1
Non-Bulk Package Marking: Natural gas, compressed, UN1971
Labels: Flammable gas
Placards/Marking (Bulk): Flammable gas / 1971
Packaging - Non-Bulk: P200
EMS: F-D, S-U
Note: Methane, compressed may be substituted for Natural gas, compressed

ICAO Shipping Name:

UN/ID : UN1971
Proper Shipping Name: Natural gas, compressed
Hazard Class/Division: 2.1
Non-Bulk Package Marking: Natural gas, compressed, UN1971
Labels: Flammable gas
ERG Code: 10L
Note: Methane, compressed may be substituted for Natural gas, compressed
Packaging Instruction : LTD. QTY -Forbidden; Passenger Aircraft - Forbidden; Cargo Aircraft Only - 200
Max. Net Qty. Per Package: LTD. QTY -Forbidden; Passenger Aircraft - Forbidden; Cargo Aircraft Only - 150 kg

SECTION 15 : REGULATORY INFORMATION

Safety, health and environmental regulations specific for the product:

Information related to product mixture :

TSCA Inventory Status: All components are either listed on the US TSCA Inventory, or are not regulated under TSCA

TSCA 12(b) Export Notification: U.S. Export Control Classification Number: EAR99

CERCLA Section 302: CERCLA/SARA - Section 302 Extremely Hazardous Substances and TPQs (in pounds):
This material contains the following chemicals subject to the reporting requirements of SARA 302 and 40 CFR 372:
Hydrogen Sulfide : TPQ - 500 lb; EPCRA RQ - 100 lb

Section 311/312 Hazard Categories: CERCLA/SARA - Section 311/312 (Title III Hazard Categories)
Acute Health: Yes
Chronic Health: Yes
Fire Hazard: Yes
Pressure Hazard: Yes
Reactive Hazard: No

Section 313: CERCLA/SARA - Section 313 and 40 CFR 372:
This material contains the following chemicals subject to the reporting requirements of Section 313 of SARA Title III and 40 CFR 372:
Benzene : Concentration <0.2; de minimis 0.1%

EPA (CERCLA) Reportable Quantity (in pounds):
EPA's Petroleum Exclusion applies to this material - (CERCLA 101(14)).

California PROP 65: California Proposition 65:
Warning: This material may contain detectable quantities of the following chemicals, known to the State of California to cause cancer, birth defects or other reproductive harm, and which may be subject to the warning requirements of California Proposition 65 (CA Health & Safety Code Section 25249.5):
Benzene : Type of Toxicity - Cancer, Developmental Toxicant, Male Reproductive Toxicant
Toluene : Type of Toxicity - Developmental Toxicant, Female Reproductive Toxicant

Canada DSL: All components are either on the DSL, or are exempt from DSL listing requirements

Canada WHMIS: WHMIS Hazard Class:
A - Compressed Gas
B1 - Flammable Gases
D2A

SECTION 16 : ADDITIONAL INFORMATION

HMIS Ratings:

HMIS Personal Protection:

Health Hazard	
Fire Hazard	
Reactivity	
Personal Protection	

Other Information: SDS Number: 775374

SDS Revision Date: October 08, 2015

MSDS Revision Notes: Supersedes: 02-Apr-2012
Format change

Guide to Abbreviations: ACGIH = American Conference of Governmental Industrial Hygienists; CASRN = Chemical Abstracts Service Registry Number; CEILING = Ceiling Limit (15 minutes); CERCLA = The Comprehensive Environmental Response, Compensation, and Liability Act; EPA = Environmental Protection Agency; GHS = Globally Harmonized System; IARC = International Agency for Research on Cancer; INSHT = National Institute for Health and Safety at Work; IOPC = International Oil Pollution Compensation; LEL = Lower Explosive Limit; NE = Not Established; NFPA = National Fire Protection Association; NTP = National Toxicology Program; OSHA = Occupational Safety and Health Administration; PEL = Permissible Exposure Limit (OSHA); SARA = Superfund Amendments and Reauthorization Act; STEL = Short Term Exposure Limit (15 minutes); TLV = Threshold Limit Value (ACGIH); TWA = Time Weighted Average (8 hours); UEL = Upper Explosive Limit; WHMIS = Worker Hazardous Materials Information System (Canada)

Disclaimer: The information presented in this Material Safety Data Sheet is based on data believed to be accurate as of the date this Material Safety Data Sheet was prepared. HOWEVER, NO WARRANTY OF MERCHANTABILITY, FITNESS FOR ANY PARTICULAR PURPOSE, OR ANY OTHER WARRANTY IS EXPRESSED OR IS TO BE IMPLIED REGARDING THE ACCURACY OR COMPLETENESS OF THE INFORMATION PROVIDED ABOVE, THE RESULTS TO BE OBTAINED FROM THE USE OF THIS INFORMATION OR THE PRODUCT, THE SAFETY OF THIS PRODUCT, OR THE HAZARDS RELATED TO ITS USE. No responsibility is assumed for any damage or injury resulting from abnormal use or from any failure to adhere to recommended practices. The information provided above, and the product, are furnished on the condition that the person receiving them shall make their own determination as to the suitability of the product for their particular purpose and on the condition that they assume the risk of their use. In addition, no authorization is given nor implied to practice any patented invention without a license.

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Product Name:
RIDGID Dark Thread Cutting Oil

Product Catalog No.:
11471, 11491, 41590, 41600, 41610, 70830

Recommended Use:
Thread Cutting

Restrictions on Use:
Use in the manufacturing process only

Company Information:

North America
Ridge Tool Company
400 Clark Street
Elyria, Ohio 44035-6001
1-800-519-3456
(8:00 am – 5:00 pm EST, M-F)
Emergency Telephone
call 9-1-1 or local emergency number
www.RIDGID.com

Australia
Ridge Tool Australia
127 Metrolink Circuit
Campbellfield, VIC 3061
1-800-743-443
(8:30 am – 5:00 pm AEST, M-F)
Emergency Telephone
call 000 or local emergency number
www.RIDGID.com.au

Issue Date: March 27, 2017

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This product is classified as not hazardous per US OSHA 29CFR 1910.1200 (HazCom 2012) and Canada's Hazardous Products Regulations (WHMIS 2015).

GHS Label Elements: Not applicable

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<u>Component:</u>	<u>CAS #</u>	<u>% By Weight</u>
Mineral Oil	Confidential	40-100%

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Specific chemical identities and/or exact percentages have been withheld as trade secrets.

Product Name : RIDGID Dark Thread Cutting Oil

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INGESTION:

Rinse mouth thoroughly. Call a Poison Center or doctor if you feel unwell. Do NOT induce vomiting.

INHALATION:

Move to fresh air. Call a Poison Center or doctor if you feel unwell.

SKIN CONTACT:

Remove contaminated/saturated clothing and shoes. Wash contact areas with soap and water. If skin irritation occurs: Get medical advice/attention.

EYE CONTACT:

Flush thoroughly with water. If irritation occurs, get medical assistance. Continue to rinse for at least 15 minutes.

MOST IMPORTANT SYMPTOMS/EFFECTS, ACUTE AND DELAYED

Symptoms:

No data available.

INDICATION OF IMMEDIATE MEDICAL ATTENTION AND SPECIAL TREATMENT NEEDED

Treatment:

Get medical attention as appropriate or if symptoms persist

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GENERAL FIRE HAZARDS:

No unusual fire or explosion hazards noted.

SUITABLE (AND UNSUITABLE) EXTINGUISHING MEDIA

Suitable extinguishing media:

No data available.

Unsuitable extinguishing media:

Do not use water jet as an extinguisher, as this will spread the fire.

SPECIFIC HAZARDS ARISING FROM THE CHEMICAL:

Heat may cause the containers to pressurize and possibly rupture. During fire, gases hazardous to health may be formed.

Product Name : RIDGID Dark Thread Cutting Oil

SPECIAL PROTECTIVE EQUIPMENT AND PRECAUTIONS FOR FIREFIGHTERS

Special firefighting procedures:

No data available.

Special protective equipment for fire-fighters:

Firefighters must use standard protective equipment appropriate for Industrial fires.

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PERSONAL PRECAUTIONS, PROTECTIVE EQUIPMENT AND EMERGENCY PROCEDURES:

See Section 8 of the SDS for Personal Protective Equipment. Do not handle damaged containers or spilled material unless wearing appropriate protective clothing. Keep unauthorized personnel away. Ensure adequate ventilation.

METHODS AND MATERIAL FOR CONTAINMENT AND CLEANING UP:

Absorb with sand or other inert absorbent. Stop the flow of material, if this is without risk.

ENVIRONMENTAL PRECAUTIONS:

Avoid release to the environment. Do not contaminate water sources or sewer. Prevent further leakage or spillage if safe to do so and protect against releases into the environment. Remediate as appropriate.

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PRECAUTIONS FOR SAFE HANDLING:

Observe good industrial hygiene practices. Wear appropriate personal protective equipment. Do not expose to intense heat as product may expand and pressurize container. End-users should follow industry best practices for handling and using this product. Guidance may be found using the current version of ASTM Standard E1497-05: Standard Practice for Selection and Safe Use of Water-Miscible and Straight Oil Metal Removal Fluids

CONDITIONS FOR SAFE STORAGE, INCLUDING ANY INCOMPATIBILITIES:

Store in original tightly closed container. Avoid contact with oxidizing agents. Store away from incompatible materials.

SHELF LIFE:

720 days

Product Name : RIDGID Dark Thread Cutting Oil

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EXPOSURE LIMITS:

Chemical name	type	Exposure Limit Values	Source
Mineral oil - Mist.	PEL	5 mg/m ³	US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000)
Mineral oil - Mist.	STEL	10 mg/m ³	US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000)

PROTECTIVE MEASURES:

Use personal protective equipment as required.

RESPIRATORY PROTECTION:

In case of inadequate ventilation use suitable respirator. Seek advice from supervisor on the company's respiratory protection standards.

EYE PROTECTION:

Wear safety glasses with side shields (or goggles).

SKIN AND BODY PROTECTION:

Wear protective clothing appropriate for the risk of exposure. Contact health and safety professional or manufacturer for specific information.

HYGIENE MEASURES:

Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing to remove contaminants. Contaminated work clothing should not be allowed out of the workplace. Discard contaminated footwear that cannot be cleaned. Avoid contact with skin, eyes, and clothing.

Product Name : RIDGID Dark Thread Cutting Oil

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Appearance	
Physical State	Liquid
Form	No data available
Color	Black
Odor	Mild petroleum
Odor Threshold	No data available
pH	No data available
Melting point/freezing point	No data available
Initial boiling point and boiling range	No data available
Flash point	196 °C (385 °F)
Evaporation rate	No data available
Flammability (solid, gas)	No data available
Upper/lower limit on flammability or explosive limits	
Flammability limit - upper (%)	No data available
Flammability limit - lower (%)	No data available
Explosive limit – upper (%)	No data available
Explosive limit – lower (%)	No data available
Vapor pressure	No data available
Vapor density	No data available
Relative density	0.878
Solubility(ies)	
Solubility in water	Insoluble
Solubility (other)	No data available
Partition coefficient (n-octanol/water)	No data available
Auto-ignition temperature	No data available
Decomposition temperature	No data available
Viscosity	42.5 mm ² /s (40 °C, measured)
VOC	2 g/l

Product Name : RIDGID Dark Thread Cutting Oil

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REACTIVITY:

Not reactive during normal use.

CHEMICAL STABILITY:

No data available.

POSSIBILITY OF HAZARDOUS REACTIONS:

None under normal conditions.

CONDITIONS TO AVOID:

Avoid heat or contamination.

INCOMPATIBLE MATERIALS:

No data available.

HAZARDOUS DECOMPOSITION PRODUCTS:

Thermal decomposition or combustion may liberate carbon oxides and other toxic gases or vapors.

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INFORMATION ON LIKELY ROUTES OF EXPOSURE

Ingestion:

May be ingested by accident. Ingestion may cause irritation and malaise.

Inhalation:

Inhalation is the primary route of exposure. In high concentrations, vapors, fumes or mists may irritate nose, throat and mucus membranes.

Skin Contact:

Prolonged skin contact may cause redness and irritation.

Eye contact:

Eye contact is possible and should be avoided.

Product Name : RIDGID Dark Thread Cutting Oil

INFORMATION ON TOXICOLOGICAL EFFECTS

Acute toxicity

Oral Product:

ATEmix (): 2000 - 5000 mg/kg

Dermal Product:

ATEmix (): 2000 - 5000 mg/kg

Inhalation Product:

ATEmix (, 4h): > 5000 mg/l dusts, mists and fumes

Repeated dose toxicity Product:

No data available.

Skin Corrosion/Irritation Product:

No data available.

Serious Eye Damage/Eye Irritation Product:

No data available.

Respiratory or Skin Sensitization Product:

No data available.

Carcinogenicity Product: No data available.

IARC Monographs on the Evaluation of Carcinogenic Risks to Humans:

No carcinogenic components identified

US. National Toxicology Program (NTP) Report on Carcinogens:

No carcinogenic components identified

US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050):

No carcinogenic components identified

Germ Cell Mutagenicity

In vitro Product:

No data available.

In vivo Product:

No data available.

Reproductive toxicity Product:

No data available.

Specific Target Organ Toxicity - Single Exposure Product:

No data available.

Specific Target Organ Toxicity - Repeated Exposure Product:

No data available.

Aspiration Hazard Product:

No data available.

Other effects:

No data available

Product Name : RIDGID Dark Thread Cutting Oil

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GENERAL INFORMATION:

This product has not been evaluated for ecological toxicity or other environmental effects.

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DISPOSAL INSTRUCTIONS:

Discharge, treatment, or disposal may be subject to national, state, or local laws. Dispose of waste at an appropriate treatment and disposal facility in accordance with applicable laws and regulations, and product characteristics at time of disposal. It is the responsibility of the product user or owner to determine at the time of disposal, which waste regulations must be applied.

CONTAMINATED PACKAGING:

Empty containers should be taken to an approved waste handling site for recycling or disposal.

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This material is not subject to transport regulations.

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US FEDERAL REGULATIONS

US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)
None present or none present in regulated quantities.

Superfund Amendments and Reauthorization Act of 1986 (SARA)
Hazard categories - None
SARA 313 (TRI Reporting)
None present or none present in regulated quantities.

US STATE REGULATIONS

US. California Proposition 65
No component is regulated by CA Prop 65.

Product Name: RIDGID Dark Thread Cutting Oil

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Prepared by:..... Ridge Tool Company (Operating Standard 6-103)

Issue Date: March 27, 2017

Last Revision Date: May 29, 2015

RIDGE TOOL BELIEVES THE STATEMENTS, TECHNICAL INFORMATION AND RECOMMENDATIONS CONTAINED HEREIN ARE RELIABLE BUT THEY ARE GIVEN WITHOUT WARRANTY OR GUARANTEE OF ANY KIND, EXPRESSED OR IMPLIED, AND WE ASSUME NO RESPONSIBILITY FOR ANY LOSS, DAMAGE OR EXPENSE, DIRECT OR CONSEQUENTIAL, ARISING OUT OF THEIR USE.



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Product Name:
RIDGID Nu-Clear Thread Cutting Oil (United States)

Product Catalog No.:
11461, 11481, 41575, 41585, 42513, 70835

Recommended Use:
Thread Cutting

Restrictions on Use:
Industrial use only

Company Information:

<p><u>North America</u> Ridge Tool Company 400 Clark Street Elyria, Ohio 44035-6001 1-800-519-3456 (8:00 am – 5:00 pm EST, M-F) Emergency Telephone call 9-1-1 or local emergency number www.RIDGID.com</p>	<p><u>Australia</u> Ridge Tool Australia 127 Metrolink Circuit Campbellfield, VIC 3061 1-800-743-443 (8:30 am – 5:00 pm AEST, M-F) Emergency Telephone call 000 or local emergency number www.RIDGID.com.au</p>
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Issue Date: May 2, 2018

Revision: K



Product Name: RIDGID Nu-Clear Thread Cutting Oil (United States)

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This product is classified as not hazardous per US OSHA 29CFR 1910.1200 (HazCom 2012)

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No symbol

_____ **rd** _____

No signal word.

rd _____

Not applicable

r _____ **r** _____

Not applicable

r _____ **rd** _____ **d** _____
r _____

None.

_____ **3** - _____ **r** _____ **rd** _____

r _____

This product does not contain silicone or chlorinated additives.

rd _____

_____	_____	r _____
Mineral oil	Confidential	20 - <50%
Paraffin oils	Confidential	20 - <50%
Vegetable oil	Confidential	1 - <5%

Specific chemical identities and/or exact percentages have been withheld as trade secrets.



Product Name: RIDGID Nu-Clear Thread Cutting Oil (United States)

IDENTIFICATION - RIDGID M

IDENTIFICATION

Rinse mouth thoroughly. Call a POISON CENTER/doctor if you feel unwell. Do NOT induce vomiting.

IDENTIFICATION

Move to fresh air. Call a POISON CENTER/doctor if you feel unwell.

IDENTIFICATION

Remove contaminated clothing and shoes. Wash contact areas with soap and water. If skin irritation occurs: Get medical advice/attention.

IDENTIFICATION

Flush thoroughly with water. If irritation occurs, get medical assistance. Continue to rinse for at least 15 minutes.

Miscellaneous Information - RIDGID M

IDENTIFICATION

No data available.

First Aid - RIDGID M

IDENTIFICATION

Get medical attention if symptoms occur.

IDENTIFICATION - RIDGID M

IDENTIFICATION

No unusual fire or explosion hazards noted.

IDENTIFICATION

IDENTIFICATION

Water spray, fog, CO2, dry chemical, or regular foam. Use fire-extinguishing media appropriate for surrounding materials.

IDENTIFICATION

Do not use water jet as an extinguisher, as this will spread the fire.

IDENTIFICATION

Heat may cause the containers to explode. During fire, gases hazardous to health may be formed.

IDENTIFICATION

IDENTIFICATION

No data available.

IDENTIFICATION

Firefighters must use standard protective equipment including flame retardant coat, helmet with face shield, gloves, rubber boots, and in enclosed spaces, SCBA.



Product Name: RIDGID Nu-Clear Thread Cutting Oil (United States)

Section 6 – Hazardous Materials

Personal Protective Equipment (PPE),
See Section 8 of the SDS for Personal Protective Equipment. Do not touch
damaged containers or spilled material unless wearing appropriate
protective clothing. Keep unauthorized personnel away. Ensure adequate
ventilation.

See Section 8 of the SDS for Personal Protective Equipment. Do not touch
damaged containers or spilled material unless wearing appropriate
protective clothing. Keep unauthorized personnel away. Ensure adequate
ventilation.

Spill Cleanup: Absorb with sand or other inert absorbent. Stop the flow of material, if this is
without risk.

Absorb with sand or other inert absorbent. Stop the flow of material, if this is
without risk.

Environmental: Avoid release to the environment. Do not contaminate water sources or
sewer. Prevent further leakage or spillage if safe to do so.

Avoid release to the environment. Do not contaminate water sources or
sewer. Prevent further leakage or spillage if safe to do so.

Section 7 – Physical and Chemical Properties

Industrial Hygiene: Observe good industrial hygiene practices. Wear appropriate personal
protective equipment. Do not expose to intense heat as product may
expand and pressurize container.

Observe good industrial hygiene practices. Wear appropriate personal
protective equipment. Do not expose to intense heat as product may
expand and pressurize container.

Storage: Store in original tightly closed container. Avoid contact with oxidizing
agents. Store away from incompatible materials. Shelf Life: 720 Days

Store in original tightly closed container. Avoid contact with oxidizing
agents. Store away from incompatible materials. Shelf Life: 720 Days



Product Name: RIDGID Nu-Clear Thread Cutting Oil (United States)

Product Name - RIDGID Nu-Clear Thread Cutting Oil (United States)

Product Name - RIDGID Nu-Clear Thread Cutting Oil (United States)

Component	Exposure Limit	Exposure Limit Value	Reference
Mineral oil - Mist.	PEL	5 mg/m ³	US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000) (01 2017)
Mineral oil - Mist.	TWA	5 mg/m ³	US. OSHA Table Z-1-A (29 CFR 1910.1000) (1989)
Paraffin oils - Inhalable fraction.	TWA	5 mg/m ³	US. ACGIH Threshold Limit Values (03 2014)
Paraffin oils - Mist.	PEL	5 mg/m ³	US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000) (02 2006)
Paraffin oils - Mist.	TWA	5 mg/m ³	US. OSHA Table Z-1-A (29 CFR 1910.1000) (1989)
Vegetable oil - Total dust.	PEL	15 mg/m ³	US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000) (02 2006)
Vegetable oil - Respirable fraction.	PEL	5 mg/m ³	US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000) (02 2006)

Use personal protective equipment as required.

Use personal protective equipment as required.

In case of inadequate ventilation use suitable respirator. Seek advice from supervisor on the company's respiratory protection standards.

In case of inadequate ventilation use suitable respirator. Seek advice from supervisor on the company's respiratory protection standards.

Wear safety glasses with side shields (or goggles).

Wear safety glasses with side shields (or goggles).

Wear protective clothing appropriate for the risk of exposure. Be aware of other hazards such as rotating parts. Contact health and safety professional or manufacturer for specific information.

Wear protective clothing appropriate for the risk of exposure. Be aware of other hazards such as rotating parts. Contact health and safety professional or manufacturer for specific information.

Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing to remove contaminants. Discard contaminated footwear that cannot be cleaned.

Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing to remove contaminants. Discard contaminated footwear that cannot be cleaned.

Product Name - RIDGID Nu-Clear Thread Cutting Oil (United States)

Product Name - RIDGID Nu-Clear Thread Cutting Oil (United States)

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Product Name - RIDGID Nu-Clear Thread Cutting Oil (United States)

Product Name - RIDGID Nu-Clear Thread Cutting Oil (United States)

Liquid

No data available.

Yellow

Mild petroleum/solvent

No data available.

No data available.

No data available.



Product Name: RIDGID Nu-Clear Thread Cutting Oil (United States)

Inhalation is the primary route of exposure. In high concentrations, vapors, fumes or mists may irritate nose, throat and mucus membranes.

Prolonged skin contact may cause redness and irritation.

Eye contact is possible and should be avoided.

No data available.

No data available.

No data available.

No data available.

Not classified for acute toxicity based on available data.

Not classified for acute toxicity based on available data.

Not classified for acute toxicity based on available data.

No data available.

No data available.

No data available.

No data available.

No data available.

No carcinogenic components identified

No carcinogenic components identified



Product Name: RIDGID Nu-Clear Thread Cutting Oil (United States)

R No carcinogenic components identified

M

r No data available.

r No data available.

R No data available.

r No data available.

R No data available.

r No data available.

r No data available.

1 – **r**

r This product has not been evaluated for ecological toxicity or other environmental effects.

13 – **D** **r**

D Discharge, treatment, or disposal may be subject to national, state, or local laws. Dispose of waste at an appropriate treatment and disposal facility in accordance with applicable laws and regulations, and product characteristics at time of disposal. It is the responsibility of the product user or owner to determine at the time of disposal, which waste regulations must be applied.

d Empty containers should be taken to an approved waste handling site for recycling or disposal.



Product Name: RIDGID Nu-Clear Thread Cutting Oil (United States)

□□□□□□ 16 – □ □□r □□□r□ □□□□

Prepared by: Ridge Tool Company (Operating Standard 6-101)

Issue Date: May 2, 2018

Last Revision Date: March 8, 2017

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FICHE SANTÉ/SÉCURITÉ

1 – Identification du produit et du fournisseur

Produit:
RIDGID Nu-Clear Thread Cutting Oil (Etats-Unis)

Réf. catalogue:
11461, 11481, 41575, 41585, 42513, 70835

Emploi recommandé:
Filetage mécanique

Restrictions d'utilisation:
Usage industriel seulement

Fournisseur:

<p><u>North America</u> Ridge Tool Company 400 Clark Street Elyria, Ohio 44035-6001 1-800-519-3456 (Etats-Unis) (du lundi au vendredi de 8h à 17h EST) Téléphone d'urgence: composer le 9-1-1 ou appeler les services d'urgences appropriés www.RIDGID.com</p>
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Date de publication: le 2 mai 2018

Révision K

Produit: RIDGID Nu-Clear Thread Cutting Oil (Etats-Unis)

Rincer avec soin à l'eau.
En cas d'irritation, consulter un médecin. Continuer à rincer pendant au moins 15 minutes.

Aucune information disponible.

Indication d'un besoin médical immédiat et traitement spécial requis

Consulter un médecin en cas de symptômes.

5 – Lutte contre les incendies

Aucun risque exceptionnel d'incendie et d'explosion.

Aucune information disponible.

Moyens d'extinction

Eau pulvérisée, brouillard, CO2, agent chimique sec ou mousse standard. Choisir le moyen d'extinction de l'incendie en tenant compte d'autres produits chimiques éventuels.

Moyens d'extinction

Ne pas lutter contre l'incendie au jet d'eau pour ne pas propager les flammes.

La chaleur peut provoquer l'explosion des récipients.
En cas d'incendie, des gaz dangereux pour la santé peuvent se former.

La chaleur peut provoquer l'explosion des récipients.
En cas d'incendie, des gaz dangereux pour la santé peuvent se former.

Aucune information disponible.

Aucune information disponible.

Aucune information disponible.

Les pompiers doivent porter un équipement de protection standard,
notamment vêtement ignifuge, casque à masque facial, gants, bottes en
caoutchouc et, dans les espaces clos, un appareil respiratoire autonome.
Aucune information disponible.

Les pompiers doivent porter un équipement de protection standard, notamment vêtement ignifuge, casque à masque facial, gants, bottes en caoutchouc et, dans les espaces clos, un appareil respiratoire autonome.

Produit: RIDGID Nu-Clear Thread Cutting Oil (Etats-Unis)

6 – Lutte contre les déversements accidentels

Procédure d'urgence

Voir l'équipement de protection individuelle à la Section 8. Ne pas toucher les récipients endommagés ou le produit déversé à moins de porter les vêtements de protection appropriés. Maintenir à distance le personnel non autorisé. Assurer une ventilation adéquate.

Méthode de nettoyage

Absorber le produit avec du sable ou un autre absorbant inerte. Arrêter le débit de matière, si ceci est sans risque.

Prévention de l'Environnement

Éviter le rejet dans l'environnement. Ne pas contaminer les sources d'eau ou les égouts. Endiguer la fuite ou le déversement si cela peut être fait sans danger.

7 – Manipulation et stockage

Pratiques de manipulation

Se conformer aux bonnes pratiques d'hygiène industrielle. Porter un équipement de protection personnelle approprié. N'exposez pas à la chaleur intense comme le produit peut développer et pressuriser le récipient.

Conditions d'un stockage sûr, y compris d'éventuelles incompatibilités

Conserver dans le récipient d'origine hermétiquement fermé. Éviter tout contact avec des agents comburants. Conserver à l'écart des matières incompatibles. Durée de conservation: 720 jours

Produit: RIDGID Nu-Clear Thread Cutting Oil (Etats-Unis)

Non classé comme présentant une toxicité aiguë d'après les données disponibles.

Non classé comme présentant une toxicité aiguë d'après les données disponibles.

Non classé comme présentant une toxicité aiguë d'après les données disponibles.

Non classé comme présentant une toxicité aiguë d'après les données disponibles.

Aucune information disponible.

Aucune information disponible.

Aucune information disponible.

Aucune information disponible.

Aucune information disponible.

Aucune information disponible.

Aucune information disponible.

Aucune information disponible.

Aucune information disponible.

Aucune information disponible.

Monographies du CIRC sur l'évaluation des risques de cancérogénicité pour l'homme
Aucun composant cancérigène identifié

Aucun composant cancérigène identifié

UNIS. Substances spécialement réglementées par l'OSHA (29 CFR 1910.1001)
Aucun composant cancérigène identifié

Aucune information disponible.

Aucune information disponible.

Aucune information disponible.

Aucune information disponible.

Aucune information disponible.

Aucune information disponible.

Aucune information disponible.

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Aucune information disponible.

Aucune information disponible.

Aucune information disponible.

Produit: RIDGID Nu-Clear Thread Cutting Oil (Etats-Unis)

16 – Renseignements divers

Rédaction : Ridge Tool Company (OPSTD 6-101)

Date de publication : le 2 mai 2018

Dernière révision : le 8 mars 2017

Quoi que la société Ridge Tool estime que les affirmations, informations techniques et recommandations ci-présentes sont dignes de confiance, celles-ci ne sont données qu'à titre indicatif, sans aucune garantie expresse ou implicite, et ne sauraient engager la responsabilité civile de la société en cas de pertes, dommages et intérêts, voire frais directs ou indirects relevant de leur application.

Nombre del producto:
RIDGID Nu-Clear Thread Cutting Oil (Estados Unidos)

No. de catálogo:
11461, 11481, 41575, 41585, 42513, 70835

Uso recomendado:
Para cortar roscas

Restricciones de utilización:
Uso industria seusement

Nombre de la compañía:

North America
Ridge Tool Company
400 Clark Street
Elyria, Ohio 44035-6001, EE. UU.
Teléfono 1-800-519-3456 (EE. UU.) (8:00 a 17:00 hora
estándar del este, lunes a viernes)
Teléfono de emergencia: Llame al 9-1-1 o al teléfono de
emergencia local
www.RIDGID.com

Fecha de publicación: 2 de mayo de 2018

Révision: K

Producto: RIDGID Nu-Clear Thread Cutting Oil (Estados Unidos)

Sección 2 – Identificación de Peligros

Identificación de Peligros

Este producto está clasificado como no peligroso según la norma OSHA 29CFR 1910.1200 (HazCom 2012)

Palabras de advertencia

Palabra de advertencia: No hay símbolo

Palabra de advertencia: No hay palabra de advertencia.

Palabra de advertencia: No aplicable

Palabra de advertencia: No aplicable

Frases de peligro

Ninguno.

Sección 3 – Composición de Ingredientes y Contenido de Sustancias Peligrosas

Contenido de Sustancias Peligrosas

Este producto no contiene silicona o aditivos clorados.

Composición de Ingredientes

Identificación de Ingredientes	Confidencialidad	Porcentaje
Mineral oil	Confidencial	20 - <50%
Paraffin oils	Confidencial	20 - <50%
Vegetable oil	Confidencial	1 - <5%

Las identidades químicas específicas y/o los porcentajes exactos han sido retenidos como secretos de fabricación.

Sección 4 – Medidas de Primeros Auxilios

Ingestión

Enjuagar a fondo la boca. Llamar a un CENTRO DE TOXICOLOGÍA / médico si la persona se encuentra mal. NO provocar el vómito.

Inhalación

Trasladar al aire libre. Llamar a un CENTRO DE TOXICOLOGÍA / médico si la persona se encuentra mal.

Contaminación de la piel y de la ropa

Quitar ropa y zapatos contaminados. Lave las áreas de contacto con agua y jabón. En caso de irritación cutánea: Consultar a un médico.

Contaminación de los ojos

Lave con abundante agua. Si aparece irritación, busque asistencia médica. Continuar enjuagando durante al menos 15 minutos.



Producto: RIDGID Nu-Clear Thread Cutting Oil (Estados Unidos)

Este producto es un aceite de corte de hilos, que puede ser irritante para la piel y los ojos.

Recomendación: No hay datos disponibles.

Este producto puede causar irritación de la piel y los ojos.

Recomendación: Obtenga atención médica en caso de síntomas.

Sección 5 – Medidas de extinción

Riesgo de incendio o explosión: Ningún riesgo excepcional de incendio o explosión señalado.

Medidas de extinción: Agua pulverizada, neblina, CO2, polvos químicos, o espuma normal.

Medidas de extinción: Seleccione el medio de extinción más apropiado, teniendo en cuenta la posible presencia de otros productos químicos.

Medidas de extinción: No utilice chorro de agua, pues extendería el fuego.

Riesgo de explosión: El calor puede ocasionar explosión de los recipientes. En caso de incendio se pueden formar gases nocivos.

Medidas de extinción: El calor puede ocasionar explosión de los recipientes. En caso de incendio se pueden formar gases nocivos.

Medidas de extinción: No hay datos disponibles.

Medidas de extinción: Los bomberos deben utilizar un equipo de protección estándar incluyendo chaqueta ignífuga, casco con careta, guantes, botas de goma, y, en espacios cerrados, equipo de respiración autónomo (SCBA, según sus siglas en inglés).

Sección 6 – Medidas de limpieza y derrames

Recomendación: Consulte la sección 8 de la FDS sobre equipo de protección personal. No toque los recipientes dañados o el material derramado a menos que esté usando ropa protectora adecuada. Mantener alejado al personal no autorizado. Asegúrese una ventilación apropiada.

Medidas de limpieza: Absorber con arena u otro absorbente inerte. Detenga el flujo del material, si esto no representa un riesgo.

Recomendación: Evitar su liberación al medio ambiente. No contamine el drenaje o el alcantarillado. Impedir nuevos escapes o derrames de forma segura.



Producto: RIDGID Nu-Clear Thread Cutting Oil (Estados Unidos)

Precauciones – Manipulación y almacenamiento

Respete las normas para una manipulación correcta de productos químicos. Use equipo protector personal adecuado. No exponga al calor intenso cuando el producto puede ampliar y presurizar el contenedor.

Respete las normas para una manipulación correcta de productos químicos. Use equipo protector personal adecuado. No exponga al calor intenso cuando el producto puede ampliar y presurizar el contenedor.

Guárdese en el recipiente original bien cerrado. Evite el contacto con agentes reductores. Consérvese alejado de materiales incompatibles. Vida útil: 720 días

Guárdese en el recipiente original bien cerrado. Evite el contacto con agentes reductores. Consérvese alejado de materiales incompatibles. Vida útil: 720 días

Propiedades físicas y químicas – Información de seguridad y salud

Propiedades físicas y químicas

Descripción del producto	Clasificación	Valor límite de exposición	Referencia
Mineral oil - Niebla	PEL	5 mg/m ³	NOS. OSHA la tabla Z-1 límites para contaminantes del aire (29 CFR 1910.1000) (01 2017)
Mineral oil - Niebla	TWA	5 mg/m ³	NOS. OSHA la Tabla Z-1-A (29 CFR 1910.1000) (1989)
Paraffin oils - Fracción inhalable	TWA	5 mg/m ³	EE.UU. ACGIH Valores umbrales límite (03 2014)
Paraffin oils - Niebla	PEL	5 mg/m ³	NOS. OSHA la tabla Z-1 límites para contaminantes del aire (29 CFR 1910.1000) (02 2006)
Paraffin oils - Niebla	TWA	5 mg/m ³	NOS. OSHA la Tabla Z-1-A (29 CFR 1910.1000) (1989)
Vegetable oil - Polvo total	PEL	15 mg/m ³	NOS. OSHA la tabla Z-1 límites para contaminantes del aire (29 CFR 1910.1000) (02 2006)
Vegetable oil - Fracción respirable	PEL	5 mg/m ³	NOS. OSHA la tabla Z-1 límites para contaminantes del aire (29 CFR 1910.1000) (02 2006)

Medidas de protección personal

Utilizar los equipos de protección individual según las necesidades.

Respiración y protección respiratoria

En caso de ventilación insuficiente, utilice un equipo respiratorio adecuado. Consulte al supervisor sobre la norma de la compañía de protección respiratoria.

Protección ocular

Use gafas de seguridad con protectores laterales (o gafas estancas).

Protección de la piel y ropa protectora

Use ropa protectora apropiada para el riesgo de exposición. Tenga en cuenta otros peligros, como las piezas giratorias. Comuníquese con el profesional o fabricante de salud y seguridad para obtener información específica.



Producto: RIDGID Nu-Clear Thread Cutting Oil (Estados Unidos)

10 –

- No reactivo durante uso normal.
- El material es estable bajo condiciones normales.
- Ningunos en circunstancias normales.
- Evite el calor o la contaminación.
- No hay datos disponibles.
- La descomposición térmica o la combustión pueden liberar óxido de carbono u otros gases o vapores tóxicos.

11 –

- Puede ingerirse accidentalmente. La ingestión puede causar irritación y malestar.
- La inhalación es la principal vía de exposición. En concentraciones altas, los vapores, humos o neblinas pueden irritar la nariz, la garganta y las membranas mucosas.
- El contacto prolongado con la piel puede causar rubor e irritación.
- El contacto con los ojos es posible y debe evitarse.
- No hay datos disponibles.
- No hay datos disponibles.
- No hay datos disponibles.
- No hay datos disponibles.

- No clasificado en cuanto a toxicidad aguda con los datos disponibles.



Producto: RIDGID Nu-Clear Thread Cutting Oil (Estados Unidos)

1 - r

r

Este producto no ha sido evaluado para la toxicidad ecológica u otros efectos ambientales.

13 - d r

r

r r

Las actividades de descarga, tratamiento o eliminación pueden estar sujetos a leyes nacionales, estatales o locales. Elimine el residuo en una instalación adecuada de tratamiento y eliminación de acuerdo con las leyes y reglamentos correspondientes y características del producto en el momento de la eliminación. Es responsabilidad del usuario del producto o propietario para determinar en el momento de la disposición, que las regulaciones de residuos debe ser aplicado.

d

Los contenedores vacíos deben ser llevados a un sitio de manejo aprobado para desechos, para el reciclado o eliminación.

1 - r d

r

D

No reglamentado.

MD

No reglamentado.

No reglamentado.

1 - r r

r

R d d

R 1 10 1001 10 0

No están presentes, o no están presentes en las cantidades reguladas.

d d R r d d 1 6 R

r d r

Este producto está clasificado como no peligroso según la norma OSHA 29CFR 1910.1200 (HazCom 2012)

R 313 R, r d r d r d

No están presentes, o no están presentes en las cantidades reguladas.



Producto: RIDGID Nu-Clear Thread Cutting Oil (Estados Unidos)

Ridge Tool Company d.o.b. Ridge Tool Company

Ridge Tool Company 6 Ridge Tool Company, Inc.

No hay presencia de ningún ingrediente regulador por CA Prop 65.

Ridge Tool Company 16 - Ridge Tool Company d.o.b.

Preparado por: Ridge Tool Company (OPSTD 6-101)

Fecha de emisión: 2 de mayo de 2018

Fecha de la última revisión: 8 de marzo de 2017

RIDGE TOOL CONSIDERA QUE TODAS LAS DECLARACIONES, INFORMACIÓN TÉCNICA Y RECOMENDACIONES EN EL PRESENTE DOCUMENTO SON CONFIABLES, PERO SE PRESENTAN SIN GARANTÍA ALGUNA, SEA EXPRESA O IMPLÍCITA, Y NO ASUMIMOS RESPONSABILIDAD ALGUNA POR PÉRDIDAS, DAÑOS O GASTOS, DIRECTOS O CONSECUENTES, QUE SURJAN DE SU USO.



Meters & Instruments
16240 PORT NORTHWEST DRIVE
HOUSTON, TEXAS 77041 USA
(832) 590-2302

MATERIAL SAFETY DATA SHEET

ARG PRODUCT CODE: H44-7360

ROOTS[®] METER OIL

H.V.I. R&O AW ISO VG 15

Revision #: 3

Prepared according to 29 CFR 1910.1200

1. Chemical Product and Company Identification

American Refining Group, Inc.
77 North Kendall Avenue
Bradford, PA 16701 USA
Tel: (814) 368.1200
www.amref.com

Product Name	ROOTS [®] METER OIL H.V.I. R&O AW ISO VG 15
Product Code	7360
CAS Number	Not applicable for mixtures
Synonyms	Meter oil
Generic Chemical Name	Severely hydrotreated & hydrocracked base oil
Product Type	Mixture
Transportation Emergency Phone No.	Chemtrec: 1-800-424-9300 (24 HRS)
ARG Emergency Phone No.	814-368-1297 (24 HRS)
MSDS E-Mail	msds@amref.com

2. Hazards Identification

Appearance	Red
Odor	Petroleum oil
Signal Word	WARNING! Harmful if swallowed. Can enter lungs and cause damage. Harmful if inhaled May cause skin irritation May cause eye irritation May cause respiratory tract irritation
OSHA Regulatory Status	This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200)
Precautions	
Inhalation	Avoid breathing dust/fume/gas/mist/vapors/spray. Keep container tightly closed. Use only with adequate ventilation.
Eyes	Avoid contact with eyes. Wash thoroughly after handling.
Skin	Avoid contact with skin and clothing. Wash thoroughly after handling.
Medical Conditions Aggravated by Exposure	Pre-existing disorders involving any target organs mentioned in this MSDS as being at risk may be aggravated by over-exposure to this product
Chronic Effects	See Section 11 for complete health hazard information
Environmental Effects	See Section 12 for complete ecological information

MATERIAL SAFETY DATA SHEET

ARG PRODUCT CODE: H44-7360

ROOTS® METER OIL

H.V.I. R&O AW ISO VG 15

Revision #: 3

3. Composition / Information on Ingredients

CAS No.	Component	Percent
mixture	severely hydrotreated & hydrocracked base oil (petroleum)	90-100
confidential	acrylic copolymer	1.0-2.5
64741-88-4	interchangeable neutral oils	1.0-1.5
64741-89-5	interchangeable neutral oils	1.0-1.5
64741-65-0	interchangeable neutral oils	1.0-1.5
64741-88-4	interchangeable neutral oils	1.0-1.5
64741-89-5	interchangeable neutral oils	1.0-1.3
64742-55-8	interchangeable neutral oils	1.0-1.3

Component Regulatory Information

This product may be regulated, have exposure limits or other information identified as the following: Mineral Oil (See Section 8)

4. First Aid Measures

Eyes	Check for and remove any contact lenses. Immediately flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. Get medical attention immediately.
Skin	In case of contact, immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Wash clothing before reuse. Clean shoes thoroughly before reuse. Get medical attention immediately.
Inhalation	Move exposed person to fresh air. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. Loosen tight clothing such as a collar, tie, belt or waistband. Get medical attention immediately.
Ingestion	DO NOT INDUCE VOMITING. If conscious, rinse out mouth with water. Get medical attention immediately.
Note to Physicians	No specific treatment. Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.

5. Fire Fighting Measures

Flammable Properties

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5. Fire Fighting Measures

Not available

Extinguishing Media

Use dry chemical, CO₂, water spray (FOG) or foam

Specific Hazards Arising from Chemical

Elevated temperatures can lead to the formation of irritating fumes and vapors. Decomposition products may include the following materials: Carbon dioxide and Carbon monoxide.

Protective Equipment and Precautions for Firefighters

Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

6. Accidental Release Measures

Personal Precautions

No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Shut off all ignition sources. No flares, smoking or flames in hazard area. Avoid breathing vapor or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.

Environmental Precautions

Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution.

Methods for Containment

Stop leak if without risk.

Methods for Cleanup

Move containers from spill area. Approach release from upwind. Absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.

7. Handling and Storage

Handling Procedures

Eating, drinking, and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. Do not get in eyes or on skin or clothing. Do not ingest. Avoid breathing vapor or mist. Use only with adequate ventilation. Use non-sparking tools.

Shipping and Storing Procedures

Store in accordance with local regulations. Store in a segregated and approved area. Keep in the original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials. Do not store in unlabeled containers. Store and use away from heat, sparks, open flame or any other ignition source. Take precautionary measures against electrostatic discharges. To avoid fire or explosion, dissipate static electricity during transfer by grounding and bonding containers and equipment before transferring material. Empty containers that retain product residue may be hazardous. Do not reuse container.

8. Exposure Controls / Personal Protection



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8. Exposure Controls / Personal Protection

Component Exposure Limits

Oil Mist (mineral)

ACGIH TLV:	TWA:	N/A ppm	TWA:	5 mg/m ³	STEL:	N/A ppm	STEL:	10 mg/m ³
OSHA PEL:	TWA:	N/A ppm	TWA:	5 mg/m ³	STEL:	N/A ppm	STEL:	N/A mg/m ³
NIOSH REL:	TWA:	N/A ppm	TWA:	5 mg/m ³	STEL:	N/A ppm	STEL:	10 mg/m ³

N/A signifies not available

Engineering Controls

Material should be handled in enclosed vessels and equipment. Use only in adequate ventilation. Use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits.

Eye/Face Protection

Chemical goggles or face shield.

Skin Protection

Chemical resistant, impervious gloves complying with an approved standard should be worn at all times. Coveralls, apron, and boots as necessary to minimize contact.

Respiratory Protection

Use a properly fitted, air-purifying or air-fed respirator complying with an approved standard if a risk assessment indicated this is necessary. Respirator selection must be based on known or anticipated exposure levels.

General Hygiene

Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing.

9. Physical and Chemical Properties

Appearance	Red	Vapor Pressure (mm Hg at 20°C)	0
Odor	Hydrocarbon oil	Water Soluble	No
Physical State	Liquid	Specific Gravity (g/cc)	.86
Flash Point (°F)	275	Density (lbs/gal)	7.26
Boiling Point (°F)	>625	pH	Not available

10. Chemical Stability & Reactivity Information

Stability

Stable under normal conditions

Polymerization

No polymerization

Incompatibility

Strong acids and oxidizing materials

Conditions to Avoid

High temperatures

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10. Chemical Stability & Reactivity Information

Hazardous Decomposition Products Smoke, carbon monoxide, carbon dioxide, aldehydes and other products of incomplete combustion.

11. Toxicological Information

Acute Exposure
Respiratory Irritation Aspiration Hazard. If material is misted or if vapors are generated from heating, exposure may cause irritation of mucous membranes and the upper respiratory tract. Based on data from components or similar materials.
Eye Irritation May cause eye irritation. Vapors formed from heating may cause eye irritation.
Skin Irritation May cause skin irritation. Prolonged or repeated direct exposure to the skin may result in symptoms of irritation and redness.
Sensitization Not expected to cause skin or respiratory sensitization.

Component Analysis – LD50 / LC50

Acute Toxicity Estimate (ATE) Values for Product:

Inhalation LC50 Rat	19.88	mg/L 1 HR
Oral LD50 Rat	>4500	mg/kg
Dermal LD50 Rabbit	>2000	mg/kg

Chronic Exposure
Target Organ Effects No data available to indicate product or components present at greater than 1% are chronic health hazards.
Carcinogenicity This product contains mineral oils which are considered to be severely refined and not considered to be carcinogenic under IARC. All of the oils in this product have been demonstrated to contain less than 3% extractables by the IP 346 test.
Mutagenicity No data available to indicate product or any components present at greater than .1% are mutagenic or genotoxic.
Reproductive Toxicity No data available to indicate either product or components present at greater than .1% that may cause reproductive toxicity.
Teratogenicity No data available to indicate product or any components contained at greater than .1% may cause birth defects.

12. Ecological Information

Component Analysis- Ecotoxicity – Aquatic Life

Duration/Test/Species

Concentration/Conditions

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12. Ecological Information

96 Hr LC50 N/A mg/L
Pimephales promelas

Degradability Not readily degradable
Bioaccumulation Not determined
Soil Mobility Not determined

13. Disposal Considerations

Disposal Instructions

The generation of waste should be avoided or minimized wherever possible. Treatment, storage, transportation and disposal must be in accordance with applicable Federal, State/Provincial, and Local regulations.

14. Transportation Information

Emergency Response Guide No.	128	<i>North American Emergency Response Guide Book</i>		
	UN Number	Shipping Name (technical name)	Hazard Class	Packing Group
U.S. DOT Bulk		Not Regulated		
U.S. DOT Non-Bulk		Not Regulated		

15. Regulatory Information

SARA Extremely Hazardous Substances (Sections 302 & 304) This product does not contain greater than 1% of any “extremely hazardous substances” listed pursuant to Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA) Section 302 or Section 304 as identified in 40 CFR Part 355, Appendix A and B.

SARA Section 313 This product does not contain greater than 1.0% of the substances subject to the reporting requirements of Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 and 40 CFR Part 372.

SARA Section 311 & 312 Classifications

Acute Hazard	Yes
Chronic Hazard	No
Fire Hazard	No
Reactivity Hazard	No



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CERCLA

This product does not contain any “hazardous substances” listed under the Comprehensive Environmental Response, Compensation and Liability Act of 1980 (CERCLA) in 40 CFR Part 302, Table 302.4.

California Prop 65

This product contains chemical(s) known to the state of California to cause cancer and/or birth defects.

Clean Water Act / Oil Pollution Act

This product contains petroleum distillates and may be subject to regulation by Section 311 of the Clean Water Act and the Oil Pollution Act. Releases of the product into or leading to surface waters must be reported to the National Response Center at 1-800-424-8802.

Global Chemical Inventories

Inventory	Component
	All components
US TSCA	Present
EU	Present
Japan	Not available
Australia	Present
New Zealand	Not available
Canada	Present
Switzerland	Not available
Korea	Present
Philippines	Present
China	Present
Taiwan	Not available

16. Other Information

US NFPA Ratings

Health	Fire	Reactivity
2	1	0

HMIS Ratings

Health	Fire	Physical Hazards
2	1	0

Precautionary Labels

Signal Word

WARNING!
 Harmful if swallowed. Can enter lungs and cause damage.
 Harmful if inhaled
 May cause skin irritation
 May cause eye irritation



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16. Other Information

Preparation/Revision Date

May cause respiratory tract irritation

10/4/2012

Revision Reason

Outdated

The information provided on this MSDS is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guide for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered as a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other material or in any process, unless specified in the text.

End of MSDS

SAFETY DATA SHEET



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SECTION 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

Product identifier

Trade name ROUNDUP TRANSORB® HC LIQUID HERBICIDE
Product code (UVP) 62290216
SDS Number 102000040183
PCP Registration No. 28198

Relevant identified uses of the substance or mixture and uses advised against

Use Herbicide
Restrictions on use See product label for restrictions.

Information on supplier

Supplier Bayer CropScience Inc
#200, 160 Quarry Park Blvd, SE
Calgary, Alberta T2C 3G3
Canada
Responsible Department Email: SDSINFO.BCS-NA@bayer.com

Emergency telephone no.

Emergency Telephone Number (24hr/ 7 days) 1-800-334-7577
Product Information Telephone Number 1-888-283-6847

SECTION 2: HAZARDS IDENTIFICATION

Classified in accordance with Part 2 of the Hazardous Products Regulations
Acute toxicity(Inhalation): Category 4

Labelling in accordance with Part 3 of the Hazardous Products Regulations



Signal word: Warning

Hazard statements
Harmful if inhaled.

Precautionary statements
Avoid breathing mist/ vapours/ spray.

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Use only outdoors or in a well-ventilated area.
IF INHALED: Remove person to fresh air and keep comfortable for breathing.
Call a POISON CENTER/doctor/physician if you feel unwell.

Hazards Not Otherwise Classified (HNOC)

No physical hazards not otherwise classified.
No health hazards not otherwise classified.

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

Hazardous Component Name	CAS-No.	Concentration % by weight
Potassium salt of glyphosate	70901-12-1	48.8
Surfactant blend (proprietary)		>7.0 – <13.0

The specific chemical identity and/or concentration range is being withheld because it is trade secret information.

SECTION 4: FIRST AID MEASURES

Description of first aid measures

General advice	When possible, have the product container or label with you when calling a poison control center or doctor or going for treatment.
Inhalation	Move to fresh air. If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably mouth-to-mouth if possible. Call a physician or poison control center immediately.
Skin contact	Wash off immediately with plenty of water for at least 15 minutes. Take off contaminated clothing and shoes immediately. Get medical attention if irritation develops and persists.
Eye contact	Hold eye open and rinse slowly and gently with water for 15-20 minutes. Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye. Call a physician or poison control center immediately.
Ingestion	Call a physician or poison control center immediately. Rinse out mouth and give water in small sips to drink. DO NOT induce vomiting unless directed to do so by a physician or poison control center. Never give anything by mouth to an unconscious person. Do not leave victim unattended.

Most important symptoms and effects, both acute and delayed

Symptoms	To date no symptoms are known.
Indication of any immediate medical attention and special treatment needed	
Risks	This product is not a cholinesterase inhibitor.

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Treatment	Treatment with atropine and oximes is not indicated. Appropriate supportive and symptomatic treatment as indicated by the patient's condition is recommended.
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SECTION 5: FIREFIGHTING MEASURES

Extinguishing media

Suitable	Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.
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Unsuitable	High volume water jet
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Special hazards arising from the substance or mixture	In the event of fire the following may be released: Carbon monoxide (CO), Carbon dioxide (CO ₂), Nitrogen oxides (NO _x), Oxides of phosphorus
--	---

Advice for firefighters

Special protective equipment for firefighters	In the event of fire and/or explosion do not breathe fumes. Firefighters should wear NIOSH approved self-contained breathing apparatus and full protective clothing. Equipment should be thoroughly decontaminated after use.
--	---

Further information	Keep out of smoke. Fight fire from upwind position. Cool closed containers exposed to fire with water spray. Do not allow run-off from fire fighting to enter drains or water courses.
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Flash point	does not flash
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Auto-ignition temperature	No data available
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Lower explosion limit	No data available
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Upper explosion limit	No data available
------------------------------	-------------------

Explosivity	Not applicable
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SECTION 6: ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

Precautions	Use personal protective equipment. Keep unauthorized people away. Avoid contact with spilled product or contaminated surfaces.
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Methods and materials for containment and cleaning up

Methods for cleaning up	Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust). Collect and transfer the product into a properly labelled and tightly closed container. Keep in suitable, closed containers for disposal. Clean contaminated floors and objects thoroughly, observing environmental regulations.
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Additional advice	Use personal protective equipment. If the product is accidentally spilled, do not allow to enter soil, waterways or waste water canal. Do not allow product to contact non-target plants.
Reference to other sections	Information regarding safe handling, see section 7. Information regarding personal protective equipment, see section 8. Information regarding waste disposal, see section 13.

SECTION 7: HANDLING AND STORAGE

Precautions for safe handling

Advice on safe handling Avoid contact with skin, eyes and clothing. Ensure adequate ventilation.

Hygiene measures Wash hands thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco, using the toilet or applying cosmetics.
Remove Personal Protective Equipment (PPE) immediately after handling this product. Remove soiled clothing immediately and clean thoroughly before using again. Wash thoroughly and put on clean clothing. Keep working clothes separately. Garments that cannot be cleaned must be destroyed (burnt).

Conditions for safe storage, including any incompatibilities

Requirements for storage areas and containers Store in original container. Store in a cool, dry place and in such a manner as to prevent cross contamination with other crop protection products, fertilizers, food, and feed. Store in a place accessible by authorized persons only. Reacts with galvanised steel or unlined mild steel to produce hydrogen, a highly flammable gas that could explode. Protect from freezing. Partial crystallization may occur on prolonged storage below the minimum storage temperature. Freezing will affect the physical condition but will not damage the material. Thaw and mix before using.

Advice on common storage Keep away from food, drink and animal feedingstuffs.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

No known occupational limit values.

Exposure controls

Personal protective equipment

In normal use and handling conditions please refer to the label and/or leaflet. In all other cases the following recommendations would apply.

Respiratory protection

When respirators are required, select NIOSH approved equipment based on actual or potential airborne concentrations and in accordance with the appropriate regulatory standards and/or industry recommendations.

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Hand protection	Please observe the instructions regarding permeability and breakthrough time which are provided by the supplier of the gloves. Also take into consideration the specific local conditions under which the product is used, such as the danger of cuts, abrasion, and the contact time. Chemical-resistant gloves (barrier laminate, butyl rubber, nitrile rubber or Viton) Wash gloves when contaminated. Dispose of when contaminated inside, when perforated or when contamination on the outside cannot be removed. Wash hands frequently and always before eating, drinking, smoking or using the toilet.
Eye protection	Use tightly sealed goggles and face protection.
Skin and body protection	Wear long-sleeved shirt and long pants and shoes plus socks.
General protective measures	Follow manufacturer's instructions for cleaning/maintaining PPE. If no such instructions for washables, use detergent and warm/tepid water. Keep and wash PPE separately from other laundry.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

Form	Liquid, clear
Colour	green
Odour	odourless
Odour Threshold	No data available
pH	4.5 - 4.9 (6.77 %) (23 °C) (deionized water)
Freezing range	No data available
Boiling point/boiling range	No data available
Flash point	does not flash
Flammability	No data available
Auto-ignition temperature	No data available
Minimum ignition energy	No data available
Self-accelerating decomposition temperature (SADT)	No data available
Upper explosion limit	No data available
Lower explosion limit	No data available
Vapour pressure	No significant volatility.

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Evaporation rate	No data available
Relative vapour density	No data available
Relative density	No data available
Density	1.36 g/cm ³ (20 °C)
Water solubility	completely miscible
Partition coefficient: n-octanol/water	Potassium salt of glyphosate: log Pow: < -3.2 (25 °C)
Viscosity, dynamic	No data available
Viscosity, kinematic	No data available
Oxidizing properties	No oxidizing properties
Explosivity	Not applicable
Other information	Further safety related physical-chemical data are not known.

SECTION 10: STABILITY AND REACTIVITY

Reactivity

Thermal decomposition	Stable under normal conditions.
Chemical stability	Stable under recommended storage conditions.
Possibility of hazardous reactions	Reacts with galvanised steel or unlined mild steel to produce hydrogen, a highly flammable gas that could explode.
Conditions to avoid	Extremes of temperature and direct sunlight.
Incompatible materials	Galvanised steel, Carbon steel, Unlined mild steel
Hazardous decomposition products	Hazardous products of combustion: see section 5.

SECTION 11: TOXICOLOGICAL INFORMATION

Exposure routes	Skin contact, Eye contact, Inhalation
Immediate Effects	
Eye	Causes eye irritation.
Skin	Causes skin irritation.
Ingestion	Harmful if swallowed.
Inhalation	Harmful if inhaled.
Information on toxicological effects	

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Based on available data, the classification criteria are not met.

SECTION 12: ECOLOGICAL INFORMATION

Toxicity to fish	LC50 (Lepomis macrochirus (Bluegill sunfish)) 47 mg/l static test; Exposure time: 96 h The value mentioned relates to the active ingredient glyphosate.
Chronic toxicity to fish	Oncorhynchus mykiss (rainbow trout) flow-through test NOEC: \geq 9.63 mg/l The value mentioned relates to the active ingredient glyphosate.
Toxicity to aquatic invertebrates	LC50 (Crassostrea gigas (Portuguese oyster)) 40 mg/l static test; Exposure time: 48 h The value mentioned relates to the active ingredient glyphosate.
Chronic toxicity to aquatic invertebrates	EC50 (Daphnia magna (Water flea)): 12.5 mg/l Exposure time: 21 d The value mentioned relates to the active ingredient glyphosate.
Toxicity to aquatic plants	ErC50 (Skeletonema costatum) 13.5 mg/l Growth rate; Exposure time: 72 h The value mentioned relates to the active ingredient glyphosate.
Biodegradability	Potassium salt of glyphosate: Not readily biodegradable.
Koc	Potassium salt of glyphosate: Koc: 884
Bioaccumulation	Potassium salt of glyphosate: Bioconcentration factor (BCF) < 1
Mobility in soil	Potassium salt of glyphosate: Variable, depends on temperature, soil type, soil moisture, soil pH and organic matter content.
Results of PBT and vPvB assessment	
PBT and vPvB assessment	Potassium salt of glyphosate: This substance is not considered to be persistent, bioaccumulative and toxic (PBT). This substance is not considered to be very persistent and very bioaccumulative (vPvB).
Additional ecological information	No further ecological information is available.
Environmental precautions	Apply this product as specified on the label. Do not apply directly to water, to areas where surface water is present or to intertidal areas below the mean high water mark. Do not contaminate surface or ground water by cleaning equipment or disposal of wastes, including equipment wash water. Retain and dispose of contaminated wash water.

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SECTION 13: DISPOSAL CONSIDERATIONS

Waste treatment methods

Product

It is best to use all of the product in accordance with label directions. If it is necessary to dispose of unused product, please follow container label instructions and applicable local guidelines.
Do not contaminate water, food, or feed by disposal.
Follow all local/regional/national/international regulations.

Contaminated packaging

Follow advice on product label and/or leaflet.
Do not re-use empty containers.
Triple rinse containers.
Puncture container to avoid re-use.
Completely empty container into application equipment, then dispose of empty container in a sanitary landfill, by incineration or by other procedures approved by state/provincial and local authorities.
If burned, stay out of smoke.

SECTION 14: TRANSPORT INFORMATION

According to national and international transport regulations this material is not classified as dangerous goods / hazardous material.

SECTION 15: REGULATORY INFORMATION

PCP Registration No. 28198

PMRA Information:

Read the label, authorized under the Pest Control Products Act, prior to using or handling the pest control product.

This chemical is a pest control product regulated by Health Canada Pest Management Regulatory Agency and is subject to certain labelling requirements under the Pest Control Products Act. These requirements differ from the classification criteria and hazard information required for GHS-consistent safety data sheets. The following is the hazard information required on the pest control product label:

Signal word: Warning!

Hazard statements: Poison.
Harmful if swallowed.
Harmful if inhaled.
Causes eye irritation.
Causes skin irritation.

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There are Canada-specific environmental requirements for handling, use, and disposal of this pest control product that are indicated on the label.

SECTION 16: OTHER INFORMATION

Abbreviations and acronyms

49CFR	Code of Federal Regulations, Title 49
ACGIH	US. ACGIH Threshold Limit Values
ATE	Acute toxicity estimate
CAS-Nr.	Chemical Abstracts Service number
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
EINECS	European inventory of existing commercial substances
ELINCS	European list of notified chemical substances
IARC	International Agency for Research on Cancer
IATA	International Air Transport Association
IMDG	International Maritime Dangerous Goods
N.O.S.	Not otherwise specified
NTP	US. National Toxicology Program (NTP) Report on Carcinogens
OECD	Organization for Economic Co-operation and Development
TDG	Transportation of Dangerous Goods
TWA	Time weighted average
UN	United Nations
WHO	World health organisation

NFPA 704 (National Fire Protection Association):

Health - 2 Flammability - 1 Instability - 1 Others - none

HMIS (Hazardous Materials Identification System, based on the Third Edition Ratings Guide)

Health - 2 Flammability - 1 Physical Hazard - PPE -

0 = minimal hazard, 1 = slight hazard, 2 = moderate hazard, 3 = severe hazard, 4 = extreme hazard

Reason for Revision: New Safety Data Sheet.

Revision Date: 01/12/2021

This information is provided in good faith but without express or implied warranty. The customer assumes all responsibility for safety and use not in accordance with label instructions. The product names are registered trademarks of Bayer.



SAFETY DATA SHEET

1. Identification

Product identifier SC4-KIT-1 Part A

Other means of identification

SDS number SDS-00065-CA

Product code SC4-KIT-1

Recommended use Epoxy resin.

Recommended restrictions None known.

Manufacturer/Importer/Supplier/Distributor information

Company name ABB Installation Products Inc.

Address 860 Ridge Lake Blvd.
Memphis, TN 38120
USA

Telephone 901-252-5000 ext. 8324

Emergency telephone CHEMTREC - 24 HOURS:
+1-800-424-9300 (Toll-free)
+1 703-741-5970

2. Hazard identification

Physical hazards Not classified.

Health hazards Skin corrosion/irritation Category 2
Serious eye damage/eye irritation Category 2A
Sensitization, skin Category 1

Label elements



Signal word Warning

Hazard statement Causes skin irritation. Causes serious eye irritation. May cause an allergic skin reaction.

Precautionary statement

Prevention Avoid breathing mist/vapours. Wash thoroughly after handling. Contaminated work clothing should not be allowed out of the workplace. Wear protective gloves/eye protection/face protection.

Response IF ON SKIN: Wash with plenty of water. If skin irritation or rash occurs: Get medical advice/attention. Take off contaminated clothing and wash it before reuse. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention.

Storage Store away from incompatible materials.

Disposal Dispose of contents/container in accordance with local/regional/national/international regulations.

Other hazards None known.

Supplemental information None.

3. Composition/information on ingredients

Mixtures

Chemical name	Common name and synonyms	CAS number	%
Epoxy resin		28064-14-4	60 - 80
Formaldehyde, oligomeric reaction products with 1-chloro-2,3-epoxypropane and phenol		9003-36-5	10 - 30

Chemical name	CAS number	%
Amorphous silica	112926-00-8	5 - 10
Epichlorohydrin-4,4'-isopropylidene diphenol resin	25068-38-6	1 - 5
Propan-2-ol	67-63-0	0.1 - 1

Composition comments The exact concentrations of the above listed chemicals are being withheld as a trade secret. All concentrations are in percent by weight unless otherwise indicated.

4. First-aid measures

Inhalation	Move to fresh air. Call a physician if symptoms develop or persist.
Skin contact	Remove contaminated clothing immediately and wash skin with soap and water. In case of eczema or other skin disorders: Seek medical attention and take along these instructions.
Eye contact	Immediately flush eyes with plenty of water for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Get medical attention if irritation develops and persists.
Ingestion	Rinse mouth. Do not induce vomiting unless directed to do so by medical personnel. Get medical attention if symptoms occur.
Most important symptoms/effects, acute and delayed	Severe eye irritation. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. Skin irritation. May cause redness and pain. May cause an allergic skin reaction. Dermatitis. Rash.
Indication of immediate medical attention and special treatment needed	Provide general supportive measures and treat symptomatically. Keep victim under observation. Symptoms may be delayed.
General information	Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves. Wash contaminated clothing before reuse.

5. Fire-fighting measures

Suitable extinguishing media	Foam. Dry chemical powder. Carbon dioxide (CO ₂).
Unsuitable extinguishing media	Do not use water jet as an extinguisher, as this will spread the fire.
Specific hazards arising from the chemical	During fire, hazardous combustion products are released that may include: Carbon oxides. Phenolics. Aldehydes. Acids. Irritating vapors. Silicon oxide fumes. Containers can burst violently when heated, due to excess pressure build-up.
Special protective equipment and precautions for firefighters	Self-contained breathing apparatus and full protective clothing must be worn in case of fire.
Fire fighting equipment/instructions	In case of fire and/or explosion do not breathe fumes. Move containers from fire area if you can do so without risk. Cool containers exposed to flames with water until well after the fire is out. Prevent runoff from fire control or dilution from entering streams, sewers or drinking water supply.
Specific methods	Use standard firefighting procedures and consider the hazards of other involved materials.
General fire hazards	Will burn if involved in a fire.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures	Keep unnecessary personnel away. Keep people away from and upwind of spill/leak. Wear appropriate protective equipment and clothing during clean-up. Avoid breathing mist/vapours. Avoid contact with eyes, skin, and clothing. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Ensure adequate ventilation. Local authorities should be advised if significant spillages cannot be contained. For personal protection, see section 8 of the SDS.
Methods and materials for containment and cleaning up	Prevent entry into waterways, sewer, basements or confined areas. Large Spills: Stop the flow of material, if this is without risk. Dike the spilled material, where this is possible. Absorb in vermiculite, dry sand or earth and place into containers. Following product recovery, flush area with water. Retain and dispose of contaminated wash water. Small Spills: Wipe up with absorbent material (e.g. cloth, fleece). Clean surface thoroughly to remove residual contamination.
Environmental precautions	Never return spills to original containers for re-use. For waste disposal, see section 13 of the SDS. Avoid release to the environment. Inform appropriate managerial or supervisory personnel of all environmental releases. Prevent further leakage or spillage if safe to do so. Avoid discharge into drains, water courses or onto the ground.

7. Handling and storage

Precautions for safe handling

Avoid breathing mist/vapours. Avoid contact with eyes, skin, and clothing. Avoid prolonged exposure. Persons with epoxy allergy should not work with this product. Provide adequate ventilation. Wear appropriate personal protective equipment. Avoid release to the environment. Observe good industrial hygiene practices.

Conditions for safe storage, including any incompatibilities

Keep containers tightly closed in a cool, well-ventilated place. Keep away from heat, sparks and open flame. Protect from direct sunlight. Store away from incompatible materials (see section 10 of the SDS).

8. Exposure controls/personal protection

Occupational exposure limits

US. ACGIH Threshold Limit Values

Components	Type	Value
Propan-2-ol (CAS 67-63-0)	STEL	400 ppm
	TWA	200 ppm

Canada. Alberta OELs (Occupational Health & Safety Code, Schedule 1, Table 2)

Components	Type	Value
Propan-2-ol (CAS 67-63-0)	STEL	984 mg/m ³
		400 ppm
	TWA	492 mg/m ³
		200 ppm

Canada. British Columbia OELs. (Occupational Exposure Limits for Chemical Substances, Occupational Health and Safety Regulation 296/97, as amended)

Components	Type	Value
Propan-2-ol (CAS 67-63-0)	STEL	400 ppm
	TWA	200 ppm

Canada. Manitoba OELs (Reg. 217/2006, The Workplace Safety And Health Act)

Components	Type	Value
Propan-2-ol (CAS 67-63-0)	STEL	400 ppm
	TWA	200 ppm

Canada. Ontario OELs. (Control of Exposure to Biological or Chemical Agents)

Components	Type	Value
Propan-2-ol (CAS 67-63-0)	STEL	400 ppm
	TWA	200 ppm

Canada. Quebec OELs. (Ministry of Labor - Regulation respecting occupational health and safety)

Components	Type	Value
Propan-2-ol (CAS 67-63-0)	STEL	1230 mg/m ³
		500 ppm
	TWA	983 mg/m ³
		400 ppm

Canada. Saskatchewan OELs (Occupational Health and Safety Regulations, 1996, Table 21)

Components	Type	Value
Propan-2-ol (CAS 67-63-0)	15 minute	400 ppm
	8 hour	200 ppm

Biological limit values

ACGIH Biological Exposure Indices

Components	Value	Determinant	Specimen	Sampling Time
Propan-2-ol (CAS 67-63-0)	40 mg/l	Acetone	Urine	*

* - For sampling details, please see the source document.

Appropriate engineering controls	Good general ventilation should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. Provide easy access to water supply and eye wash facilities.
Individual protection measures, such as personal protective equipment	
Eye/face protection	Wear approved chemical safety goggles. Face shield is recommended.
Skin protection	
Hand protection	Wear appropriate chemical resistant gloves. Suitable gloves can be recommended by the glove supplier.
Other	Wear appropriate chemical resistant clothing. Use of an impervious apron is recommended.
Respiratory protection	In case of insufficient ventilation, wear suitable respiratory equipment. Selection and use of respiratory protective equipment should be in accordance with CSA Standard Z94.4. Check with respiratory protective equipment suppliers.
Thermal hazards	Wear appropriate thermal protective clothing, when necessary.
General hygiene considerations	Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants. Contaminated work clothing should not be allowed out of the workplace.

9. Physical and chemical properties

Appearance

Physical state	Liquid.
Form	Liquid.
Colour	White.

Odour Mild.

Odour threshold Not available.

pH Not applicable.

Melting point/freezing point Not available.

Initial boiling point and boiling range Not available.

Flash point 96.1 °C (205.0 °F) Setflash Closed Cup

Evaporation rate Not available.

Flammability (solid, gas) Not applicable.

Upper/lower flammability or explosive limits

Flammability limit - lower (%) Not available.

Flammability limit - upper (%) Not available.

Vapour pressure Not available.

Vapour density Not available.

Relative density 1.21 (Water=1)

Solubility(ies)

Solubility (water) Not available.

Partition coefficient (n-octanol/water) Not available.

Auto-ignition temperature Not available.

Decomposition temperature Not available.

Viscosity Not available.

Other information

Explosive properties Not explosive.

Oxidising properties Not oxidising.

VOC 0 % California SCAQMD Method 316B

10. Stability and reactivity

Reactivity	The product is stable and non-reactive under normal conditions of use, storage and transport.
Chemical stability	Material is stable under normal conditions.
Possibility of hazardous reactions	Polymerization may occur at elevated temperature or in the presence of incompatible materials. Heating this resin above 300°F in the presence of air may cause slow oxidative decomposition.
Conditions to avoid	Keep away from heat, sparks and open flame. Avoid temperatures exceeding the flash point. Contact with incompatible materials. Protect against direct sunlight.
Incompatible materials	Strong oxidising agents. Strong acids. Strong bases. Amines. Mercaptans.
Hazardous decomposition products	Thermal decomposition or combustion may produce: Carbon oxides. Phenolics. Aldehydes. Acids. Irritating vapors. Silicon oxide fumes.

11. Toxicological information

Information on likely routes of exposure

Inhalation	Inhalation of vapours or mists of the product may be irritating to the respiratory system.
Skin contact	Causes skin irritation. May cause an allergic skin reaction.
Eye contact	Causes serious eye irritation.
Ingestion	May cause discomfort if swallowed.

Symptoms related to the physical, chemical and toxicological characteristics	Severe eye irritation. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. Skin irritation. May cause redness and pain. May cause an allergic skin reaction. Dermatitis. Rash.
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Information on toxicological effects

Acute toxicity	Not expected to be acutely toxic.
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Components	Species	Test Results
Epichlorohydrin-4,4'-isopropylidenediphenol resin (CAS 25068-38-6)		
Acute		
Dermal		
LD50	Rat	> 2000 mg/kg
Oral		
LD50	Rat	15000 mg/kg
Propan-2-ol (CAS 67-63-0)		
Acute		
Dermal		
LD50	Rabbit	12870 mg/kg
Inhalation		
<i>Vapour</i>		
LC50	Rat	72.6 mg/l, 4 hours
Oral		
LD50	Rat	4710 mg/kg
Skin corrosion/irritation	Causes skin irritation.	
Serious eye damage/eye irritation	Causes serious eye irritation.	
Respiratory or skin sensitisation		
Respiratory sensitisation	Not a respiratory sensitiser.	
Skin sensitisation	May cause an allergic skin reaction.	
Germ cell mutagenicity	No data available to indicate product or any components present at greater than 0.1% are mutagenic or genotoxic.	
Carcinogenicity	Not classifiable as to carcinogenicity to humans.	
ACGIH Carcinogens		
Propan-2-ol (CAS 67-63-0)	A4 Not classifiable as a human carcinogen.	
Canada - Manitoba OELs: carcinogenicity		
Propan-2-ol (CAS 67-63-0)	Not classifiable as a human carcinogen.	

IARC Monographs. Overall Evaluation of Carcinogenicity

Propan-2-ol (CAS 67-63-0)

3 Not classifiable as to carcinogenicity to humans.

Reproductive toxicity	This product is not expected to cause reproductive or developmental effects.
Specific target organ toxicity - single exposure	Not classified.
Specific target organ toxicity - repeated exposure	Not classified.
Aspiration hazard	Not an aspiration hazard.
Chronic effects	Prolonged inhalation may be harmful.

12. Ecological information

Ecotoxicity Toxic to aquatic life with long lasting effects.

Components	Species	Test Results
Propan-2-ol (CAS 67-63-0)		
Aquatic		
<i>Acute</i>		
Crustacea	LC50	Daphnia magna > 10000 mg/l, 24 hours
Fish	LC50	Pimephales promelas 9640 mg/l, 96 hours
<i>Chronic</i>		
Crustacea	EC50	Daphnia magna > 100 mg/l, 21 days
	NOEC	Daphnia magna 141 mg/l, 16 days
		30 mg/l, 21 days

Persistence and degradability No data is available on the degradability of this product.

Bioaccumulative potential

Partition coefficient n-octanol / water (log Kow)

Propan-2-ol (CAS 67-63-0) 0.05

Mobility in soil No data available for this product.

Other adverse effects No data available for this product.

13. Disposal considerations

Disposal instructions Collect and reclaim or dispose in sealed containers at licensed waste disposal site. Do not allow this material to drain into sewers/water supplies. Do not contaminate ponds, waterways or ditches with chemical or used container. Dispose of contents/container in accordance with local/regional/national/international regulations.

Local disposal regulations Dispose in accordance with all applicable regulations.

Hazardous waste code The waste code should be assigned in discussion between the user, the producer and the waste disposal company.

Waste from residues / unused products Dispose of in accordance with local regulations. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe manner (see: Disposal instructions).

Contaminated packaging Since emptied containers may retain product residue, follow label warnings even after container is emptied. Empty containers should be taken to an approved waste handling site for recycling or disposal.

14. Transport information

TDG

UN number	UN3082
UN proper shipping name	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Epoxy resin)
Transport hazard class(es)	
Class	9
Subsidiary risk	-
Packing group	III
Environmental hazards	Yes
Special precautions for user	Read safety instructions, SDS and emergency procedures before handling.

IATA

UN number	UN3082
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UN proper shipping name Environmentally hazardous substance, liquid, n.o.s. (Epoxy resin)
Transport hazard class(es)
Class 9
Subsidiary risk -
Label(s) Miscellaneous
Packing group III
Environmental hazards Yes
ERG Code 9L
Special precautions for user Read safety instructions, SDS and emergency procedures before handling.

IMDG

UN number UN3082
UN proper shipping name ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Epoxy resin)
Transport hazard class(es)
Class 9
Subsidiary risk -
Packing group III
Environmental hazards
Marine pollutant Yes
EmS F-A, S-F
Special precautions for user Read safety instructions, SDS and emergency procedures before handling.

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code Not established.

15. Regulatory information

Canadian regulations This product has been classified in accordance with the hazard criteria of the HPR and the SDS contains all the information required by the HPR.

Controlled Drugs and Substances Act

Not regulated.

Export Control List (CEPA 1999, Schedule 3)

Not listed.

Greenhouse Gases

Not listed.

Precursor Control Regulations

Not regulated.

International regulations

Stockholm Convention

Not applicable.

Rotterdam Convention

Not applicable.

Kyoto Protocol

Not applicable.

Montreal Protocol

Not applicable.

Basel Convention

Not applicable.

International Inventories

Country(s) or region	Inventory name	On inventory (yes/no)*
Australia	Australian Inventory of Industrial Chemicals (AICIS)	Yes
Canada	Domestic Substances List (DSL)	Yes
Canada	Non-Domestic Substances List (NDSL)	No
China	Inventory of Existing Chemical Substances in China (IECSC)	Yes
Europe	European Inventory of Existing Commercial Chemical Substances (EINECS)	No
Europe	European List of Notified Chemical Substances (ELINCS)	No
Japan	Inventory of Existing and New Chemical Substances (ENCS)	Yes

Country(s) or region	Inventory name	On inventory (yes/no)*
Korea	Existing Chemicals List (ECL)	Yes
New Zealand	New Zealand Inventory	Yes
Philippines	Philippine Inventory of Chemicals and Chemical Substances (PICCS)	Yes
Taiwan	Taiwan Chemical Substance Inventory (TCSI)	Yes
United States & Puerto Rico	Toxic Substances Control Act (TSCA) Inventory	Yes

*A "Yes" indicates that all components of this product comply with the inventory requirements administered by the governing country(s)

A "No" indicates that one or more components of the product are not listed or exempt from listing on the inventory administered by the governing country(s).

16. Other information

Issue date	31-March-2021
Revision date	-
Version No.	01
Disclaimer	ABB Installation Products Inc. cannot anticipate all conditions under which this information and its product, or the products of other manufacturers in combination with its product, may be used. It is the user's responsibility to ensure safe conditions for handling, storage and disposal of the product, and to assume liability for loss, injury, damage or expense due to improper use. The information in the sheet was written based on the best knowledge and experience currently available.



SAFETY DATA SHEET

1. Identification

Product identifier	SC4-KIT-1 Part B
Other means of identification	
SDS number	SDS-00066-CA
Product code	SC4-KIT-1
Recommended use	Epoxy hardener.
Recommended restrictions	None known.
Manufacturer/Importer/Supplier/Distributor information	
Company name	ABB Installation Products Inc.
Address	860 Ridge Lake Blvd. Memphis, TN 38120 USA
Telephone	901-252-5000 ext. 8324
Emergency telephone	CHEMTREC - 24 HOURS: +1-800-424-9300 (Toll-free) +1 703-741-5970

2. Hazard identification

Physical hazards	Not classified.	
Health hazards	Acute toxicity, oral	Category 4
	Acute toxicity, inhalation	Category 4
	Skin corrosion/irritation	Category 1B
	Serious eye damage/eye irritation	Category 1
	Sensitization, respiratory	Category 1
	Sensitization, skin	Category 1
	Carcinogenicity	Category 2
	Specific target organ toxicity following single exposure	Category 3 respiratory tract irritation
	Specific target organ toxicity following repeated exposure (inhalation)	Category 2 (respiratory tract)

Label elements



Signal word	Danger
Hazard statement	Harmful if swallowed. Harmful if inhaled. Causes severe skin burns and eye damage. May cause allergy or asthma symptoms or breathing difficulties if inhaled. May cause an allergic skin reaction. Suspected of causing cancer. May cause respiratory irritation. May cause damage to organs (respiratory tract) through prolonged or repeated exposure by inhalation.
Precautionary statement	
Prevention	Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Do not breathe mist/vapours. Wash thoroughly after handling. Do not eat, drink or smoke when using this product. Use only outdoors or in a well-ventilated area. Contaminated work clothing should not be allowed out of the workplace. Wear protective gloves/protective clothing/eye protection/face protection. Wear respiratory protection.

Response	IF exposed or concerned: Get medical advice/attention. IF SWALLOWED: Rinse mouth. Do NOT induce vomiting. IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water. If skin irritation or rash occurs: Get medical advice/attention. Take off contaminated clothing and wash it before reuse. IF INHALED: Remove person to fresh air and keep comfortable for breathing. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTRE/doctor.
Storage	Store in a well-ventilated place. Keep container tightly closed. Store locked up.
Disposal	Dispose of contents/container in accordance with local/regional/national/international regulations.
Other hazards	None known.
Supplemental information	None.

3. Composition/information on ingredients

Mixtures

Chemical name	Common name and synonyms	CAS number	%
Phenol, 4,4'-(1-methylethylidene)bis-, polymer with (chloromethyl)oxirane, reaction products with ethylenediamine		72480-18-3	30 - 60
Furfuryl alcohol		98-00-0	10 - 30
m-Xylylenediamine		1477-55-0	10 - 30
2-Furaldehyde		98-01-1	0.1 - 1
Carbon black		1333-86-4	0.1 - 1
Ethylenediamine		107-15-3	0.1 - 1

Composition comments The exact concentrations of the above listed chemicals are being withheld as a trade secret. All concentrations are in percent by weight unless otherwise indicated.

4. First-aid measures

Inhalation	Remove victim to fresh air and keep at rest in a position comfortable for breathing. Oxygen or artificial respiration if needed. Do not use mouth-to-mouth method if victim inhaled the substance. Induce artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device. If experiencing respiratory symptoms: Call a poison center or doctor/physician.
Skin contact	Remove contaminated clothing immediately and wash skin with soap and water. Call a physician or poison control centre immediately. Chemical burns must be treated by a physician.
Eye contact	Immediately flush eyes with plenty of water for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Call a physician or poison control centre immediately.
Ingestion	Call a physician or poison control centre immediately. Rinse mouth. Do not induce vomiting. If vomiting occurs, keep head low so that stomach content doesn't get into the lungs.
Most important symptoms/effects, acute and delayed	Dizziness. Nausea, vomiting. Diarrhoea. Burning pain and severe corrosive skin damage. Causes serious eye damage. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. Permanent eye damage including blindness could result. Causes digestive tract burns. May cause respiratory irritation. Difficulty in breathing. Oedema. May cause an allergic skin reaction. Dermatitis. Rash. Prolonged exposure may cause chronic effects.
Indication of immediate medical attention and special treatment needed	Provide general supportive measures and treat symptomatically. Chemical burns: Flush with water immediately. While flushing, remove clothes which do not adhere to affected area. Call an ambulance. Continue flushing during transport to hospital. Keep victim warm. Keep victim under observation. Symptoms may be delayed.
General information	IF exposed or concerned: Get medical advice/attention. If you feel unwell, seek medical advice (show the label where possible). Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves. Show this safety data sheet to the doctor in attendance. Wash contaminated clothing before reuse.

5. Fire-fighting measures

Suitable extinguishing media	Water fog. Foam. Dry chemical powder. Carbon dioxide (CO ₂).
Unsuitable extinguishing media	Do not use water jet as an extinguisher, as this will spread the fire. Use of water may result in the formation of very toxic aqueous solution.
Specific hazards arising from the chemical	During fire, hazardous combustion products are released that may include: Carbon oxides. Nitrogen Oxides. Aldehydes. Ammonia. Nitric acid. Chlorine compounds. Irritating vapors. Toxic fumes. Containers can burst violently when heated, due to excess pressure build-up.

Special protective equipment and precautions for firefighters	Self-contained breathing apparatus and full protective clothing must be worn in case of fire.
Fire fighting equipment/instructions	In case of fire and/or explosion do not breathe fumes. Move containers from fire area if you can do so without risk. Cool containers exposed to flames with water until well after the fire is out. Prevent runoff from fire control or dilution from entering streams, sewers or drinking water supply.
Specific methods	Use standard firefighting procedures and consider the hazards of other involved materials.
General fire hazards	Will burn if involved in a fire.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures Keep unnecessary personnel away. Keep people away from and upwind of spill/leak. Wear appropriate protective equipment and clothing during clean-up. Do not breathe mist/vapours. Do not get in eyes, on skin, on clothing. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Ensure adequate ventilation. Local authorities should be advised if significant spillages cannot be contained. For personal protection, see section 8 of the SDS.

Methods and materials for containment and cleaning up Prevent product from entering drains.

Large Spills: Stop the flow of material, if this is without risk. Dike the spilled material, where this is possible. Absorb in vermiculite, dry sand or earth and place into containers. Following product recovery, flush area with water. Retain and dispose of contaminated wash water.

Small Spills: Wipe up with absorbent material (e.g. cloth, fleece). Clean surface thoroughly to remove residual contamination.

Never return spills to original containers for re-use. Put material in suitable, covered, labeled containers. For waste disposal, see section 13 of the SDS.

Environmental precautions Avoid release to the environment. Inform appropriate managerial or supervisory personnel of all environmental releases. Prevent further leakage or spillage if safe to do so. Avoid discharge into drains, water courses or onto the ground.

7. Handling and storage

Precautions for safe handling Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Do not breathe mist/vapours. Do not get in eyes, on skin, or on clothing. Do not taste or swallow. Avoid prolonged exposure. When using, do not eat, drink or smoke. Should be handled in closed systems, if possible. Persons susceptible for allergic reactions should not handle this product. Use only outdoors or in a well-ventilated area. Wear appropriate personal protective equipment. Wash hands thoroughly after handling. Avoid release to the environment. Observe good industrial hygiene practices.

Conditions for safe storage, including any incompatibilities Store locked up. Store in tightly closed container. Keep only in the original container in a cool, well-ventilated place. Keep away from heat, sparks and open flame. Store away from incompatible materials (see section 10 of the SDS).

8. Exposure controls/personal protection

Occupational exposure limits

US. ACGIH Threshold Limit Values Components

Components	Type	Value	Form
2-Furaldehyde (CAS 98-01-1)	TWA	0.2 ppm	
Carbon black (CAS 1333-86-4)	TWA	3 mg/m ³	Inhalable fraction.
Ethylenediamine (CAS 107-15-3)	TWA	10 ppm	
Furfuryl alcohol (CAS 98-00-0)	TWA	0.2 ppm	
m-Xylylenediamine (CAS 1477-55-0)	Ceiling	0.018 ppm	

Canada. Alberta OELs (Occupational Health & Safety Code, Schedule 1, Table 2)

Components	Type	Value
2-Furaldehyde (CAS 98-01-1)	TWA	7.9 mg/m ³
		2 ppm

Canada. Alberta OELs (Occupational Health & Safety Code, Schedule 1, Table 2)

Components	Type	Value
Carbon black (CAS 1333-86-4)	TWA	3.5 mg/m3
Ethylenediamine (CAS 107-15-3)	TWA	25 mg/m3 10 ppm
Furfuryl alcohol (CAS 98-00-0)	STEL	60 mg/m3 15 ppm
	TWA	40 mg/m3 10 ppm
m-Xylylenediamine (CAS 1477-55-0)	Ceiling	0.1 mg/m3

Canada. British Columbia OELs. (Occupational Exposure Limits for Chemical Substances, Occupational Health and Safety Regulation 296/97, as amended)

Components	Type	Value	Form
2-Furaldehyde (CAS 98-01-1)	TWA	0.2 ppm	
Carbon black (CAS 1333-86-4)	TWA	3 mg/m3	Inhalable
Ethylenediamine (CAS 107-15-3)	TWA	10 ppm	
Furfuryl alcohol (CAS 98-00-0)	STEL	10 ppm	
	TWA	5 ppm	
m-Xylylenediamine (CAS 1477-55-0)	Ceiling	0.1 mg/m3	

Canada. Manitoba OELs (Reg. 217/2006, The Workplace Safety And Health Act)

Components	Type	Value	Form
2-Furaldehyde (CAS 98-01-1)	TWA	0.2 ppm	
Carbon black (CAS 1333-86-4)	TWA	3 mg/m3	Inhalable fraction.
Ethylenediamine (CAS 107-15-3)	TWA	10 ppm	
Furfuryl alcohol (CAS 98-00-0)	TWA	0.2 ppm	
m-Xylylenediamine (CAS 1477-55-0)	Ceiling	0.018 ppm	

Canada. Ontario OELs. (Control of Exposure to Biological or Chemical Agents)

Components	Type	Value	Form
2-Furaldehyde (CAS 98-01-1)	TWA	0.2 ppm	
Carbon black (CAS 1333-86-4)	TWA	3 mg/m3	Inhalable fraction.
Ethylenediamine (CAS 107-15-3)	TWA	10 ppm	
Furfuryl alcohol (CAS 98-00-0)	TWA	0.2 ppm	
m-Xylylenediamine (CAS 1477-55-0)	Ceiling	0.1 mg/m3	

Canada. Quebec OELs. (Ministry of Labor - Regulation respecting occupational health and safety)

Components	Type	Value
2-Furaldehyde (CAS 98-01-1)	TWA	7.9 mg/m3

Canada. Quebec OELs. (Ministry of Labor - Regulation respecting occupational health and safety)

Components	Type	Value
		2 ppm
Carbon black (CAS 1333-86-4)	TWA	3.5 mg/m3
Ethylenediamine (CAS 107-15-3)	TWA	25 mg/m3
		10 ppm
Furfuryl alcohol (CAS 98-00-0)	STEL	60 mg/m3
		15 ppm
	TWA	40 mg/m3
		10 ppm
m-Xylylenediamine (CAS 1477-55-0)	Ceiling	0.1 mg/m3

Canada. Saskatchewan OELs (Occupational Health and Safety Regulations, 1996, Table 21)

Components	Type	Value
2-Furaldehyde (CAS 98-01-1)	15 minute	4 ppm
	8 hour	2 ppm
Carbon black (CAS 1333-86-4)	15 minute	7 mg/m3
	8 hour	3.5 mg/m3
Ethylenediamine (CAS 107-15-3)	15 minute	15 ppm
	8 hour	10 ppm
Furfuryl alcohol (CAS 98-00-0)	15 minute	15 ppm
	8 hour	10 ppm
m-Xylylenediamine (CAS 1477-55-0)	Ceiling	0.1 mg/m3

Biological limit values

ACGIH Biological Exposure Indices

Components	Value	Determinant	Specimen	Sampling Time
2-Furaldehyde (CAS 98-01-1)	200 mg/l	Furoic acid, with hydrolysis	Urine	*

* - For sampling details, please see the source document.

Exposure guidelines

Canada - Alberta OELs: Skin designation

2-Furaldehyde (CAS 98-01-1)	Can be absorbed through the skin.
Ethylenediamine (CAS 107-15-3)	Can be absorbed through the skin.
Furfuryl alcohol (CAS 98-00-0)	Can be absorbed through the skin.
m-Xylylenediamine (CAS 1477-55-0)	Can be absorbed through the skin.

Canada - British Columbia OELs: Skin designation

2-Furaldehyde (CAS 98-01-1)	Can be absorbed through the skin.
Ethylenediamine (CAS 107-15-3)	Can be absorbed through the skin.
Furfuryl alcohol (CAS 98-00-0)	Can be absorbed through the skin.
m-Xylylenediamine (CAS 1477-55-0)	Can be absorbed through the skin.

Canada - Manitoba OELs: Skin designation

2-Furaldehyde (CAS 98-01-1)	Danger of cutaneous absorption
Ethylenediamine (CAS 107-15-3)	Danger of cutaneous absorption
Furfuryl alcohol (CAS 98-00-0)	Danger of cutaneous absorption
m-Xylylenediamine (CAS 1477-55-0)	Danger of cutaneous absorption

Canada - Ontario OELs: Skin designation

2-Furaldehyde (CAS 98-01-1)	Can be absorbed through the skin.
Ethylenediamine (CAS 107-15-3)	Can be absorbed through the skin.

Furfuryl alcohol (CAS 98-00-0)
m-Xylylenediamine (CAS 1477-55-0)

Can be absorbed through the skin.
Can be absorbed through the skin.

Canada - Quebec OELs: Skin designation

2-Furaldehyde (CAS 98-01-1)
Ethylenediamine (CAS 107-15-3)
Furfuryl alcohol (CAS 98-00-0)
m-Xylylenediamine (CAS 1477-55-0)

Can be absorbed through the skin.
Can be absorbed through the skin.
Can be absorbed through the skin.
Can be absorbed through the skin.

Canada - Saskatchewan OELs: Skin designation

2-Furaldehyde (CAS 98-01-1)
Ethylenediamine (CAS 107-15-3)
Furfuryl alcohol (CAS 98-00-0)
m-Xylylenediamine (CAS 1477-55-0)

Can be absorbed through the skin.
Can be absorbed through the skin.
Can be absorbed through the skin.
Can be absorbed through the skin.

US ACGIH Threshold Limit Values: Skin designation

2-Furaldehyde (CAS 98-01-1)
Ethylenediamine (CAS 107-15-3)
Furfuryl alcohol (CAS 98-00-0)
m-Xylylenediamine (CAS 1477-55-0)

Danger of cutaneous absorption
Danger of cutaneous absorption
Danger of cutaneous absorption
Danger of cutaneous absorption

Appropriate engineering controls

Good general ventilation should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. General ventilation normally adequate. Eye wash facilities and emergency shower must be available when handling this product.

Individual protection measures, such as personal protective equipment

Eye/face protection

Use approved safety goggles or face shield.

Skin protection

Hand protection

Wear appropriate chemical resistant gloves. Suitable gloves can be recommended by the glove supplier.

Other

Wear appropriate chemical resistant clothing. Use of an impervious apron is recommended.

Respiratory protection

If engineering controls do not maintain airborne concentrations below recommended exposure limits (where applicable) or to an acceptable level (in countries where exposure limits have not been established), an approved respirator must be worn. Chemical respirator with organic vapour cartridge and full facepiece. Selection and use of respiratory protective equipment should be in accordance with CSA Standard Z94.4. Check with respiratory protective equipment suppliers.

Thermal hazards

Wear appropriate thermal protective clothing, when necessary.

General hygiene considerations

Observe any medical surveillance requirements. Keep away from food and drink. Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants. Contaminated work clothing should not be allowed out of the workplace.

9. Physical and chemical properties

Appearance

Physical state

Liquid.

Form

Liquid.

Colour

Black.

Odour

Mild.

Odour threshold

Not available.

pH

Not available.

Melting point/freezing point

Not available.

Initial boiling point and boiling range

Not available.

Flash point

96.1 °C (205.0 °F) Setflash Closed Cup

Evaporation rate

Not available.

Flammability (solid, gas)

Not applicable.

Upper/lower flammability or explosive limits

Flammability limit - lower (%)

Not available.

Flammability limit - upper (%)	Not available.
Vapour pressure	Not available.
Vapour density	Not available.
Relative density	1.14 (Water=1)
Solubility(ies)	
Solubility (water)	Not available.
Partition coefficient (n-octanol/water)	Not available.
Auto-ignition temperature	Not available.
Decomposition temperature	Not available.
Viscosity	Not available.
Other information	
Explosive properties	Not explosive.
Oxidising properties	Not oxidising.
VOC	0 % California SCAQMD Method 316B

10. Stability and reactivity

Reactivity	The product is stable and non-reactive under normal conditions of use, storage and transport.
Chemical stability	Material is stable under normal conditions.
Possibility of hazardous reactions	No dangerous reaction known under conditions of normal use.
Conditions to avoid	Keep away from heat, sparks and open flame. Avoid temperatures exceeding the flash point. Contact with incompatible materials.
Incompatible materials	Strong oxidising agents. Acids. Bases. Peroxides. Sodium hypochlorite. This product slowly corrodes copper, aluminum, zinc and galvanized surfaces.
Hazardous decomposition products	Thermal decomposition or combustion may produce: Carbon oxides. Nitrogen oxides. Aldehydes. Ammonia. Nitric acid Chlorine compounds. Toxic fumes. Irritating vapors.

11. Toxicological information

Information on likely routes of exposure

Inhalation	Harmful if inhaled. May cause allergy or asthma symptoms or breathing difficulties if inhaled. May cause respiratory irritation. May cause damage to organs through prolonged or repeated exposure by inhalation.
Skin contact	Causes severe skin burns. May cause an allergic skin reaction. May be absorbed through the skin.
Eye contact	Causes serious eye damage.
Ingestion	Causes digestive tract burns. Harmful if swallowed.

Symptoms related to the physical, chemical and toxicological characteristics Dizziness. Nausea, vomiting. Diarrhoea. Burning pain and severe corrosive skin damage. Causes serious eye damage. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. Permanent eye damage including blindness could result. Causes digestive tract burns. May cause respiratory irritation. Difficulty in breathing. Oedema. May cause an allergic skin reaction. Dermatitis. Rash. Prolonged exposure may cause chronic effects.

Information on toxicological effects

Acute toxicity Harmful if inhaled. Harmful if swallowed.

Components	Species	Test Results
2-Furaldehyde (CAS 98-01-1)		
Acute		
Inhalation		
<i>Vapour</i>		
LD50	Rat	0.6 - 0.924 mg/l, 4 hours
Oral		
LD50	Rat	127 mg/kg

Components	Species	Test Results
Carbon black (CAS 1333-86-4)		
Acute		
Dermal		
LD50	Rabbit	> 3000 mg/kg
Oral		
LD50	Rat	> 8000 mg/kg
Furfuryl alcohol (CAS 98-00-0)		
Acute		
Dermal		
LD50	Rabbit	400 mg/kg
Inhalation		
LC50	Rat	233 ppm, 4 Hours
Oral		
LD50	Rat	275 mg/kg
m-Xylylenediamine (CAS 1477-55-0)		
Acute		
Dermal		
LD50	Rabbit	2000 mg/kg
Inhalation		
<i>Aerosol</i>		
LC50	Rat	3.75 mg/l, 1 Hours
Oral		
LD50	Rat	930 mg/kg
Skin corrosion/irritation	Causes severe skin burns.	
Serious eye damage/eye irritation	Causes serious eye damage.	
Respiratory or skin sensitisation		
Canada - Alberta OELs: Irritant		
2-Furaldehyde (CAS 98-01-1)		Irritant
Furfuryl alcohol (CAS 98-00-0)		Irritant
m-Xylylenediamine (CAS 1477-55-0)		Irritant
Canada - Quebec OELs: Sensitizer		
Ethylenediamine (CAS 107-15-3)		Sensitiser.
Respiratory sensitisation	May cause allergy or asthma symptoms or breathing difficulties if inhaled.	
Skin sensitisation	May cause an allergic skin reaction.	
Germ cell mutagenicity	No data available to indicate product or any components present at greater than 0.1% are mutagenic or genotoxic.	
Carcinogenicity	Suspected of causing cancer.	
ACGIH Carcinogens		
2-Furaldehyde (CAS 98-01-1)		A3 Confirmed animal carcinogen with unknown relevance to humans.
Carbon black (CAS 1333-86-4)		A3 Confirmed animal carcinogen with unknown relevance to humans.
Ethylenediamine (CAS 107-15-3)		A4 Not classifiable as a human carcinogen.
Furfuryl alcohol (CAS 98-00-0)		A3 Confirmed animal carcinogen with unknown relevance to humans.
Canada - Manitoba OELs: carcinogenicity		
2-Furaldehyde (CAS 98-01-1)		Confirmed animal carcinogen with unknown relevance to humans.
Carbon black (CAS 1333-86-4)		Confirmed animal carcinogen with unknown relevance to humans.
Ethylenediamine (CAS 107-15-3)		Not classifiable as a human carcinogen.
Furfuryl alcohol (CAS 98-00-0)		Confirmed animal carcinogen with unknown relevance to humans.
IARC Monographs. Overall Evaluation of Carcinogenicity		
2-Furaldehyde (CAS 98-01-1)		3 Not classifiable as to carcinogenicity to humans.
Carbon black (CAS 1333-86-4)		2B Possibly carcinogenic to humans.

Furfuryl alcohol (CAS 98-00-0)

2B Possibly carcinogenic to humans.

US. National Toxicology Program (NTP) Report on Carcinogens

Carbon black (CAS 1333-86-4)

Known To Be Human Carcinogen.

Reproductive toxicity	This product is not expected to cause reproductive or developmental effects.
Specific target organ toxicity - single exposure	May cause respiratory irritation.
Specific target organ toxicity - repeated exposure	May cause damage to organs (respiratory tract) through prolonged or repeated exposure by inhalation.
Aspiration hazard	Not an aspiration hazard.
Chronic effects	Prolonged inhalation may be harmful. May cause damage to organs through prolonged or repeated exposure. Prolonged exposure may cause chronic effects.

12. Ecological information

Ecotoxicity Very toxic to aquatic life with long lasting effects.

Components	Species	Test Results
Carbon black (CAS 1333-86-4)		
Aquatic		
<i>Acute</i>		
Fish	LC50 Leuciscus idus	> 1000 mg/l, 96 Hours
Furfuryl alcohol (CAS 98-00-0)		
Aquatic		
Fish	LC50 Fathead minnow (<i>Pimephales promelas</i>)	32 mg/l, 96 h

Persistence and degradability No data is available on the degradability of this product.

Bioaccumulative potential**Partition coefficient n-octanol / water (log Kow)**

2-Furaldehyde (CAS 98-01-1)	0.41
Ethylenediamine (CAS 107-15-3)	-2.04
Furfuryl alcohol (CAS 98-00-0)	0.28

Mobility in soil No data available for this product.

Other adverse effects No data available for this product.

13. Disposal considerations

Disposal instructions	Collect and reclaim or dispose in sealed containers at licensed waste disposal site. Do not allow this material to drain into sewers/water supplies. Do not contaminate ponds, waterways or ditches with chemical or used container. Dispose of contents/container in accordance with local/regional/national/international regulations.
Local disposal regulations	Dispose in accordance with all applicable regulations.
Hazardous waste code	The waste code should be assigned in discussion between the user, the producer and the waste disposal company.
Waste from residues / unused products	Dispose of in accordance with local regulations. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe manner (see: Disposal instructions).
Contaminated packaging	Since emptied containers may retain product residue, follow label warnings even after container is emptied. Empty containers should be taken to an approved waste handling site for recycling or disposal.

14. Transport information**TDG**

UN number	UN2922
UN proper shipping name	CORROSIVE LIQUID, TOXIC, N.O.S. (m-Xylylenediamine; Furfuryl alcohol)
Transport hazard class(es)	
Class	8
Subsidiary risk	6.1
Packing group	II
Environmental hazards	Yes
Special precautions for user	Read safety instructions, SDS and emergency procedures before handling.

IATA

UN number	UN2922
UN proper shipping name	Corrosive liquid, toxic, n.o.s. (m-Xylylenediamine; Furfuryl alcohol)
Transport hazard class(es)	
Class	8
Subsidiary risk	6.1
Label(s)	8, 6.1
Packing group	II
Environmental hazards	Yes
ERG Code	8P
Special precautions for user	Read safety instructions, SDS and emergency procedures before handling.

IMDG

UN number	UN2922
UN proper shipping name	CORROSIVE LIQUID, TOXIC, N.O.S. (m-Xylylenediamine; Furfuryl alcohol)
Transport hazard class(es)	
Class	8
Subsidiary risk	6.1
Packing group	II
Environmental hazards	
Marine pollutant	Yes
EmS	F-A, S-B
Special precautions for user	Read safety instructions, SDS and emergency procedures before handling.

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code Not established.

15. Regulatory information

Canadian regulations This product has been classified in accordance with the hazard criteria of the HPR and the SDS contains all the information required by the HPR.

Controlled Drugs and Substances Act

Not regulated.

Export Control List (CEPA 1999, Schedule 3)

Not listed.

Greenhouse Gases

Not listed.

Precursor Control Regulations

Not regulated.

International regulations

Stockholm Convention

Not applicable.

Rotterdam Convention

Not applicable.

Kyoto Protocol

Not applicable.

Montreal Protocol

Not applicable.

Basel Convention

Not applicable.

International Inventories

Country(s) or region	Inventory name	On inventory (yes/no)*
Australia	Australian Inventory of Industrial Chemicals (AICIS)	Yes
Canada	Domestic Substances List (DSL)	No
Canada	Non-Domestic Substances List (NDSL)	Yes
China	Inventory of Existing Chemical Substances in China (IECSC)	Yes
Europe	European Inventory of Existing Commercial Chemical Substances (EINECS)	No

Country(s) or region	Inventory name	On inventory (yes/no)*
Europe	European List of Notified Chemical Substances (ELINCS)	No
Japan	Inventory of Existing and New Chemical Substances (ENCS)	No
Korea	Existing Chemicals List (ECL)	Yes
New Zealand	New Zealand Inventory	Yes
Philippines	Philippine Inventory of Chemicals and Chemical Substances (PICCS)	No
Taiwan	Taiwan Chemical Substance Inventory (TCSI)	Yes
United States & Puerto Rico	Toxic Substances Control Act (TSCA) Inventory	Yes

*A "Yes" indicates that all components of this product comply with the inventory requirements administered by the governing country(s)

A "No" indicates that one or more components of the product are not listed or exempt from listing on the inventory administered by the governing country(s).

16. Other information

Issue date	31-March-2021
Revision date	-
Version No.	01
Disclaimer	ABB Installation Products Inc. cannot anticipate all conditions under which this information and its product, or the products of other manufacturers in combination with its product, may be used. It is the user's responsibility to ensure safe conditions for handling, storage and disposal of the product, and to assume liability for loss, injury, damage or expense due to improper use. The information in the sheet was written based on the best knowledge and experience currently available.

SAFETY DATA SHEET

1. Identification

Product identifier	SC65 Putty Sealing Compound
Other means of identification	
SDS number	SDS-00034-CA
Product number	SC65
Recommended use	Sealing Cables
Recommended restrictions	Workers (and your customers or users in the case of resale) should be informed of the potential presence of respirable dust and respirable crystalline silica as well as their potential hazards. Appropriate training in the proper use and handling of this material should be provided as required under applicable regulations.

Manufacturer/Importer/Supplier/Distributor information

Company name	ABB Installation Products Inc.
Address	860 Ridge Lake Blvd. Memphis, TN 38120 United States
Telephone	901-252-5000 ext.8324
E-mail	Not available.

Emergency phone number CHEMTREC - 24 HOURS: +1 800-424-9300

2. Hazard identification

Physical hazards	Not classified.	
Health hazards	Skin corrosion/irritation	Category 2
	Serious eye damage/eye irritation	Category 2
	Sensitization, skin	Category 1
	Carcinogenicity	Category 1A
	Specific target organ toxicity following repeated exposure	Category 1 (lungs)
Environmental hazards	Hazardous to the aquatic environment, acute hazard	Category 2
	Hazardous to the aquatic environment, long-term hazard	Category 2

Label elements



Signal word	Danger
Hazard statement	Causes skin irritation. Causes serious eye irritation. May cause an allergic skin reaction. May cause cancer. Causes damage to organs (lungs) through prolonged or repeated exposure. Toxic to aquatic life with long lasting effects.
Precautionary statement	
Prevention	Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Do not breathe fumes and dusts. Wash thoroughly after handling. Do not eat, drink or smoke when using this product. Contaminated work clothing should not be allowed out of the workplace. Avoid release to the environment. Wear protective gloves/protective clothing/eye protection/face protection.

Response	IF ON SKIN: Wash with plenty of water. If skin irritation or rash occurs: Get medical advice/attention. Take off contaminated clothing and wash it before reuse. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention. IF exposed or concerned: Get medical advice/attention. Collect spillage.
Storage	Store locked up.
Disposal	Dispose of contents/container in accordance with local/regional/national/international regulations.
Other hazards	None known.
Supplemental information	None.

3. Composition/information on ingredients

Mixtures

Chemical name	Common name and synonyms	CAS number	%
Talc		14807-96-6	30 - 60
Epoxy resin		25068-38-6	10 - 30
Crystalline silica		14808-60-7	0.1 - 1

Composition comments All concentrations are in percent by weight unless ingredient is a gas. Gas concentrations are in percent by volume.
The exact concentrations of the above listed chemicals are being withheld as a trade secret.

4. First-aid measures

Inhalation	Move to fresh air. Call a poison centre or doctor/physician if you feel unwell.
Skin contact	Remove contaminated clothing immediately and wash skin with soap and water. In case of eczema or other skin disorders: Seek medical attention and take along these instructions. Wash contaminated clothing before reuse.
Eye contact	Immediately flush eyes with plenty of water for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Get medical attention if irritation develops and persists.
Ingestion	Rinse mouth. Get medical attention if symptoms occur.
Most important symptoms/effects, acute and delayed	Severe eye irritation. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. Skin irritation. May cause redness and pain. May cause an allergic skin reaction. Dermatitis. Rash. Prolonged exposure may cause chronic effects.
Indication of immediate medical attention and special treatment needed	Provide general supportive measures and treat symptomatically. Keep victim under observation. Symptoms may be delayed.
General information	IF exposed or concerned: Get medical advice/attention. If you feel unwell, seek medical advice (show the label where possible). Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves. Wash contaminated clothing before reuse.

5. Fire-fighting measures

Suitable extinguishing media	Water fog. Foam. Dry chemical powder. Carbon dioxide (CO2).
Unsuitable extinguishing media	Do not use water jet as an extinguisher, as this will spread the fire.
Specific hazards arising from the chemical	During fire, gases hazardous to health may be formed.
Special protective equipment and precautions for firefighters	Self-contained breathing apparatus and full protective clothing must be worn in case of fire.
Fire fighting equipment/instructions	Move containers from fire area if you can do so without risk. Cool containers exposed to flames with water until well after the fire is out.
Specific methods	Use standard firefighting procedures and consider the hazards of other involved materials.
General fire hazards	Will burn if involved in a fire.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures	Keep unnecessary personnel away. Keep people away from and upwind of spill/leak. Wear appropriate protective equipment and clothing during clean-up. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Ensure adequate ventilation. Local authorities should be advised if significant spillages cannot be contained. For personal protection, see section 8 of the SDS.
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Methods and materials for containment and cleaning up

In case of spills, beware of slippery floors and surfaces.

Large Spills: Stop the flow of material, if this is without risk. Dike the spilled material, where this is possible. Absorb in vermiculite, dry sand or earth and place into containers. Following product recovery, flush area with water.

Small Spills: Wipe up with absorbent material (e.g. cloth, fleece). Clean surface thoroughly to remove residual contamination.

Never return spills to original containers for re-use. Put material in suitable, covered, labeled containers. For waste disposal, see section 13 of the SDS.

Environmental precautions

Avoid release to the environment. Inform appropriate managerial or supervisory personnel of all environmental releases. Prevent further leakage or spillage if safe to do so.

7. Handling and storage**Precautions for safe handling**

Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Persons with epoxy allergy should not work with this product. Provide appropriate exhaust ventilation at places where dust is formed. Do not breathe dust or mist. Grinding and sanding will release respirable crystalline silica. Avoid contact with eyes, skin, and clothing. When using, do not eat, drink or smoke. Keep the workplace clean. Be aware of potential for surfaces to become slippery. Wear appropriate personal protective equipment. Wash hands thoroughly after handling. Work practice should minimise contact. Avoid release to the environment. Observe good industrial hygiene practices.

Conditions for safe storage, including any incompatibilities

Store locked up. Store in tightly closed container. Store away from incompatible materials (see section 10 of the SDS).

8. Exposure controls/personal protection**Occupational exposure limits****US. ACGIH Threshold Limit Values**

Components	Type	Value	Form
Crystalline silica (CAS 14808-60-7)	TWA	0.025 mg/m ³	Respirable fraction.
Talc (CAS 14807-96-6)	TWA	2 mg/m ³	Respirable fraction.

Canada. Alberta OELs (Occupational Health & Safety Code, Schedule 1, Table 2)

Components	Type	Value	Form
Crystalline silica (CAS 14808-60-7)	TWA	0.025 mg/m ³	Respirable particles.
Talc (CAS 14807-96-6)	TWA	2 mg/m ³	Respirable particles.

Canada. British Columbia OELs. (Occupational Exposure Limits for Chemical Substances, Occupational Health and Safety Regulation 296/97, as amended)

Components	Type	Value	Form
Crystalline silica (CAS 14808-60-7)	TWA	0.025 mg/m ³	Respirable fraction.
Talc (CAS 14807-96-6)	TWA	2 mg/m ³	Respirable.

Canada. Manitoba OELs (Reg. 217/2006, The Workplace Safety And Health Act)

Components	Type	Value	Form
Crystalline silica (CAS 14808-60-7)	TWA	0.025 mg/m ³	Respirable fraction.
Talc (CAS 14807-96-6)	TWA	2 mg/m ³	Respirable fraction.

Canada. Ontario OELs. (Control of Exposure to Biological or Chemical Agents)

Components	Type	Value	Form
Crystalline silica (CAS 14808-60-7)	TWA	0.1 mg/m ³	Respirable fraction.
Talc (CAS 14807-96-6)	TWA	2 fibers/cc 2 mg/m ³	Respirable fraction.

Canada. Quebec OELs. (Ministry of Labor - Regulation respecting occupational health and safety)

Components	Type	Value	Form
Crystalline silica (CAS 14808-60-7)	TWA	0.1 mg/m3	Respirable dust.
Talc (CAS 14807-96-6)	TWA	3 mg/m3	Respirable dust.

Canada. Saskatchewan OELs (Occupational Health and Safety Regulations, 1996, Table 21)

Components	Type	Value	Form
Crystalline silica (CAS 14808-60-7)	8 hour	0.05 mg/m3	Respirable fraction.
Talc (CAS 14807-96-6)	8 hour	2 mg/m3	Respirable fraction.

Biological limit values	No biological exposure limits noted for the ingredient(s).
Exposure guidelines	Occupational exposure to nuisance dust (total and respirable) and respirable crystalline silica should be monitored and controlled. Occupational Exposure Limits are not relevant to the current physical form of the product.
Appropriate engineering controls	Good general ventilation should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level. Provide eyewash station and safety shower.
Individual protection measures, such as personal protective equipment	
Eye/face protection	Wear safety glasses with side shields (or goggles).
Skin protection	
Hand protection	Wear appropriate chemical resistant gloves. Suitable gloves can be recommended by the glove supplier.
Other	Wear appropriate chemical resistant clothing. Use of an impervious apron is recommended.
Respiratory protection	If engineering controls do not maintain airborne concentrations below recommended exposure limits (where applicable) or to an acceptable level (in countries where exposure limits have not been established), an approved respirator must be worn.
Thermal hazards	Wear appropriate thermal protective clothing, when necessary.
General hygiene considerations	Observe any medical surveillance requirements. Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants. Contaminated work clothing should not be allowed out of the workplace. Private clothes and working clothes should be kept separately.

9. Physical and chemical properties**Appearance**

Physical state	Solid.
Form	Paste.
Colour	Blue. Grey.
Odour	Mild.
Odour threshold	Not available.
pH	Not available.
Melting point/freezing point	Not available.
Initial boiling point and boiling range	Not available.
Flash point	205 °C (401°F)
Evaporation rate	Not available.
Flammability (solid, gas)	Will burn if involved in a fire.
Upper/lower flammability or explosive limits	
Flammability limit - lower (%)	Not available.
Flammability limit - upper (%)	Not available.
Vapour pressure	Not available.

Vapour density	Not available.
Relative density	1.05
Solubility(ies)	
Solubility (water)	Not available.
Partition coefficient (n-octanol/water)	Not available.
Auto-ignition temperature	Not available.
Decomposition temperature	Not available.
Viscosity	Not available.
Other information	
Explosive properties	Not explosive.
Oxidising properties	Not oxidising.
Percent volatile	0.0 % (calculated)

10. Stability and reactivity

Reactivity	The product is stable and non-reactive under normal conditions of use, storage and transport.
Chemical stability	Material is stable under normal conditions.
Possibility of hazardous reactions	No dangerous reaction known under conditions of normal use.
Conditions to avoid	Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. Contact with incompatible materials. Protect against direct sunlight.
Incompatible materials	Oxidizing agents. Acids. Bases. Amines.
Hazardous decomposition products	Carbon oxides. Nitrogen oxides (NOx). Aldehydes. Acids. Phenol. Toxic fumes. Irritating vapors.

11. Toxicological information

Information on likely routes of exposure

Inhalation	Unlikely route of exposure as the product does not contain volatile substances. Grinding and sanding this product may generate dust.
Skin contact	Causes skin irritation. May cause an allergic skin reaction.
Eye contact	Causes serious eye irritation.
Ingestion	Expected to be a low ingestion hazard.

Symptoms related to the physical, chemical and toxicological characteristics	Severe eye irritation. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. Skin irritation. May cause redness and pain. May cause an allergic skin reaction. Dermatitis. Rash.
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Information on toxicological effects

Acute toxicity	Not expected to be acutely toxic.
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Components	Species	Test Results
Epoxy resin (CAS 25068-38-6)		
Acute		
Dermal		
LD50	Rat	> 2000 mg/kg
Oral		
LD50	Rat	15000 mg/kg
Talc (CAS 14807-96-6)		
Acute		
Oral		
LD50	Rat	> 5000 mg/kg

Skin corrosion/irritation	Causes skin irritation.
Serious eye damage/eye irritation	Causes serious eye irritation.
Respiratory or skin sensitisation	
Respiratory sensitisation	Not a respiratory sensitiser.

Skin sensitisation	May cause an allergic skin reaction.
Germ cell mutagenicity	No data available to indicate product or any components present at greater than 0.1% are mutagenic or genotoxic.
Carcinogenicity	Due to the form of the product, exposure to the potentially carcinogenic components is not expected. Grinding and sanding this product may generate dust. May cause cancer. In 1997, IARC (the International Agency for Research on Cancer) concluded that crystalline silica inhaled from occupational sources can cause lung cancer in humans. However in making the overall evaluation, IARC noted that "carcinogenicity was not detected in all industrial circumstances studied. Carcinogenicity may be dependent on inherent characteristics of the crystalline silica or on external factors affecting its biological activity or distribution of its polymorphs." (IARC Monographs on the evaluation of the carcinogenic risks of chemicals to humans, Silica, silicates dust and organic fibres, 1997, Vol. 68, IARC, Lyon, France.) In June 2003, SCOEL (the EU Scientific Committee on Occupational Exposure Limits) concluded that the main effect in humans of the inhalation of respirable crystalline silica dust is silicosis. "There is sufficient information to conclude that the relative risk of lung cancer is increased in persons with silicosis (and, apparently, not in employees without silicosis exposed to silica dust in quarries and in the ceramic industry). Therefore, preventing the onset of silicosis will also reduce the cancer risk..." (SCOEL SUM Doc 94-final, June 2003) According to the current state of the art, worker protection against silicosis can be consistently assured by respecting the existing regulatory occupational exposure limits. Occupational exposure to respirable dust and respirable crystalline silica should be monitored and controlled.

ACGIH Carcinogens

Crystalline silica (CAS 14808-60-7)	A2 Suspected human carcinogen.
Talc (CAS 14807-96-6)	A4 Not classifiable as a human carcinogen.

Canada - Alberta OELs: Carcinogen category

Crystalline silica (CAS 14808-60-7)	Suspected human carcinogen.
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Canada - Manitoba OELs: carcinogenicity

Crystalline silica (CAS 14808-60-7)	Suspected human carcinogen.
Talc (CAS 14807-96-6)	Not classifiable as a human carcinogen.

Canada - Quebec OELs: Carcinogen category

Crystalline silica (CAS 14808-60-7)	Suspected carcinogenic effect in humans.
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IARC Monographs. Overall Evaluation of Carcinogenicity

Crystalline silica (CAS 14808-60-7)	1 Carcinogenic to humans.
Talc (CAS 14807-96-6)	3 Not classifiable as to carcinogenicity to humans.

US. National Toxicology Program (NTP) Report on Carcinogens

Crystalline silica (CAS 14808-60-7)	Known To Be Human Carcinogen.
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Reproductive toxicity	This product is not expected to cause reproductive or developmental effects.
Specific target organ toxicity - single exposure	Not classified.
Specific target organ toxicity - repeated exposure	Grinding and sanding this product may generate dust. Causes damage to organs (lungs) through prolonged or repeated exposure.
Aspiration hazard	Not an aspiration hazard.
Chronic effects	Causes damage to organs through prolonged or repeated exposure. Prolonged exposure may cause chronic effects.

12. Ecological information

Ecotoxicity	Toxic to aquatic life with long lasting effects.
Persistence and degradability	The product contains inorganic compounds which are not biodegradable.
Bioaccumulative potential	No data available.
Mobility in soil	This substance has low mobility in the environment.
Other adverse effects	No other adverse environmental effects (e.g. ozone depletion, photochemical ozone creation potential, endocrine disruption, global warming potential) are expected from this component.

13. Disposal considerations

Disposal instructions	Collect and reclaim or dispose in sealed containers at licensed waste disposal site. Do not allow this material to drain into sewers/water supplies. Do not contaminate ponds, waterways or ditches with chemical or used container. Dispose of contents/container in accordance with local/regional/national/international regulations.
Local disposal regulations	Dispose in accordance with all applicable regulations.

Hazardous waste code	The waste code should be assigned in discussion between the user, the producer and the waste disposal company.
Waste from residues / unused products	Dispose of in accordance with local regulations. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe manner (see: Disposal instructions).
Contaminated packaging	Since emptied containers may retain product residue, follow label warnings even after container is emptied. Empty containers should be taken to an approved waste handling site for recycling or disposal.

14. Transport information

TDG

UN number	UN3077
UN proper shipping name	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (Epoxy resin)
Transport hazard class(es)	
Class	9
Subsidiary risk	-
Packing group	III
Environmental hazards	E3
Special precautions for user	Read safety instructions, SDS and emergency procedures before handling.

IATA

UN number	UN3077
UN proper shipping name	Environmentally hazardous substance, solid, n.o.s. (Epoxy resin)
Transport hazard class(es)	
Class	9
Subsidiary risk	-
Packing group	III
Environmental hazards	Yes
ERG Code	9L
Special precautions for user	Read safety instructions, SDS and emergency procedures before handling.

IMDG

UN number	UN3077
UN proper shipping name	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (Epoxy resin)
Transport hazard class(es)	
Class	9
Subsidiary risk	-
Packing group	III
Environmental hazards	
Marine pollutant	Yes
EmS	F-A, S-F
Special precautions for user	Read safety instructions, SDS and emergency procedures before handling.

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code Not applicable.

15. Regulatory information

Canadian regulations This product has been classified in accordance with the hazard criteria of the HPR and the SDS contains all the information required by the HPR.

Controlled Drugs and Substances Act

Not regulated.

Export Control List (CEPA 1999, Schedule 3)

Not listed.

Greenhouse Gases

Not listed.

Precursor Control Regulations

Not regulated.

International regulations

Stockholm Convention

Not applicable.

Rotterdam Convention

Not applicable.

Kyoto Protocol

Not applicable.

Montreal Protocol

Not applicable.

Basel Convention

Not applicable.

International Inventories

Country(s) or region	Inventory name	On inventory (yes/no)*
Australia	Australian Inventory of Chemical Substances (AICS)	No
Canada	Domestic Substances List (DSL)	Yes
Canada	Non-Domestic Substances List (NDSL)	No
China	Inventory of Existing Chemical Substances in China (IECSC)	No
Europe	European Inventory of Existing Commercial Chemical Substances (EINECS)	No
Europe	European List of Notified Chemical Substances (ELINCS)	No
Japan	Inventory of Existing and New Chemical Substances (ENCS)	No
Korea	Existing Chemicals List (ECL)	No
New Zealand	New Zealand Inventory	No
Philippines	Philippine Inventory of Chemicals and Chemical Substances (PICCS)	No
Taiwan	Taiwan Chemical Substance Inventory (TCSI)	No
United States & Puerto Rico	Toxic Substances Control Act (TSCA) Inventory	Yes

*A "Yes" indicates this product complies with the inventory requirements administered by the governing country(s).

A "No" indicates that one or more components of the product are not listed or exempt from listing on the inventory administered by the governing country(s).

16. Other information

Issue date 18-November-2019

Revision date -

Version No. 01

Disclaimer

ABB Installation Products Inc. cannot anticipate all conditions under which this information and its product, or the products of other manufacturers in combination with its product, may be used. It is the user's responsibility to ensure safe conditions for handling, storage and disposal of the product, and to assume liability for loss, injury, damage or expense due to improper use. The information in the sheet was written based on the best knowledge and experience currently available.

SAFETY DATA SHEET

1. PRODUCT and COMPANY INFORMATION

PRODUCT	Sealing compound (putty type)	EMERGENCY TELEPHONE NUMBER	CHEMTREC: 800-424-9300
CATALOG NUMBERS	SC65	TELEPHONE NUMBER FOR INFORMATION	901-252-5000 ext. 8324
MANUFACTURER / SUPPLIER	THOMAS & BETTS CORPORATION	DATE OF PREPARATION of REVISION	October 7, 2015
ADDRESS	8155 T & B BOULEVARD, MEMPHIS, TENNESSEE 38125		

2. HAZARDS IDENTIFICATION

Physical hazards Not classified.

Health hazards

Skin corrosion/irritation Category 2

Serious eye damage/eye irritation Category 1

Sensitization, skin Category 1

Specific target organ toxicity, single exposure Category 3 respiratory tract irritation

Environmental hazards

Hazardous to the aquatic environment, acute hazard Category 2

Hazardous to the aquatic environment, long-term hazard Category 2

Label elements



Signal word Danger

Hazard statement Causes skin irritation. Causes serious eye damage. May cause an allergic skin reaction. May cause respiratory irritation. Toxic to aquatic life. Toxic to aquatic life with long lasting effects.

Precautionary statement

Prevention Avoid breathing mist or vapor. Wash thoroughly after handling. Use only outdoors or in a well-ventilated area. Contaminated work clothing should not be allowed out of the workplace. Wear protective gloves/eye protection/face protection. Avoid release to the environment.

Response IF ON SKIN: Wash with plenty of water. If skin irritation or rash occurs: Get medical advice/attention. IF INHALED: Remove person to fresh air and keep comfortable for breathing. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER/doctor. Collect spillage.

Storage Store in a well-ventilated place. Keep container tightly closed. Store locked up.

Disposal Dispose of contents/container in accordance with local/regional/national/international regulations.

Other hazards None known.

Supplemental information None.

3. COMPOSITION / INFORMATION ON INGREDIENTS

Mixtures			
Chemical name		CAS #	Percent
Talc		14807-96-6	30 - 60
Epoxy resin		Proprietary	10 - 30
Substituted aminophenol		Proprietary	1 - 5
Zinc sulfide		1314-98-3	1 - 5
Quartz		14808-60-7	0.1 - 1

All concentrations are in percent by weight (kg) unless ingredient is a gas. Gas concentrations are in percent by volume (l).

Composition comments All concentrations are in percent by weight unless ingredient is a gas. Gas concentrations are in percent by volume. Components not listed are either non-hazardous or are below reportable limits.

SAFETY DATA SHEET

4. FIRST AID MEASURES

Inhalation Move to fresh air. If breathing is difficult, give oxygen. Get medical attention if symptoms persist.
Skin contact Immediately flush with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. If skin irritation or an allergic skin reaction develops, get medical attention. Wash contaminated clothing before reuse.
Eye contact Immediately flush with plenty of water for at least 15 minutes occasionally lifting upper and lower eyelids. If easy to do, remove contact lenses. Get medical attention immediately.
Ingestion Do NOT induce vomiting. Rinse mouth thoroughly. Get medical attention if any discomfort continues.
Most important symptoms/effects, acute and delayed Severe eye irritation. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. May cause respiratory irritation. Skin irritation. May cause redness and pain. May cause an allergic skin reaction.
Indication of immediate medical attention and special treatment needed Treat symptomatically.

5. FIRE FIGHTING MEASURES

Suitable extinguishing media Alcohol foam. Dry powder. Carbon dioxide (CO2). Water fog.
Unsuitable extinguishing media Not available.
Specific hazards arising from the chemical None known.
Special protective equipment and precautions for firefighters Self-contained breathing apparatus and full protective clothing must be worn in case of fire. Containers close to fire should be removed or cooled with water.
Firefighting equipment/instructions Use standard firefighting procedures and consider the hazards of other involved materials.
Specific methods Selection of respiratory protection for firefighting: follow the general fire precautions indicated in the workplace.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures Wear appropriate protective equipment and clothing during clean-up. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Ensure adequate ventilation. Local authorities should be advised if significant spillages cannot be contained. For personal protection, see section 8 of the SDS.
Methods and materials for containment and cleaning up Prevent product from entering drains.
 Large Spills: Stop the flow of material, if this is without risk. Dike the spilled material, where this is possible. Cover with plastic sheet to prevent spreading. Absorb in vermiculite, dry sand or earth and place into containers. Following product recovery, flush area with water.
 Small Spills: Wipe up with absorbent material (e.g. cloth, fleece). Clean surface thoroughly to remove residual contamination.
 Never return spills to original containers for re-use. For waste disposal, see section 13 of the SDS.
Environmental precautions Avoid release to the environment. Inform appropriate managerial or supervisory personnel of all environmental releases. Prevent further leakage or spillage if safe to do so. Avoid discharge into drains, water courses or onto the ground.

7. HANDLING and STORAGE

Precautions for safe handling Avoid breathing mist or vapor. Avoid contact with eyes, skin, and clothing. Avoid prolonged exposure. Provide adequate ventilation. Wear appropriate personal protective equipment. Avoid release to the environment. Observe good industrial hygiene practices.
Conditions for safe storage, including any incompatibilities Store locked up. Store in original tightly closed container. Store in a cool, dry, well-ventilated place. Keep away from heat, sparks and open flame. Protect from direct sunlight. Store away from incompatible materials (see Section 10 of the SDS).

8. EXPOSURE CONTROL / PERSONAL PROTECTION

Canada. Alberta OELs (Occupational Health & Safety Code, Schedule 1, Table 2)

Components	Type	Value	Form
Quartz (CAS 14808-60-7)	TWA	0.025 mg/m3	Respirable particles
Talc (CAS 14807-96-6)	TWA	2 mg/m3	Respirable particules

Canada. British Columbia OELs. (Occupational Exposure Limits for Chemical Substances, Occupational Health and Safety Regulation 296/97, as amended)

Components	Type	Value	Form
Quartz (CAS 14808-60-7)	TWA	0.025 mg/m3	Respirable fraction
Talc (CAS 14807-96-6)	TWA	2 mg/m3	Respirable

SAFETY DATA SHEET

Canada. Manitoba OELs (Reg. 217/2006, The Workplace Safety And Health Act)

Components	Type	Value	Form
Quartz (CAS 14808-60-7)	TWA	0.025 mg/m3	Respirable fraction
Talc (CAS 14807-96-6)	TWA	2 mg/m3	Respirable fraction

Canada. Ontario OELs. (Control of Exposure to Biological or Chemical Agents)

Components	Type	Value	Form
Quartz (CAS 14808-60-7)	TWA	0.1 mg/m3	Respirable
Talc (CAS 14807-96-6)	TWA	2 fibers/ml 2 mg/m3	Respirable particles

Canada. Quebec OELs. (Ministry of Labor - Regulation Respecting the Quality of the Work Environment)

Components	Type	Value	Form
Quartzx (CAS 14808-60-7)	TWA	0.1 mg/m3	Respirable dust
Talc (CAS 14807-96-6)	TWA	3 mg/m3	Respirable dust

Biological limit values No biological exposure limits noted for the ingredient(s).

Exposure guidelines No exposure standards allocated.

Appropriate engineering Controls Good general ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level. Shower, hand and eye washing facilities near the workplace are recommended.

Individual protection measures, such as personal protective equipment

Eye/face protection Wear safety glasses with side shields (or goggles).

Skin protection

Hand protection Wear chemical-resistant, impervious gloves. Suitable gloves can be recommended by the glove supplier.

Other Wear chemical-resistant gloves, footwear and protective clothing appropriate for risk of exposure. Contact chemical protective clothing manufacturer for specific information.

Respiratory protection If engineering controls do not maintain airborne concentrations below recommended exposure limits (where applicable) or to an acceptable level (in countries where exposure limits have not been established), an approved respirator must be worn.

Thermal hazards Wear appropriate thermal protective clothing, when necessary.

General hygiene considerations When using, do not eat, drink or smoke. Avoid contact with eyes. Avoid contact with skin. Wash hands before breaks and immediately after handling the product. Keep away from food and drink. Handle in accordance with good industrial hygiene and safety practice.

9. PHYSICAL and CHEMICAL PROPERTIES

Appearance

Physical state Liquid.

Form Paste.

Color Blue. Gray.

Odor Mild.

Odor threshold Not available.

pH Not available.

Melting point/freezing point Not available.

Initial boiling point and boiling range Not available.

Flash point 401.0 °F (205.0 °C)

Evaporation rate Not available.

Flammability (solid, gas) Not applicable.

Upper/lower flammability or explosive limits

Flammability limit – lower (%) Not available.

Flammability limit – upper (%) Not available.

Vapor pressure Not available.

Vapor density Not available.

Relative density 1.05

SAFETY DATA SHEET

Solubility(ies)

Solubility (water) Not available.

Partition coefficient (n-octanol/water) Not available.

Auto-ignition temperature Not available.

Decomposition temperature Not available.

Viscosity Not available.

Other information

Explosive properties Not explosive.

Oxidizing properties Not oxidizing.

VOC (Weight %) 0 % Calculated

10. STABILITY and REACTIVITY

Reactivity The product is non-reactive under normal conditions of use, storage and transport.

Chemical stability Material is stable under normal conditions.

Possibility of hazardous Reactions Hazardous polymerization does not occur.

Conditions to avoid Keep away from heat, spark, open flames and other sources of ignition. Protect against direct sunlight. Avoid contact with incompatible materials.

Incompatible materials Strong oxidizers, strong acids, and strong bases.

Hazardous decomposition products Carbon dioxide. Aldehydes. Acids. Nitrogen oxides.

11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure

Inhalation May cause irritation to the respiratory system. Prolonged inhalation may be harmful.

Skin contact Causes skin irritation. May cause an allergic skin reaction.

Eye contact Causes serious eye damage.

Ingestion Expected to be a low ingestion hazard.

Symptoms related to the physical, chemical and toxicological characteristics Severe eye irritation. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. May cause respiratory irritation. Skin irritation. May cause redness and pain. May cause an allergic skin reaction.

Information on toxicological effects

Acute toxicity May cause respiratory irritation. May cause an allergic skin reaction.

Components	Species	Test Results
Epoxy resin (CAS Proprietary) Acute <i>Dermal</i> LD50	Rat	> 2000 mg/kg
<i>Oral</i> LD50	Ra	> 5000 mg/kg
Talc (CAS 14807-96-6) Acute <i>Oral</i> LD50	Rat	> 5000 mg/kg

Skin corrosion/irritation Causes skin irritation.

Serious eye damage/eye irritation Causes serious eye damage.

Respiratory or skin sensitization

Respiratory sensitization Not a respiratory sensitizer.

Skin sensitization May cause an allergic skin reaction.

Germ cell mutagenicity No data available to indicate product or any components present at greater than 0.1% are mutagenic or genotoxic.

Carcinogenicity Due to the form of the product, exposure to the potentially carcinogenic components is not expected.

ACGIH Carcinogens

Quartz (CAS 14808-60-7) A2 Suspected human carcinogen.

Talc (CAS 14807-96-6) A4 Not classifiable as a human carcinogen.

Canada - Alberta OELs: Carcinogen category

Quartz (CAS 14808-60-7) Suspected human carcinogen.

SAFETY DATA SHEET

Canada - Manitoba OELs: carcinogenicity

SILICA, CRYSTALLINE-.ALPHA-.QUARTZ,
RESPIRABLE FRACTION (CAS 14808-60-7)

Suspected human carcinogen.

TALC, CONTAINING NO ASBESTOS FIBERS,

RESPIRABLE FRACTION (CAS 14807-96-6)

Not classifiable as a human carcinogen.

Canada - Quebec OELs: Carcinogen category

Quartz (CAS 14808-60-7) Suspected carcinogenic effect in humans.

IARC Monographs. Overall Evaluation of Carcinogenicity

Quartz (CAS 14808-60-7) 1 Carcinogenic to humans.

Reproductive toxicity This product is not expected to cause reproductive or developmental effects.

Specific target organ toxicity - single exposure May cause respiratory irritation.

Specific target organ toxicity - repeated exposure Not classified.

Aspiration hazard Not an aspiration hazard.

Chronic effects Prolonged inhalation may be harmful. Prolonged exposure may cause chronic effects.

12. ECOLOGICAL INFORMATION

Ecotoxicity Toxic to aquatic life with long lasting effects.

Components	Species	Test Results
Epoxy resin Fish LC50	Salmo gairdneri	1.5 mg/l, 96 hours
Aquatic Crustacea EC50	Daphnia magna	2.7 mg/l, 48 hours

Persistence and degradability No data is available on the degradability of this product.

Bioaccumulative potential The product is not expected to bioaccumulate.

Mobility in soil No data available.

Other adverse effects Not established.

13. DISPOSAL CONSIDERATION

Disposal instructions Dispose of contents/container in accordance with local/regional/national/international regulations.

Hazardous waste code Not regulated.

Waste from residues / unused products Dispose of in accordance with local regulations.

Contaminated packaging Since emptied containers may retain product residue, follow label warnings even after container is emptied.

14. TRANSPORT INFORMATION

TDG

UN number UN3082

UN proper shipping name ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Epoxy resin)

Class 9

Transport hazard class(es)

Subsidiary risk -

Packing group III

Environmental hazards Yes

Special precautions for user Read safety instructions, SDS and emergency procedures before handling.

IATA

UN number UN3082

UN proper shipping name ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Epoxy resin)

Class 9

Transport hazard class(es)

Subsidiary risk -

Label(s) 9

Packing group III

Environmental hazards Yes

ERG Code 9L

Special precautions for user Read safety instructions, SDS and emergency procedures before handling.

SAFETY DATA SHEET

IMDG
UN number UN3082
UN proper shipping name ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Epoxy resin)
Class 9
Transport hazard class(es)
Subsidiary risk -
Label(s) 9
Packing group III
Environmental hazards
Marine pollutant Yes
EmS F-A, S-F
Special precautions for user Read safety instructions, SDS and emergency procedures before handling.
Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code Not applicable.

15. REGULATORY INFORMATION

Canadian regulations This product has been classified in accordance with the hazard criteria of the HPR and the SDS contains all the information required by the HPR.

Controlled Drugs and Substances Act Not regulated.

Export Control List (CEPA 1999, Schedule 3) Not listed.

Greenhouse Gases Not listed.

Precursor Control Regulations Not regulated.

International regulations

Stockholm Convention Not applicable.

Rotterdam Convention Not applicable.

Kyoto protocol Not applicable.

Montreal Protocol Not applicable.

Basel Convention Not applicable.

International Inventories

Country(s) or region	Inventory name	On inventory	(yes/no)*
Australia	Australian Inventory of Chemical Substances (AICS)		Yes
Canada	Domestic Substances List (DSL)		Yes
Canada	Non-Domestic Substances List (NDSL)		No
China	Inventory of Existing Chemical Substances in China (IECSC)		Yes
Japan	Inventory of Existing and New Chemical Substances (ENCS)		Yes
Korea	Existing Chemicals List (ECL)		Yes
New Zealand	New Zealand Inventory		Yes
Philippines	Philippine Inventory of Chemicals and Chemical Substances (PICCS)		Yes
United States & Puerto Rico	Toxic Substances Control Act (TSCA) Inventory		Yes

*A "Yes" indicates this product complies with the inventory requirements administered by the governing country(s).

A "No" indicates that one or more components of the product are not listed or exempt from listing on the inventory administered by the governing country(s).

16. OTHER INFORMATION

THE INFORMATION PRESENTED HEREIN HAS BEEN COMPILED FROM SOURCES CONSIDERED TO BE DEPENDABLE AND ACCURATE TO THE BEST OF THOMAS & BETTS CORPORATION KNOWLEDGE. THE INFORMATION RELATES TO THE SPECIFIC MATERIAL. IT MAY NOT BE VALID FOR THIS MATERIAL IF USED IN COMBINATION WITH ANY OTHER MATERIALS OR IN ANY PROCESS. IT IS THE USER'S RESPONSIBILITY TO SATISFY HIMSELF AS TO THE SUITABILITY AND COMPLETENESS OF THIS INFORMATION FOR HIS OWN PARTICULAR USE.

Conforms to Hazard Communication Standard 29 CFR 1910.1200

Section 1 - IDENTIFICATION


Product Identifier:	Spectracide® Wasp & Hornet Killer₃
Other Means of Identification:	
Product Code	HG-15715; HG-35715; HG-45715; HG-45865HD; HG-55715HD; HG57625; HG-27221; HG-67221; HG-97221; HG-65715; HG-65717; HG-65811; HG-65865; HG-65865W; HG-75715; HG-75865HD; HG-85715; HG-85865; HG-95715; HG-95715W; HG-95865; HG-96560; HG-96756; HG-96852
Formula Number	21-1497
EPA Reg. Number	9688-190-8845
Recommended Use:	Insecticide - Wasp & Hornet, aerosol
Recommended Restrictions:	Use in accordance with label directions
Manufacturer/Importer/Supplier/Distributor Information:	
Company Name	Spectrum Group, Division of United Industries
Address	PO Box 142642, St. Louis, MO 63114-0642
Telephone Number	1-800-917-5438
Emergency Telephone Number:	
CHEMTREC	(800)424-9300
Medical	(866)823-2749

Section 2 - HAZARD(S) IDENTIFICATION

Classification of Substance or Mixture:

Physical Hazard(s)	Flammable Aerosol - Category 2 Gases Under Pressure - Low Pressure Liquefied Gas
Health Hazard(s)	Skin irritant - Category 2

Label Elements:

Hazard Pictogram(s)	
Signal Word	Warning
Hazard Statements:	Flammable aerosol Contains gas under pressure; may explode if heated Causes skin irritation
Precautionary Statements:	Keep away from heat, sparks, open flames, and hot surfaces. - No smoking. Protect from sunlight. Do not expose to temperatures exceeding 50°C/122°F. Store in a well-ventilated place. Wash hands thoroughly after handling. Wear protective gloves. If on skin: Wash with plenty of water. If skin irritation occurs: Get medical advice. Take off contaminated clothing and wash it before reuse.

Hazard(s) not Otherwise Classified (HNOC): No additional information available

Supplemental Information: None

Section 3 - COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Name	Synonyms	CAS Number	%
Hydrotreated light petroleum distillates	n/a	64742-47-8	5.000
Propane	n/a	74-98-6	3.400
Isopropyl Alcohol	n/a	67-63-0	2.040
Isobutane	n/a	75-28-5	0.080
Prallethrin	n/a	23031-36-9	0.025
Cyhalothrin, lambda-	n/a	91465-08-6	0.010

In accordance with paragraph (d) of 1910.1200, the exact percentage (concentration) has been withheld as a trade secret. Other components are below reportable levels.

Section 4 - FIRST-AID MEASURES

Inhalation: If breathing is difficult, remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical advice/attention if you feel unwell.

Skin Contact: In case of contact, wash skin with plenty of water for 15 minutes. If skin irritation or redness develops, seek medical attention.

Eye Contact: In case of contact, flush eyes with plenty of water. Remove contact lenses, if worn. If irritation persists, get medical attention.

Ingestion: If swallowed, do NOT induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Get medical advice/attention.

Most Important Symptoms/Effects, Acute and Delayed: Symptoms of exposure may include, skin irritation, irritation of eyes and nose, cough and/or shortness of breath.

Indication of Immediate Medical Attention & Special Treatment Needed: Seek medical attention if irritation persists.

Section 5 - FIRE-FIGHTING MEASURES

Suitable Extinguishing Media: Dry chemical or CO₂.

Unsuitable Extinguishing Media: None: Use extinguishing agent suitable for type of surrounding fire.

Specific Hazards Arising from the Chemical: Products of combustion may include, and are not limited to: oxides of carbon.

Special Protective Equipment and Precautions for Firefighters: Keep upwind of fire. Vapors may cause dizziness or asphyxiation without warning. Vapors from liquefied gas are initially heavier than air and spread along ground. Contact with gas or liquefied gas may cause burns, severe injury and/or frostbite. Fire may produce irritating, corrosive and/or toxic gases. Wear positive pressure self-contained breathing apparatus (SCBA). Wear chemical protective clothing that is specifically recommended by the manufacturer. It may provide little or no thermal protection. Structural firefighters' protective clothing will only provide limited protection.

In Case of Large Fire: Water spray, fog or regular foam. Move containers from fire area if you can do it without risk. Damaged cylinders should be handled only by specialists.

Potential Hazards: Some may burn but none ignite readily. Containers may explode when heated. Ruptured cylinders may rocket.

Section 6 - ACCIDENTAL RELEASE MEASURES

Personal Precautions, Protective Equipment and Emergency Procedures: Use personal protection recommended in Section 8. Isolate the hazard area and deny entry to unnecessary and unprotected personnel.

Methods and Materials for Containment and Cleaning Up: Do not touch or walk through spilled material. Stop leak if you can do it without risk. Do not direct water at spill or source of leak. Use water spray to reduce vapors or divert vapor cloud drift. Avoid allowing water runoff to contact spilled material. If possible, turn leaking containers so that gas escapes rather than liquid. Prevent entry into waterways, sewers, basements or confined areas. Allow substance to evaporate. Ventilate the area.

Environmental Precautions: Report spills as required by local and national regulations. Prevent entry into storm sewers and waterways.

Section 7 - HANDLING AND STORAGE

Precautions for Safe Handling: Avoid breathing mist. Avoid contact with skin and eyes. Wear protective gloves. Do not swallow. Handle and open container with care. When using do not eat, drink or smoke. Wash hands thoroughly after handling.

Conditions for Safe Storage, Including any Incompatibilities: Keep out of reach of children. Keep container tightly closed. Keep away from heat, sparks, open flames, and hot surfaces. Protect from sunlight. Do not expose to temperatures exceeding 50°C/122°F. Store in a well-ventilated place. (See section 10).

NFPA 30B Classification: Level 1 Aerosol

Section 8 - EXPOSURE CONTROLS / PERSONAL PROTECTION

Control Parameters:

Chemical Name	Exposure Limits					
	OSHA PEL		ACGIH TLV		Supplier OEL	
	ppm	mg/m ³	ppm	mg/m ³	ppm	mg/m ³

Hydrotreated light petroleum distillates	-	-	-	TWA 5; STEL 10; TWA 200 (as total hydrocarbon vapor), 8hr	-	-
Propane	TWA 1000	TWA 1800	TWA 1000	-	NIOSH REL TWA 1000	NIOSH REL TWA 1800
Isobutane	-	-	STEL 1000	-	NIOSH REL TWA 800	NIOSH REL TWA 1900
Isopropyl Alcohol	TWA 400	TWA 980	STEL 400; TWA 200	-	-	-

Appropriate Engineering Controls: Wear appropriate respirator or use adequate ventilation where situations arise that the exposure limits are exceeded.

Individual Protective Measures, Such as Personal Protective Equipment:

Eye/face protection: None required for normal use. Avoid eye contact.
 Skin and body protection: Wash hands thoroughly after handling. Wear protective gloves.
 Respiratory protection: None required under normal use conditions.
 General hygiene considerations: Do not eat, drink or smoke where material is handled, processed or stored. Wash hands after handling.

Section 9 - PHYSICAL AND CHEMICAL PROPERTIES

Appearance (physical state, color, etc.): Clear to slightly hazy yellow liquid

Odor: Solvent and Pyrethroid

Odor Threshold: No data available

pH: 7.38

Melting / Freezing Point: No data available

Initial boiling point and range: No data available

Flashpoint: No data available

Evaporation Rate: No data available

Flammability (solid, gas): No data available

Upper/lower flammability or explosive limits: No data available

Vapor pressure: No data available

Vapor density: No data available

Relative density: 0.806

Solubility(ies): Soluble in water

Partition coefficient (n-octanol/water): No data available

Auto-ignition temperature: No data available

Decomposition temperature: No data available

Viscosity: No data available

Heat of Combustion: 4.2 kJ/g

Section 10 - STABILITY AND REACTIVITY

Reactivity: No dangerous reaction known under conditions of normal use.
Chemical stability: Stable under normal storage conditions.
Possibility of hazardous reactions: No dangerous reaction known under conditions of normal use.
Conditions to avoid: Heat. Incompatible materials.
Incompatible materials: None known.
Hazardous decomposition products: May include, and are not limited to oxides of carbon.

Section 11 - TOXICOLOGICAL INFORMATION

Information on the likely routes of exposure: Inhalation, Ingestion and/or skin or eye contact

Symptoms related to the physical, chemical and toxicological characteristics:

Inhalation: May cause respiratory tract irritation.
Ingestion: May be harmful if swallowed. May cause stomach distress, nausea or vomiting.
Skin contact: Causes skin irritation. Symptoms may include redness, drying, defatting and cracking of the skin.
Eye contact: May cause eye irritation. Symptoms may include discomfort or pain, excess blinking and tear production, with possible redness and swelling.

Acute Toxicity Values:

Calculated overall Chemical Acute Toxicity Values (ATE)		
LD50 (Oral)	LD50 (Dermal)	LC50 (inhalation)
>2000 mg/kg	>2000 mg/kg	>5mg/l

Eye Contact: Based on available data, the classification criteria are not met.
Skin Contact: This product is a skin irritant.
Sensitization: Based on available data, the classification criteria are not met.

Chronic Effects-Carcinogenicity:

Ingredient	Chemical Listed as a Carcinogen or Potential Carcinogen (NTP, IARC, OSHA)
None of the ingredients present in this product at or above 0.1% are listed as potential carcinogens on the NTP, IARC or OSHA lists.	

Reproductive Toxicity: Based on available data, the classification criteria are not met.
Germ Cell Mutagenicity: Based on available data, the classification criteria are not met.
STOT-single exposure: Based on available data, the classification criteria are not met.
STOT-repeated exposure: Based on available data, the classification criteria are not met.
Aspiration hazard: Based on available data, the classification criteria are not met.

Comment: All information was generated using the GHS classification criteria for mixtures

and test data where available.

Section 12 - ECOLOGICAL INFORMATION

Ecotoxicity:	This product is not expected to be harmful to aquatic organisms.
Persistence and degradability:	No data available
Bioaccumulative potential:	No data available
Mobility in soil:	No data available
Other adverse effects:	No data available

Section 13 - DISPOSAL CONSIDERATIONS

Dispose of in accordance with all local, state,/provincial and federal regulations. For more information see product label.

Section 14 - TRANSPORTATION INFORMATION

DOT:	UN Number:	UN1950
	Proper Shipping Name:	Aerosols
	Hazard Class:	2.1
	Packing Group:	None
	Limited Quantity:	≤1L
IATA:	UN Number:	UN1950
	Proper Shipping Name:	Aerosols
	Hazard Class:	2.1
	Packing Group:	None
IMDG:	UN Number:	UN1950
	Proper Shipping Name:	Aerosols
	Hazard Class:	2.1
	Packing Group:	None
	Limited Quantity:	≤1L
	Marine Pollutant:	Yes (Lambda-Cyhalothrin)

Section 15 - REGULATORY INFORMATION

US EPA Label Information:

EPA Pesticide Registration Number 9688-190-8845

Federal Insecticide, Fungicide, Rodenticide Act Regulations

This chemical is a pesticide product registered by the Environmental Protection Agency and is subjected to certain labeling requirements under the federal pesticide law. These requirements differ from the classification criteria and hazard information required for safety data sheets, and for workplace labels of non-pesticide chemicals. Following is the hazard information as required on the pesticide label:

EPA Pesticide Label

CAUTION: KEEP OUT OF REACH OF CHILDREN.

Hazards to Humans and Domestic Animals

CAUTION: Avoid contact with skin, eyes or clothing. Wash thoroughly with soap and water after handling.

FIRST AID: If Swallowed: Immediately call a Poison Control Center or doctor. Do not induce vomiting unless told to do so by a Poison Control Center or doctor. Do not give any liquid to the person. Do not give anything by mouth to an unconscious person. **If on Skin or Clothing:** Take off contaminated clothing. Rinse skin immediately with plenty of water for 15-20 minutes. Call a Poison Control Center or doctor for treatment advice. Have the product container with you when calling a Poison Control Center or doctor, or going for treatment. **Note to Physician:** Contains petroleum distillates — vomiting may cause aspiration pneumonia.

ENVIRONMENTAL HAZARDS: This pesticide is toxic to fish. Do not apply directly to water.

PHYSICAL HAZARDS: Contents under pressure. Do not use or store near heat or open flame. Do not puncture or incinerate container. Exposure to temperatures above 130°F may cause bursting.

STORAGE AND DISPOSAL: Storage: Store in cool, dry area away from heat or open flame.

Disposal: Do Not Puncture or Incinerate! **If empty:** Place in trash or offer for recycling if available. **If partly filled:** Call your local solid waste agency for disposal instructions.

EPA TSCA Inventory: All of the components of this product are either on the Toxic Substances Control Act (TSCA) Inventory List or exempt.

SARA Hazard Category (311/312): See OSHA hazards listed in section 2.

Disclaimer: Information contained herein was obtained from sources considered technically accurate and reliable. While every effort has been made to ensure full disclosure of product hazards, in some cases data is not available and is so stated. Since conditions of actual product use are beyond control of the supplier, it is assumed that users of this material have been fully trained according to the requirements of all applicable legislation and regulatory instruments. No warranty, expressed or implied, is made and supplier will not be liable for any losses, injuries or consequential damages which may result from the use of or reliance on any information contained in this document.

Section 16 - OTHER INFORMATION

Issue date: September 5, 2018
Revision date: June 22, 2022
Version number: 1.4



SAFETY DATA SHEET

Revision Date 27-Apr-2020

Version 12

1. IDENTIFICATION

Product identifier

Product Name Spray Nine®

Other means of identification

Product Code 61110, 61113

Recommended use of the chemical and restrictions on use

Recommended Use Liquid cleaner

Uses advised against No information available

Details of the supplier of the safety data sheet

Manufacturer Address

ITW Permatex
6875 Parkland Blvd.
Solon, Ohio 44139 USA
Telephone: 1-87-Permatex
(866) 732-9502

24-hour emergency phone number

Chem-Tel: 800-255-3924
International Emergency:
00+1+ 813-248-0585
Contract Number: MIS0003453

May Also Be Distributed by:

ITW Permatex Canada
101-2360 Bristol Circle
Oakville, ON Canada L6H 6M5
Telephone: (800) 924-6994

E-mail address: mail@permatex.com

2. HAZARDS IDENTIFICATION

Classification

OSHA Regulatory Status

This chemical is not considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200)

Label elements

Emergency Overview

The product contains no substances which at their given concentration, are considered to be hazardous to health

Appearance Clear

Physical state Liquid

Odor Citrus

Precautionary Statements - Storage

Store in a well-ventilated place. Keep container tightly closed

Precautionary Statements - Disposal

Dispose of contents/container to an approved waste disposal plant

Hazards not otherwise classified (HNOC)

Not applicable

Other Information

Not applicable.

3. COMPOSITION/INFORMATION ON INGREDIENTS

The product contains no substances which at their given concentration, are considered to be hazardous to health.

4. FIRST AID MEASURES**Description of first aid measures**

General advice	If symptoms persist, call a physician.
Eye contact	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately flush with plenty of water. After initial flushing, remove any contact lenses and continue flushing for at least 15 minutes. Keep eye wide open while rinsing. If symptoms persist, call a physician.
Skin contact	Immediate medical attention is not required. Wash off immediately with soap and plenty of water while removing all contaminated clothes and shoes. If skin irritation persists, call a physician.
Inhalation	IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Immediate medical attention is not required. If symptoms persist, call a physician. Move to fresh air in case of accidental inhalation of vapors or decomposition products.
Ingestion	Clean mouth with water and drink afterwards plenty of water. Never give anything by mouth to an unconscious person. Call a physician. Do NOT induce vomiting.
Self-protection of the first aider	Use personal protective equipment as required.

Most important symptoms and effects, both acute and delayed

Symptoms See section 2 for more information.

Indication of any immediate medical attention and special treatment needed

Note to physicians Treat symptomatically.

5. FIRE-FIGHTING MEASURES**Suitable extinguishing media**

Use, Dry chemical, Carbon dioxide (CO₂), Water spray (fog), Alcohol resistant foam

Unsuitable extinguishing media

None

Specific hazards arising from the chemical

Keep product and empty container away from heat and sources of ignition. Risk of ignition.

Explosion data

Sensitivity to Mechanical Impact None.
Sensitivity to Static Discharge None.

Protective equipment and precautions for firefighters

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

Personal precautions Avoid contact with eyes and skin. Wash thoroughly after handling. Evacuate personnel to safe areas. Keep people away from and upwind of spill/leak. Remove all sources of ignition. Pay attention to flashback. Take precautionary measures against static discharges. Use personal protective equipment as required.

Environmental precautions

Environmental precautions See section 12 for additional ecological information. Prevent further leakage or spillage if safe to do so. Prevent product from entering drains.

Methods and material for containment and cleaning up

Methods for containment Prevent further leakage or spillage if safe to do so.

Methods for cleaning up Use personal protective equipment as required. Dam up. Cover liquid spill with sand, earth or other non-combustible absorbent material. Take up mechanically, placing in appropriate containers for disposal. Clean contaminated surface thoroughly. Soak up with inert absorbent material. Pick up and transfer to properly labeled containers. Take precautionary measures against static discharges.

Prevention of secondary hazards Clean contaminated objects and areas thoroughly observing environmental regulations.

7. HANDLING AND STORAGE

Precautions for safe handling

Advice on safe handling Handle in accordance with good industrial hygiene and safety practice. Avoid contact with skin and eyes. Use with local exhaust ventilation. All equipment used when handling the product must be grounded. Keep away from heat/sparks/open flames/hot surfaces. - No smoking. Use personal protective equipment as required. Do not breathe dust/fume/gas/mist/vapors/spray. Take necessary action to avoid static electricity discharge (which might cause ignition of organic vapors).

Conditions for safe storage, including any incompatibilities

Storage Conditions Keep from freezing. Keep containers tightly closed in a cool, well-ventilated place. Keep away from heat. Keep in properly labeled containers.

Incompatible materials Strong oxidizing agents

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

Exposure Guidelines
NIOSH IDLH *Immediately Dangerous to Life or Health*

Other Information Vacated limits revoked by the Court of Appeals decision in AFL-CIO v. OSHA, 965 F.2d 962 (11th Cir., 1992).

Appropriate engineering controls

Engineering Controls Eyewash stations

Individual protection measures, such as personal protective equipment

Eye/face protection	Wear safety glasses with side shields (or goggles).
Skin and body protection	Wear protective natural rubber, nitrile rubber, Neoprene™ or PVC gloves.
Respiratory protection	No protection equipment is needed under normal use conditions. If respiratory irritation is experienced a NIOSH approved air-purifying respirator with organic vapor cartridges or canisters may be required.
General Hygiene Considerations	When using do not eat, drink or smoke. Regular cleaning of equipment, work area and clothing is recommended.

9. PHYSICAL AND CHEMICAL PROPERTIES**9.1. Information on basic physical and chemical properties**

Physical state	Liquid
Appearance	Clear
Odor	Citrus
Odor threshold	No information available

<u>Property</u>	<u>Values</u>	<u>Remarks • Method</u>
pH	12.0 - 12.8	Low free alkalinity
Melting point / freezing point	No information available	
Boiling point / boiling range	100 °C / 212 °F	
Flash point	> 95 °C / > 203 °F	Tag Closed Cup
Evaporation rate	< 1	Butyl acetate = 1
Flammability (solid, gas)	No information available	
Flammability Limit in Air		
Upper flammability limit:	No information available	
Lower flammability limit:	No information available	
Vapor pressure	18 mm Hg	
Vapor density	>1	Air = 1
Relative density	1.02 g/ml	
Water solubility	Soluble in water	
Solubility(ies)	No information available	
Partition coefficient	No information available	
Autoignition temperature	No information available	
Decomposition temperature	No information available	
Kinematic viscosity	No information available	
Dynamic viscosity	No information available	
Explosive properties	No information available	
Oxidizing properties	No information available	

Other Information

Softening point	No information available
Molecular weight	No information available
VOC Content (%)	<0.5%
Density	No information available
Bulk density	No information available
SADT (self-accelerating decomposition temperature)	No information available

10. STABILITY AND REACTIVITY**Reactivity**

No information available

Chemical stability

Stable under normal conditions

Possibility of Hazardous Reactions

None under normal processing.

Conditions to avoid

Keep from freezing. Heat, flames and sparks.

Incompatible materials

Strong oxidizing agents

Hazardous Decomposition Products

Carbon oxides

11. TOXICOLOGICAL INFORMATION**Information on likely routes of exposure**

Inhalation	May cause irritation of respiratory tract.
Eye contact	Contact with eyes may cause irritation. May cause redness and tearing of the eyes.
Skin contact	May cause skin irritation and/or dermatitis.
Ingestion	Ingestion may cause irritation to mucous membranes.

Information on toxicological effects

Symptoms No information available.

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Sensitization No information available.
Germ cell mutagenicity No information available.
Carcinogenicity No information available.

The following values are calculated based on chapter 3.1 of the GHS document .

ATEmix (oral)	39421 mg/kg
ATEmix (dermal)	76980 mg/kg

12. ECOLOGICAL INFORMATION**Ecotoxicity**

0 % of the mixture consists of component(s) of unknown hazards to the aquatic environment

Persistence and degradability

No information available.

Bioaccumulation

No information available.

Mobility

No information available.

Other adverse effects

No information available

13. DISPOSAL CONSIDERATIONS

Waste treatment methods

Disposal of wastes	This material, as supplied, is a hazardous waste according to federal regulations (40 CFR 261).
Contaminated packaging	Do not reuse container.

This product contains one or more substances that are listed with the State of California as a hazardous waste.

14. TRANSPORT INFORMATION

DOT

Proper shipping name: Not regulated

IATA

Proper shipping name: Not regulated

IMDG

Proper shipping name: Not regulated

15. REGULATORY INFORMATION

International Inventories

TSCA	Complies
DSL/NDSL	Complies
EINECS/ELINCS	Not determined
ENCS	Not determined
IECSC	Complies
KECL	Not determined
PICCS	Not determined
AICS	Not determined

Legend:

TSCA - United States Toxic Substances Control Act Section 8(b) Inventory
DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List
EINECS/ELINCS - European Inventory of Existing Chemical Substances/European List of Notified Chemical Substances
ENCS - Japan Existing and New Chemical Substances
IECSC - China Inventory of Existing Chemical Substances
KECL - Korean Existing and Evaluated Chemical Substances
PICCS - Philippines Inventory of Chemicals and Chemical Substances
AICS - Australian Inventory of Chemical Substances

US Federal Regulations**SARA 313**

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product does not contain any chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372

SARA 311/312 Hazard Categories

Acute health hazard	Yes
Chronic Health Hazard	No
Fire hazard	No
Sudden release of pressure hazard	No
Reactive Hazard	No

CWA (Clean Water Act)

This product contains the following substances which are regulated pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42)

CERCLA

This material, as supplied, contains one or more substances regulated as a hazardous substance under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302)

US State Regulations**California Proposition 65**

This product contains the following Proposition 65 chemicals

U.S. State Right-to-Know Regulations

Chemical Name	New Jersey	Massachusetts	Pennsylvania
SODIUM HYDROXIDE 1310-73-2	X	X	X

U.S. EPA Label Information

EPA Pesticide Registration Number 6659-3

EPA Statement

This chemical is a pesticide product registered by the Environmental Protection Agency and is subject to certain labeling requirements under federal pesticide law. These requirements differ from the classification criteria and hazard information required for safety data sheets, and for workplace labels of non-pesticide chemicals.

WHMIS Hazard Class

Non-controlled

16. OTHER INFORMATION, INCLUDING DATE OF PREPARATION OF THE LAST REVISION
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NFPA	Health hazards 1	Flammability 1	Instability 0	-
HMIS	Health hazards 1	Flammability 1	Physical hazards 0	Personal protection B

NFPA (National Fire Protection Association)

HMIS (Hazardous Material Information System)

Revision Date 27-Apr-2020

Disclaimer

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End of Safety Data Sheet

SAFETY DATA SHEET

IF 1795

SAVE THESE INSTRUCTIONS FOR FUTURE REFERENCE

SECTION 1: PRODUCT & COMPANY IDENTIFICATION

Chemical product name: STL thread lubricant (STL2, STL8)
Product description: Thread lubricant
CAS number: Mixture
Synonyms: NA
Relevant identified uses of the substance: Thread lubricant
Restrictions on use: For industrial applications only
Supplier: Eaton's Crouse-Hinds Division
 1201 Wolf Street
 Syracuse, NY 13208 USA
Telephone: (866) 764-5454
Emergency Phone: CHEMTREC (800) 424-9300

SECTION 2: HAZARDS IDENTIFICATION

Classification of the substance: This product is not a hazardous chemical, as defined by OSHA at 29 CFR 1910.1200, Canada Hazard Product Regulations (SOR 2015-17), or EU Directive 1272/2008.

Based on information available at the time of the development of this Safety Data Sheet, this product does not meet the criteria necessary to be classified as a hazardous chemical. No tests on the product were performed to make this determination. This product could have unforeseen hazards and should be handled with care. Check with your safety manager for suggestions on precautions and procedures that you should follow when working with this product.

Relevant route of exposure/target organs: None.

Label elements:

Labeling according to Regulation (EC) No. 1272/2008 (CLP) and 2012 OSHA Hazard Communication.

Hazard pictograms: None.

Hazard statements: None.

Precautionary statements: None.

Other hazards: None known.

SECTION 3: COMPOSITION & INFORMATION ON INGREDIENTS

This product is a mixture. Health hazard information is based on its ingredients.

COMPONENT	CAS #	%
Highly refined base oil (viscosity >20.5 cSt at 40°C)	NA	60-100%

Additional information

Manufacturer supplies Eaton with a highly refined base oil that may contain one or more lubricating oils. The composition is confidential. Product contains mineral oil with less than 3% DMSO extract as measured by IP 346. See Section 15 for additional information on base oils.

SECTION 4: FIRST AID MEASURES

Exposure is unlikely to require first aid. The following recommendations are made as a precaution for large or lengthy exposures not anticipated by the anticipated use of the product.

General advice: If symptoms persist, call a physician.

Inhalation: Not expected under normal conditions. If mists or degradation products are inhaled, remove to fresh air. Administer oxygen or artificial respiration as indicated and get immediate medical attention. Ensure that there is no obstruction to breathing. If necessary, give external cardiac massage and obtain medical assistance. Obtain medical assistance if breathing remains difficult.

Skin contact: Remove contaminated clothing and wash skin with soap and water. Do not rub or scratch skin.

Eye contact: Holding eyelids away from the eyeballs, flush eyes thoroughly with lukewarm water for 15 minutes. Do not rub. If irritation persists, seek medical attention.

Ingestion: Not expected under normal conditions. If substantial amounts are ingested, consult a physician. Do not wait for symptoms to develop. Do not induce vomiting – If vomiting occurs, hold head beneath hips or place on left side with head down to reduce aspiration into lungs. Never give anything by mouth to an unconscious person.

Most important symptoms and effects, both acute and delayed

Main symptoms: None.

Indication of immediate medical attention and special treatment needed: None. Treat symptomatically.

Notes to physician: High velocity injection under the skin may result in serious injury. If left untreated, the affected area is subject to infection, disfigurement, lack of blood circulation and may require amputation. When dispensed by high pressure equipment, this material can easily penetrate the skin and leave a bloodless puncture wound. Material injected into a finger can be deposited into the palm of the hand. Within 24-48 hours the patient may experience swelling, discoloration and throbbing pain in the affected area. Immediate treatment by a surgical specialist is recommended.

SECTION 5: FIRE FIGHTING MEASURES

Special fire fighting procedures: No unusual fire hazards.

Extinguishing media: Dry chemical, carbon dioxide, foam, water fog. Foam and water fog are effective but may cause frothing, they should only be used by specifically trained personnel. Do not use direct water stream, as oil may spread and frothing can be violent. Simultaneous use of foam and water on the same surface is to be avoided, as water destroys the foam. Continue to cool fire-exposed containers after flames are extinguished.

Advice for firefighters: Do not use a solid water stream, as it may scatter and spread fire. Water may be used to keep fire-exposed containers cool and knock down vapors. Wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

Unusual fire or explosion hazards: Mists and sprays may be flammable at temperatures below normal flash point. No unusual fire hazards. In the event of fire and/or explosion, do not breathe fumes. Carbon monoxide, carbon dioxide and unburned hydrocarbons (smoke).

Hazardous combustion products: Incomplete combustion and thermolysis produces potentially toxic gases such as carbon monoxide and carbon dioxide.

SECTION 6: ACCIDENTAL RELEASE MEASURES

For non-emergency personnel:

Personal protection: Normal oil-resistant antistatic working clothes should be adequate. Note: gloves made of PVA are not suitable.

Foot protection: Wear antistatic non-skid safety shoes or boots.

Face and eye protection: Goggles or face shield, if splashes or contact with eyes is possible or anticipated.

Respiratory protection (if mists or vapors are formed): Use in an area with an exhaust system suitable for an industrial workplace environment. A half or full-face respirator with combined dust/organic vapor filter(s). Oil-resistant clothing is recommended when responding to spills.

Spill procedures: Isolate area of spill and scoop up spilled material. Avoid walking through spilled material. Prevent spills from reaching waterways. Scoop or wipe up spilled material and place in clean container for later disposal. Thoroughly remove residue to prevent slipping.

Environmental precautions and clean-up methods: Scoop up spilled material and place in clean container for later disposal. Do not release into waterways.

See Section 8/12/13 for additional information.

SECTION 7: HANDLING & STORAGE

Precautions for safe handling: Keep away from heat, sparks, flames, static electricity and oxidizing agents when handling or in storage. Avoid skin and eye contact. Change contaminated clothing and discard items that cannot be adequately cleaned (i.e., leather shoes). Wash thoroughly after handling and before meals and breaks. Empty containers may contain combustible product residue. Do not weld, solder, drill, cut or perform similar operations unless they have been properly cleaned.

Storage: Store in a cool, dry, well-ventilated area away from ignition sources and incompatible materials. Storage containers should be composed of mild steel or stainless steel. Synthetic storage containers may not be suitable. Storage area should be equipped with adequate containment to prevent ground and water pollution in the event of a leak or spill. Keep containers closed.

Incompatible materials: Strong oxidizing agents, strong acids, strong bases.

SECTION 8: EXPOSURE CONTROLS & PERSONAL PROTECTION

Although this product is not classified as a hazardous substance as described in Section 2, the following occupational exposure limits are provided based on the hazards of components and related chemicals.

COMPONENT	OSHA/PEL	ACGIH/TLV
Petroleum distillates	500 mg/m ³ 2000 mg/m ³	TWA 350 mg/m ³ C 1800 mg/m ³ C (15 min)
Highly refined base oil	5 mg/m ³ (mist) NOTE: This product is not anticipated to produce a mist under normal conditions of use.	5 mg/m ³ (mist)

Engineering controls: General room ventilation is expected to be sufficient for use of the product. Local exhaust may be needed to control air contaminants when product is heated or misting may occur.

Protective equipment:

Eye protection: Safety glasses with side shields.

Respiratory protection: None required under normal working conditions. If product is heated, or ventilation is deemed insufficient to control air contaminants, select NIOSH approved respiratory protection according to the magnitude of exposure. Select and maintain respirators in accordance with OSHA 29 CFR 1910.134 (in Europe - Standard EN 149).

Skin protection: Wear protective gloves/clothing.

Hygiene measures: Handle in accordance with good industrial hygiene and safety practice. An eyewash station and safety shower should be available in the work area.

SECTION 9: PHYSICAL & CHEMICAL PROPERTIES

- **Color:** Amber
- **Physical form:** Grease
- **Odor:** Bland

- **Odor characteristics:** Not known
- **Odor threshold:** Not known
- **pH (undiluted):** Not known
- **Flash point:** 94-344°C (201-651°F)
- **Flammability (solid, gas):** Not known
- **Boiling point:** Greater than 260°C (500°F)
- **Evaporation rate:** <1
- **Melting point:** Not known
- **Lower explosive limit:** Not known
- **Upper explosive limit:** Not known
- **Vapor pressure:** Less than 1 mmHg
- **Vapor density:** Greater than 1
- **Specific gravity:** 0.89
- **Solubility:** Insoluble in water
- **Auto-ignition temperature:** Not known
- **Decomposition temperature:** Not known
- **Other information:** None

SECTION 10: STABILITY & REACTIVITY

Reactivity: None under normal conditions.

Stability: Stable under normal use and storage conditions.

Possibility of hazardous reactions

Hazardous polymerization: None under normal use conditions.

Oxidizing properties: None known for product.

Conditions to avoid: Keep away from open flames, hot surfaces and sources of ignition.

Incompatible materials: Strong oxidizing agents, strong acids, strong bases.

Hazardous decomposition products: Incomplete combustion and thermolysis produces potentially toxic gases such as carbon monoxide and carbon dioxide.

SECTION 11: TOXICOLOGICAL INFORMATION

Although this product is not classified as a hazardous substance as described in Section 2, the following toxicological information provided based on the hazards of related chemicals.

Information on toxicological effects

Acute toxicity and immediate effects:

Oral LD50 (rat): Petroleum oil - >5000 mg/kg

Dermal LD50: Petroleum oil - >2,000 mg/kg

Inhalation LC50 (rat): Petroleum oil - >2-4 mg/l

Delayed and chronic effects: None known.

Carcinogenicity:

IARC: No

NTP: No

OSHA: No

EU REACH: No

EU CLP: No

Mineral oil products that contain less than 3% DMSO extract when measured by the IP 346 test have been determined to not be classified as carcinogens.

Mutagenicity: No.

Reproductive toxicity: No.

Sensitization: No.

SECTION 12: ECOLOGICAL INFORMATION

No data is available for this material. Avoid exposure to environment whenever possible. This mixture has not been tested for persistence or biodegradation. Water accommodated fractions (WAF) of highly refined base oils did not produce acute toxicity in fish (100-1000 mg/l), fresh water algae (500 mg/l) or daphnia (10,000 mg/l) in 48-96 hour LC50 studies. Based on component data, this mixture is not expected to be readily biodegradable nor acutely toxic.

Persistence and degradability: The product is not readily biodegradable, but it can be degraded by micro-organisms; it is regarded as being inherently biodegradable.

Mobility: The product is insoluble and floats on water. Is not likely mobile in the environment due to its low water solubility.

Toxicity to fish: No data available.

Ecotoxicological information: No data available.

Chemical fate information: No data available.

SECTION 13: DISPOSAL CONSIDERATIONS

Recycle, reclaim and dispose of in accordance with applicable local, state and federal regulations for used or waste petroleum grease/oil. According to 40 CFR 112, this product is an oil; therefore, the US EPA requires that spills which reach surface waters must be reported to the National Response Center (800-424-8802). Waste product is not anticipated to be a hazardous waste, however, the user should review local regulations for jurisdictional classification.

SECTION 14: TRANSPORTATION INFORMATION

Proper shipping name: Not classified as a DOT hazardous material.

Hazard class: Not classified as a DOT hazardous material.

Packing group: None.

UN number: None.

SECTION 15: REGULATORY INFORMATION

International inventories

TSCA	Complies
DSL	Complies
AICS	Does not comply
PICCS	Does not comply
KECL	Does not comply
IECSC	Does not comply
ENCS	Does not comply

TSCA - United States Toxic Substances Control Act Section 8(b) Inventory
AICS - Australian Inventory of Chemical Substances
PICCS - Philippines Inventory of Chemicals and Chemical Substances
KECL - Korean Existing and Evaluated Chemical Substances
IECSC - China Inventory of Existing Chemical Substances
ENCS - Japan Existing and New Chemical Substances

TSCA inventory status: All ingredients are listed on the TSCA inventory.

SARA Section 311/312 hazard categories: None.

Section 313 toxic chemicals: Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product does not contain any chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372.

CERCLA RO: This material, as supplied, does not contain any substances regulated as hazardous substances under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302) or the Superfund Amendments and Reauthorization Act (SARA) (40 CFR 355). There may be specific reporting requirements at the local, regional or state level pertaining to releases of this material.

California Proposition 65: This product does not contain chemicals known to the state of California to cause cancer.

SCAQMD Rule 1144: This product has not been tested for compliance with California's SCAQMD Rule 1144. For further information, please contact the material supplier.

WHMIS classification: Non-controlled.

Clean Water Act: This product does not contain any substances regulated as pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42).

International regulations

Mexico – Grade slight risk, Grade 1

Canada – This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations (CPR) and the MSDS contains all the information required by the CPR.

SECTION 16: OTHER INFORMATION

Revision number: Revision 3

Revision date: January, 2019

NFPA:

Health hazard 0
Flammability 1
Instability 0

HMIS:

Health hazard 0
Flammability 1
Instability 0

Abbreviations

CAS	Chemical Abstracts Service
CERCLA	Comprehensive Environmental Response Compensation and Liability Act
CFR	US Code of Federal Regulations
GHS	Globally Harmonized System
HCS	Hazard Communication Standard
HSIS	Australia Hazardous Substance Information System
IARC	International Agency for Research on Cancer
LD50	Lethal dose to 50% of exposed laboratory animals
NA	Not available
NIOSH	US National Institute of Occupational Safety and Health
NOEC	No observed effect concentration
NTP	US National Toxicology Program
OSHA	US Occupational Safety Health Administration
PEL	Permissible exposure limit
RQ	Reportable quantity
SARA	Superfund Amendments and Reauthorization Act
STEL	Short-term exposure limit
TSCA	Toxic Substances Control Act
TWA	Time weighted average
UN	United Nations
WHMIS	Canada Workplace Hazardous Material Information System

DISCLAIMER

The information in this SAFETY DATA SHEET should be provided to all who will use, handle, store, transport or otherwise be exposed to this material. This information has been prepared for the guidance of plant engineering, operations and management, and for persons working with or handling this material. Eaton's Crouse-Hinds Division believes this information to be reliable and up-to-date as of the date of publication, but makes no warranty that it is.

All statements, technical information and recommendations contained herein are based on information and tests we believe to be reliable. The accuracy or completeness thereof are not guaranteed. In accordance with Eaton's Crouse-Hinds Division's "Terms and Conditions of Sale," and since conditions of use are outside our control, the purchaser should determine the suitability of the product for his intended use and assumes all risk and liability whatsoever in connection therewith.

1. IDENTIFICATION OF THE MATERIAL AND SUPPLIER

1.1 Product identifier

Product name SWAK AND CLASSIC SWAK
Synonyms ANAEROBIC THREAD SEALANT • CLASSIC SWAK • SWAGELOK SWAK • SWAK

1.2 Uses and uses advised against

Uses ANAEROBIC SEALANT • SEALANT • THREAD SEALANT

1.3 Details of the supplier of the product

Supplier name SWAGELOK EASTERN AUSTRALIA
Address 42 Metrolink Circuit, Campbellfield, Victoria, 3061, AUSTRALIA
Telephone (03) 9303 2100
Fax (03) 9303 9565

1.4 Emergency telephone numbers

Emergency 13 11 26

1.7 Details of alternative suppliers of the product

Supplier name SWAGELOK WESTERN AUSTRALIA
2 Barrel Rd, Canning Vale, Perth, WA, 6155, AUSTRALIA
Phone: (08) 9331 1111
Emergency: 13 11 26
sales@swagelokwa.com.au
<http://www.swagelok.com.au>

2. HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture

CLASSIFIED AS HAZARDOUS ACCORDING TO SAFE WORK AUSTRALIA CRITERIA

GHS classifications Skin Corrosion/Irritation: Category 2
Skin Sensitisation: Category 1
Serious Eye Damage / Eye Irritation: Category 2A
Specific Target Organ Systemic Toxicity (Single Exposure): Category 3

2.2 GHS Label elements

Signal word WARNING

Pictograms



Hazard statements

H315 Causes skin irritation.
H317 May cause an allergic skin reaction.
H319 Causes serious eye irritation.
H335 May cause respiratory irritation.

PRODUCT NAME SWAK AND CLASSIC SWAK

Prevention statements

P261	Avoid breathing dust/fume/gas/mist/vapours/spray.
P264	Wash thoroughly after handling.
P271	Use only outdoors or in a well-ventilated area.
P272	Contaminated work clothing should not be allowed out of the workplace.
P280	Wear protective gloves/protective clothing/eye protection/face protection.

Response statements

P302 + P352	IF ON SKIN: Wash with plenty of soap and water.
P304 + P340	IF INHALED: Remove to fresh air and keep at rest in a position comfortable for breathing.
P305 + P351 + P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P312	Call a POISON CENTER or doctor/physician if you feel unwell.
P321	Specific treatment is advised - see first aid instructions.
P333 + P313	If skin irritation or rash occurs: Get medical advice/attention.
P362	Take off contaminated clothing and wash before re-use.

Storage statements

P403 + P233	Store in a well-ventilated place. Keep container tightly closed.
P405	Store locked up.

Disposal statements

P501	Dispose of contents/container in accordance with relevant regulations.
------	--

2.3 Other hazards

No information provided.

3. COMPOSITION/ INFORMATION ON INGREDIENTS

3.1 Substances / Mixtures

Ingredient	CAS Number	EC Number	Content
ETHOXYLATED BISPHENOL A DIMETHACRYLATE	41637-38-1	609-946-4	30 to 40%
TITANIUM DIOXIDE	13463-67-7	236-675-5	1 to 5%
POLYTETRAFLUOROETHYLENE (TEFLON)	9002-84-0	618-337-2	30 to 40%
POLY(1,2 PROPYLENE GLYCOL AZELATE) ESTER	29408-67-1	608-355-9	20 to 30%
POLYETHYLENE GLYCOL	25322-68-3	500-038-2	1 to 5%

4. FIRST AID MEASURES

4.1 Description of first aid measures

Eye	If in eyes, hold eyelids apart and flush continuously with running water. Continue flushing until advised to stop by a Poisons Information Centre, a doctor, or for at least 15 minutes.
Inhalation	If inhaled, remove from contaminated area. To protect rescuer, use a Type A (Organic vapour) respirator or an Air-line respirator (in poorly ventilated areas). Apply artificial respiration if not breathing.
Skin	If skin or hair contact occurs, remove contaminated clothing and flush skin and hair with running water. Continue flushing with water until advised to stop by a Poisons Information Centre or a doctor.
Ingestion	For advice, contact a Poisons Information Centre on 13 11 26 (Australia Wide) or a doctor (at once). If swallowed, do not induce vomiting.
First aid facilities	Eye wash facilities and safety shower should be available.

4.2 Most important symptoms and effects, both acute and delayed

See Section 11 for more detailed information on health effects and symptoms.

4.3 Immediate medical attention and special treatment needed

Treat symptomatically.

5. FIRE FIGHTING MEASURES

5.1 Extinguishing media

Dry agent, carbon dioxide or foam. Prevent contamination of drains and waterways.

PRODUCT NAME SWAK AND CLASSIC SWAK

5.2 Special hazards arising from the substance or mixture

Combustible. May evolve carbon oxides and hydrocarbons when heated to decomposition. May evolve hydrogen fluoride gas when heated to decomposition.

5.3 Advice for firefighters

Evacuate area and contact emergency services. Toxic gases may be evolved in a fire situation. Remain upwind and notify those downwind of hazard. Wear full protective equipment including Self Contained Breathing Apparatus (SCBA) when combating fire. Use waterfog to cool intact containers and nearby storage areas.

5.4 Hazchem code

None allocated.

6. ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures

Wear Personal Protective Equipment (PPE) as detailed in section 8 of the SDS. Clear area of all unprotected personnel. Ventilate area where possible. Contact emergency services where appropriate.

6.2 Environmental precautions

Prevent product from entering drains and waterways.

6.3 Methods of cleaning up

Contain spillage, then cover / absorb spill with non-combustible absorbent material (vermiculite, sand, or similar), collect and place in suitable containers for disposal. Only trained personnel should undertake clean up.

6.4 Reference to other sections

See Sections 8 and 13 for exposure controls and disposal.

7. HANDLING AND STORAGE

7.1 Precautions for safe handling

Before use carefully read the product label. Use of safe work practices are recommended to avoid eye or skin contact and inhalation. Observe good personal hygiene, including washing hands before eating. Prohibit eating, drinking and smoking in contaminated areas.

7.2 Conditions for safe storage, including any incompatibilities

Store in a cool, dry, well ventilated area, removed from incompatible substances, heat or ignition sources and foodstuffs. Ensure containers are adequately labelled, protected from physical damage and sealed when not in use. Check regularly for leaks or spills. Large storage areas should have appropriate ventilation and fire protection systems. Store as a Class C2 Combustible Liquid (AS1940).

7.3 Specific end uses

No information provided.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

8.1 Control parameters

Exposure standards

Ingredient	Reference	TWA		STEL	
		ppm	mg/m ³	ppm	mg/m ³
Titanium dioxide (a)	SWA (AUS)	--	10	--	--

Biological limits

No biological limit values have been entered for this product.

8.2 Exposure controls

Engineering controls Avoid inhalation. Use in well ventilated areas. Where an inhalation risk exists, mechanical extraction ventilation is recommended.

PRODUCT NAME SWAK AND CLASSIC SWAK

PPE

Eye / Face	Wear splash-proof goggles.
Hands	Wear rubber or butyl or nitrile gloves.
Body	Wear coveralls.
Respiratory	Where an inhalation risk exists, wear a Type A (Organic vapour) respirator.



9. PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties

Appearance	OFF WHITE PASTE
Odour	SLIGHT ODOUR
Flammability	CLASS C2 COMBUSTIBLE
Flash point	> 110°C
Boiling point	NOT AVAILABLE
Melting point	NOT AVAILABLE
Evaporation rate	NOT AVAILABLE
pH	NOT AVAILABLE
Vapour density	NOT AVAILABLE
Specific gravity	1.3
Solubility (water)	NOT AVAILABLE
Vapour pressure	NOT AVAILABLE
Upper explosion limit	NOT AVAILABLE
Lower explosion limit	NOT AVAILABLE
Partition coefficient	NOT AVAILABLE
Autoignition temperature	NOT AVAILABLE
Decomposition temperature	> 250°C
Viscosity	NOT AVAILABLE
Explosive properties	NOT AVAILABLE
Oxidising properties	NOT AVAILABLE
Odour threshold	NOT AVAILABLE

10. STABILITY AND REACTIVITY

10.1 Reactivity

Carefully review all information provided in sections 10.2 to 10.6.

10.2 Chemical stability

Stable under recommended conditions of storage.

10.3 Possibility of hazardous reactions

May polymerise with violent rupture/explosion.

10.4 Conditions to avoid

Avoid heat, sparks, open flames and other ignition sources.

10.5 Incompatible materials

May polymerise in contact with oxidising agents (e.g. nitrates), acids (e.g. nitric acid), reducing agents (e.g. sulphites), amines, UV light, alkalis (e.g. hydroxides), or if heated. Polymerisation may generate heat with potential for fire-explosion.

10.6 Hazardous decomposition products

May evolve carbon oxides and hydrocarbons when heated to decomposition.

11. TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects

PRODUCT NAME SWAK AND CLASSIC SWAK**Acute toxicity** May be harmful if swallowed, in contact with skin, and/or if inhaled.**Information available for the ingredients:**

Ingredient	Oral LD50	Dermal LD50	Inhalation LC50
TITANIUM DIOXIDE	5000 mg/kg (rat)	--	3.43 - 6.82 mg/L air (rat)
POLYETHYLENE GLYCOL	33750 mg/kg (rat)	> 20000 mg/kg (rabbit)	--

Skin	Contact may result in irritation, rash and dermatitis.
Eye	Contact may result in irritation, lacrimation, pain and redness.
Sensitisation	May cause an allergic skin reaction. This product is not classified as a respiratory sensitiser.
Mutagenicity	Not classified as a mutagen.
Carcinogenicity	Not classified as a carcinogen.
Reproductive	Not classified as a reproductive toxin.
STOT - single exposure	Over exposure may result in irritation of the nose and throat, coughing, nausea and headache. High level exposure may result in dizziness, drowsiness, breathing difficulties and unconsciousness.
STOT - repeated exposure	Not classified as causing organ damage from repeated exposure.
Aspiration	Not classified as causing aspiration.

12. ECOLOGICAL INFORMATION**12.1 Toxicity**

No known ecological effects.

12.2 Persistence and degradability

Degradability is not established.

12.3 Bioaccumulative potential

No known adverse bioaccumulation or biomagnification effects.

12.4 Mobility in soil

No information provided.

12.5 Other adverse effects

No information provided.

13. DISPOSAL CONSIDERATIONS**13.1 Waste treatment methods**

Waste disposal For small amounts, absorb with sand, vermiculite or similar and dispose of to an approved landfill site. Contact the manufacturer/supplier for additional information if disposing of large quantities (if required). Prevent contamination of drains and waterways as aquatic life may be threatened and environmental damage may result.

Legislation Dispose of in accordance with relevant local legislation.

14. TRANSPORT INFORMATION**NOT CLASSIFIED AS A DANGEROUS GOOD BY THE CRITERIA OF THE ADG CODE, IMDG OR IATA**

	LAND TRANSPORT (ADG)	SEA TRANSPORT (IMDG / IMO)	AIR TRANSPORT (IATA / ICAO)
14.1 UN Number	None allocated.	None allocated.	None allocated.
14.2 Proper Shipping Name	None allocated.	None allocated.	None allocated.
14.3 Transport hazard class	None allocated.	None allocated.	None allocated.
14.4 Packing Group	None allocated.	None allocated.	None allocated.

PRODUCT NAME SWAK AND CLASSIC SWAK

Abbreviations

ACGIH	American Conference of Governmental Industrial Hygienists
CAS #	Chemical Abstract Service number - used to uniquely identify chemical compounds
CNS	Central Nervous System
EC No.	EC No - European Community Number
EMS	Emergency Schedules (Emergency Procedures for Ships Carrying Dangerous Goods)
GHS	Globally Harmonized System
GTEPG	Group Text Emergency Procedure Guide
IARC	International Agency for Research on Cancer
LC50	Lethal Concentration, 50% / Median Lethal Concentration
LD50	Lethal Dose, 50% / Median Lethal Dose
mg/m ³	Milligrams per Cubic Metre
OEL	Occupational Exposure Limit
pH	relates to hydrogen ion concentration using a scale of 0 (high acidic) to 14 (highly alkaline).
ppm	Parts Per Million
STEL	Short-Term Exposure Limit
STOT-RE	Specific target organ toxicity (repeated exposure)
STOT-SE	Specific target organ toxicity (single exposure)
SUSMP	Standard for the Uniform Scheduling of Medicines and Poisons
SWA	Safe Work Australia
TLV	Threshold Limit Value
TWA	Time Weighted Average

Report status

This document has been compiled by RMT on behalf of the manufacturer, importer or supplier of the product and serves as their Safety Data Sheet ('SDS').

It is based on information concerning the product which has been provided to RMT by the manufacturer, importer or supplier or obtained from third party sources and is believed to represent the current state of knowledge as to the appropriate safety and handling precautions for the product at the time of issue. Further clarification regarding any aspect of the product should be obtained directly from the manufacturer, importer or supplier.

While RMT has taken all due care to include accurate and up-to-date information in this SDS, it does not provide any warranty as to accuracy or completeness. As far as lawfully possible, RMT accepts no liability for any loss, injury or damage (including consequential loss) which may be suffered or incurred by any person as a consequence of their reliance on the information contained in this SDS.

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[End of SDS]



1

Safety Data Sheet

according to the REACH Regulation (EC) 1907/2006 amended by Regulation (EU) 2020/878
Issue date: 20/08/2020 Revision date: 09/12/2021 Supersedes version of: 23/11/2021 Version: 1.3

1

1.1

Product form : Mixture
Trade name : TF-15®
Product group : Trade product

1

1.1 Main use category : Industrial use

No additional information available

1.3

M

Whitmore Manufacturing LLC
930 Whitmore Drive
75087 Rockwall, Texas
USA
T 1.972.771.1000
Regulatory@whitmores.com - www.jetlube.com

D

Whitmore
City Park, Watchmead
Welwyn Garden City, Hertfordshire , AL7 1LT
United Kingdom
T +44 1707 379870
Regulatory@whitmores.com - www.whitmores.com

1

Emergency number : For Chemical Emergency Call CHEMTREC 24hr/day 7days/week
Within USA and Canada: 1.800.424.9300
Outside USA and Canada: +1.703.527.3887
(collect calls accepted)

Country	Organization	Address	Contact Number	Other
United Kingdom	National Poisons Information Service (Birmingham Centre) City Hospital	Dudley Road B18 7QH Birmingham	0344 892 0111	
United Kingdom	Chemtrec - United Kingdom	London	Local (City) +44 20 3807 3798	
United Kingdom	Chemtrec - United Kingdom		Local (National) +44 870 820 0418	

1

1

1

Not classified

1

To our knowledge, this product does not present any particular risk, provided it is handled in accordance with good occupational hygiene and safety practice.

1

1

EUH-statements : EUH210 - Safety data sheet available on request.

1.3

mica (12001-26-2)	This substance/mixture does not meet the PBT criteria of REACH regulation, annex XIII This substance/mixture does not meet the vPvB criteria of REACH regulation, annex XIII
-------------------	---

The mixture does not contain substance(s) included in the list established in accordance with Article 59(1) of REACH for having endocrine disrupting properties, or is not identified as having endocrine disrupting properties in accordance with the criteria set out in Commission Delegated Regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605

3

3.1

Not applicable



Safety Data Sheet

according to the REACH Regulation (EC) 1907/2006 amended by Regulation (EU) 2020/878

Product name					
Mixture		Exposure duration	Particle size	Particle shape	Particle density
		2 (> 30 minutes)	0.3 mm - 0.6 mm		

3 R

R

No respiratory protection needed under normal use conditions

No additional information available

No additional information available

3

Avoid release to the environment.

Physical state	
1	Solid

Physical state	: Solid
Colour	: Black.
Appearance	: Grease.
Odour	: Petroleum-like odour.
Odour threshold	: Not available
Melting point	: Not applicable
Freezing point	: Not applicable
Boiling point	: Not available
Flammability	: Non flammable.
Explosive limits	: Not applicable
Lower explosive limit (LEL)	: Not applicable
Upper explosive limit (UEL)	: Not applicable
Flash point	: > 221 °C Open cup
Auto-ignition temperature	: Not applicable
Decomposition temperature	: Not available
pH	: Not available
pH solution	: Not available
Viscosity, kinematic	: > 25 mm ² /s
Solubility	: insoluble in water.
Partition coefficient n-octanol/water (Log Kow)	: Not available
Vapour pressure	: Not available
Vapour pressure at 50 °C	: Not available
Density	: Not available
Relative density	: Not available
Relative vapour density at 20 °C	: Not applicable
Particle size	: Not available
Particle size distribution	: Not available
Particle shape	: Not available
Particle aspect ratio	: Not available
Particle aggregation state	: Not available
Particle agglomeration state	: Not available
Particle specific surface area	: Not available
Particle dustiness	: Not available

1

No additional information available

VOC content : < 0.1 %

Safety Data Sheet

according to the REACH Regulation (EC) 1907/2006 amended by Regulation (EU) 2020/878

10. Information on the substance

10.1. Reactivity

The product is non-reactive under normal conditions of use, storage and transport.

10.2. Stability

Stable under normal conditions.

10.3. Hazardous reactions

No dangerous reactions known under normal conditions of use.

10.4. Incompatible materials

None under recommended storage and handling conditions (see section 7).

10.5. Other information

No additional information available

10.6. Hazardous decomposition products

Under normal conditions of storage and use, hazardous decomposition products should not be produced.

11. Toxicological information

11.1. Acute toxicity

Acute toxicity (oral) : Not classified

Acute toxicity (dermal) : Not classified

Acute toxicity (inhalation) : Not classified

LD50 oral rat	> 5000 mg/kg (Rat, Literature study, Oral)
---------------	--

LD50 oral rat	> 5000 mg/kg bodyweight Animal: rat, Guideline: OECD Guideline 401 (Acute Oral Toxicity), Guideline: OECD Guideline 420 (Acute Oral Toxicity - Fixed Dose Method)
LD50 dermal rabbit	> 5000 mg/kg Source: IUCLID
LC50 Inhalation - Rat	> 25 mg/l/4h

LD50 oral rat	> 5000 mg/kg bodyweight Animal: rat, Guideline: OECD Guideline 401 (Acute Oral Toxicity), Guideline: OECD Guideline 420 (Acute Oral Toxicity - Fixed Dose Method)
---------------	---

LD50 oral rat	> 5000 mg/kg bodyweight Animal: rat, Guideline: OECD Guideline 401 (Acute Oral Toxicity), Guideline: OECD Guideline 420 (Acute Oral Toxicity - Fixed Dose Method)
---------------	---

- Skin corrosion/irritation : Not classified (Based on available data, the classification criteria are not met)
- Serious eye damage/irritation : Not classified (Based on available data, the classification criteria are not met)
- Respiratory or skin sensitisation : Not classified (Based on available data, the classification criteria are not met)
- Germ cell mutagenicity : Not classified (Based on available data, the classification criteria are not met)
- Carcinogenicity : Not classified (Based on available data, the classification criteria are not met)
- Reproductive toxicity : Not classified (Based on available data, the classification criteria are not met)
- STOT-single exposure : Not classified (Based on available data, the classification criteria are not met)
- STOT-repeated exposure : Not classified (Based on available data, the classification criteria are not met)

LOAEL (oral, rat, 90 days)	125 mg/kg bodyweight Animal: rat, Animal sex: male, Guideline: OECD Guideline 408 (Repeated Dose 90-Day Oral Toxicity in Rodents)
----------------------------	---

LOAEL (oral, rat, 90 days)	125 mg/kg bodyweight Animal: rat, Animal sex: male, Guideline: OECD Guideline 408 (Repeated Dose 90-Day Oral Toxicity in Rodents)
----------------------------	---

LOAEL (oral, rat, 90 days)	125 mg/kg bodyweight Animal: rat, Animal sex: male, Guideline: OECD Guideline 408 (Repeated Dose 90-Day Oral Toxicity in Rodents)
NOAEL (dermal, rat/rabbit, 90 days)	≈ 1000 mg/kg bodyweight Animal: rabbit, Guideline: OECD Guideline 410 (Repeated Dose Dermal Toxicity: 21/28-Day Study)

Aspiration hazard : Not classified (Based on available data, the classification criteria are not met)

Safety Data Sheet

according to the REACH Regulation (EC) 1907/2006 amended by Regulation (EU) 2020/878

1	
Viscosity, kinematic	> 25 mm ² /s

11 No additional information available

1 Ecology - general

: The product is not considered harmful to aquatic organisms nor to cause long-term adverse effects in the environment.

Hazardous to the aquatic environment, short-term (acute) : Not classified

Hazardous to the aquatic environment, long-term (chronic) : Not classified.

Not rapidly degradable

1 LC50 - Fish [1]

> 5000 mg/l

EC50 - Crustacea [1] > 1000 mg/l Source: IUCLID

EC50 96h - Algae [1] > 1000 mg/l Source: IUCLID

1 Persistence and degradability

Biodegradability: not applicable.

Chemical oxygen demand (COD) Not applicable (inorganic)

ThOD Not applicable (inorganic)

1 Persistence and degradability

Biodegradability in water: no data available.

1 Bioaccumulative potential

No bioaccumulation data available.

1 Partition coefficient n-octanol/water (Log Pow)

3.9 – 6 Source: IUCLID

1 Partition coefficient n-octanol/water (Log Pow)

3.9 – 6 (calculated value)

1 Ecology - soil

No (test) data on mobility of the substance available.

1 mica (12001-26-2)

This substance/mixture does not meet the PBT criteria of REACH regulation, annex XIII
This substance/mixture does not meet the vPvB criteria of REACH regulation, annex XIII

1 No additional information available

1 No additional information available

13 Waste treatment methods

: Dispose of contents/container in accordance with licensed collector's sorting instructions.

1 In accordance with ADR / IMDG / IATA / ADN / RID

Safety Data Sheet

according to the REACH Regulation (EC) 1907/2006 amended by Regulation (EU) 2020/878

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WGK	Water Hazard Class
ADN	European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways
ADR	European Agreement concerning the International Carriage of Dangerous Goods by Road
ATE	Acute Toxicity Estimate
BCF	Bioconcentration factor
BLV	Biological limit value
BOD	Biochemical oxygen demand (BOD)
COD	Chemical oxygen demand (COD)
DMEL	Derived Minimal Effect level
DNEL	Derived-No Effect Level
EC-No.	European Community number
EC50	Median effective concentration
EN	European Standard
IARC	International Agency for Research on Cancer
IATA	International Air Transport Association
IMDG	International Maritime Dangerous Goods
LC50	Median lethal concentration
LD50	Median lethal dose
LOAEL	Lowest Observed Adverse Effect Level
NOAEC	No-Observed Adverse Effect Concentration
NOAEL	No-Observed Adverse Effect Level
NOEC	No-Observed Effect Concentration
OECD	Organisation for Economic Co-operation and Development
OEL	Occupational Exposure Limit
PBT	Persistent Bioaccumulative Toxic
PNEC	Predicted No-Effect Concentration
RID	Regulations concerning the International Carriage of Dangerous Goods by Rail
SDS	Safety Data Sheet
STP	Sewage treatment plant
ThOD	Theoretical oxygen demand (ThOD)
TLM	Median Tolerance Limit
VOC	Volatile Organic Compounds
CAS-No.	Chemical Abstract Service number
N.O.S.	Not Otherwise Specified
vPvB	Very Persistent and Very Bioaccumulative
ED	Endocrine disrupting properties

<small> □□□□□□□□□□ □□d □□□□□□□□ □□□□ </small>	
EUH210	Safety data sheet available on request.

Safety Data Sheet (SDS), EU

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.



SAFETY DATA SHEET

Revision Date 05-Oct-2020

Version 17

1. IDENTIFICATION

Product identifier

Product Name MEDIUM STRENGTH THREADLOCKER BLUE 6 ML

Other means of identification

Product Code 24200

Recommended use of the chemical and restrictions on use

Recommended Use Adhesive

Uses advised against No information available

Details of the supplier of the safety data sheet

Manufacturer Address

ITW Permatex
6875 Parkland Blvd.
Solon, Ohio 44139 USA
Telephone: 1-87-Permatex
(866) 732-9502

24-hour emergency phone number

Chem-Tel: 800-255-3924
International Emergency:
00+1+ 813-248-0585
Contract Number: MIS0003453

May Also Be Distributed by:

ITW Permatex Canada
101-2360 Bristol Circle
Oakville, ON Canada L6H 6M5
Telephone: (800) 924-6994

E-mail address: mail@permatex.com

2. HAZARDS IDENTIFICATION

Classification

OSHA Regulatory Status

This chemical is considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200)

Skin corrosion/irritation	Category 2
Serious eye damage/eye irritation	Category 2A
Carcinogenicity	Category 1B
Specific target organ toxicity (repeated exposure)	Category 2

Label elements

Emergency Overview

Signal word

Danger

Causes skin irritation
Causes serious eye irritation
May cause cancer
May cause damage to organs through prolonged or repeated exposure



Appearance Blue

Physical state Liquid

Odor Mild

Precautionary Statements - Prevention

Obtain special instructions before use
Do not handle until all safety precautions have been read and understood
Use personal protective equipment as required
Wash face, hands and any exposed skin thoroughly after handling
Wear eye/face protection
Do not breathe dust/fume/gas/mist/vapors/spray

Precautionary Statements - Response

IF exposed or concerned: Get medical advice/attention
Specific treatment (see .? on this label)

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing
If eye irritation persists: Get medical advice/attention
IF ON SKIN: Wash with plenty of soap and water
If skin irritation occurs: Get medical advice/attention
Take off contaminated clothing and wash before reuse

Precautionary Statements - Storage

Store locked up

Precautionary Statements - Disposal

Dispose of contents/container to an approved waste disposal plant

Hazards not otherwise classified (HNOC)

Not applicable

Other Information

Toxic to aquatic life with long lasting effects. Toxic to aquatic life.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Name	CAS No	Weight-%
DIMETHYLBENZYL HYDROPEROXIDE	80-15-9	1 - 5
TITANIUM DIOXIDE	13463-67-7	0.1 - 1
CUMENE	98-82-8	0.1 - 1

4. FIRST AID MEASURES

Description of first aid measures

General advice If symptoms persist, call a physician.

Eye contact Immediately flush with plenty of water. After initial flushing, remove any contact lenses and continue flushing for at least 15 minutes. Keep eye wide open while rinsing. If symptoms

persist, call a physician.

Skin contact	Immediate medical attention is not required. Wash off immediately with soap and plenty of water while removing all contaminated clothes and shoes. If skin irritation persists, call a physician.
Inhalation	Immediate medical attention is not required. If symptoms persist, call a physician. Move to fresh air in case of accidental inhalation of vapors or decomposition products.
Ingestion	Clean mouth with water and drink afterwards plenty of water. Never give anything by mouth to an unconscious person. Call a physician. Do NOT induce vomiting.
Self-protection of the first aider	Use personal protective equipment as required.

Most important symptoms and effects, both acute and delayed

Symptoms See section 2 for more information.

Indication of any immediate medical attention and special treatment needed

Note to physicians Treat symptomatically.

5. FIRE-FIGHTING MEASURES

Suitable extinguishing media

Use, Use dry chemical, Carbon dioxide (CO₂), Water spray (fog), Alcohol resistant foam

Unsuitable extinguishing media

None

Specific hazards arising from the chemical

Keep product and empty container away from heat and sources of ignition. Risk of ignition.

Explosion data

Sensitivity to Mechanical Impact None.

Sensitivity to Static Discharge None.

Protective equipment and precautions for firefighters

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

Personal precautions Evacuate personnel to safe areas. Keep people away from and upwind of spill/leak. Remove all sources of ignition. Pay attention to flashback. Take precautionary measures against static discharges. Use personal protective equipment as required.

Environmental precautions

Environmental precautions See section 12 for additional ecological information. Prevent further leakage or spillage if safe to do so. Prevent product from entering drains.

Methods and material for containment and cleaning up

Methods for containment Prevent further leakage or spillage if safe to do so.

Methods for cleaning up Use personal protective equipment as required. Dam up. Cover liquid spill with sand, earth or other non-combustible absorbent material. Take up mechanically, placing in appropriate containers for disposal. Clean contaminated surface thoroughly. Soak up with inert

absorbent material. Pick up and transfer to properly labeled containers. Take precautionary measures against static discharges.

Prevention of secondary hazards Clean contaminated objects and areas thoroughly observing environmental regulations.

7. HANDLING AND STORAGE

Precautions for safe handling

Advice on safe handling Use with local exhaust ventilation. All equipment used when handling the product must be grounded. Keep away from heat/sparks/open flames/hot surfaces. - No smoking. Use personal protective equipment as required. Do not breathe dust/fume/gas/mist/vapors/spray. Take necessary action to avoid static electricity discharge (which might cause ignition of organic vapors).

Conditions for safe storage, including any incompatibilities

Storage Conditions Keep containers tightly closed in a cool, well-ventilated place. Keep away from heat. Keep in properly labeled containers.

Incompatible materials Strong oxidizing agents, Peroxides, Reducing agents

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

Exposure Guidelines

Chemical Name	ACGIH TLV	OSHA PEL	NIOSH IDLH
TITANIUM DIOXIDE 13463-67-7	TWA: 10 mg/m ³	TWA: 15 mg/m ³ total dust (vacated) TWA: 10 mg/m ³ total dust	IDLH: 5000 mg/m ³ TWA: 2.4 mg/m ³ CIB 63 fine TWA: 0.3 mg/m ³ CIB 63 ultrafine, including engineered nanoscale
CUMENE 98-82-8	TWA: 50 ppm	TWA: 50 ppm TWA: 245 mg/m ³ (vacated) TWA: 50 ppm (vacated) TWA: 245 mg/m ³ (vacated) S* S*	IDLH: 900 ppm TWA: 50 ppm TWA: 245 mg/m ³

NIOSH IDLH *Immediately Dangerous to Life or Health*

Other Information Vacated limits revoked by the Court of Appeals decision in AFL-CIO v. OSHA, 965 F.2d 962 (11th Cir., 1992).

Appropriate engineering controls

Engineering Controls Showers
Eyewash stations
Ventilation systems

Individual protection measures, such as personal protective equipment

Eye/face protection Tight sealing safety goggles.

Skin and body protection Wear protective natural rubber, nitrile rubber, Neoprene™ or PVC gloves.

Respiratory protection Use NIOSH-approved air-purifying respirator with organic vapor cartridge or canister, as appropriate.

General Hygiene Considerations When using do not eat, drink or smoke. Regular cleaning of equipment, work area and clothing is recommended.

9. PHYSICAL AND CHEMICAL PROPERTIES

9.1. Information on basic physical and chemical properties

Physical state	Liquid
Appearance	Blue
Odor	Mild
Odor threshold	No information available

<u>Property</u>	<u>Values</u>	<u>Remarks • Method</u>
pH	No information available	
Melting point / freezing point	No information available	
Boiling point / boiling range	> 200 °C / > 392 °F	
Flash point	131 °C / 268 °F	
Evaporation rate	No information available	
Flammability (solid, gas)	No information available	
Flammability Limit in Air		
Upper flammability limit:	No information available	
Lower flammability limit:	No information available	
Vapor pressure	No information available	
Vapor density	No information available	
Relative density	1.01	
Water solubility	Immiscible in water	
Solubility(ies)	No information available	
Partition coefficient	No information available	
Autoignition temperature	No information available	
Decomposition temperature	No information available	
Kinematic viscosity	No information available	
Dynamic viscosity	1,100 mPas @20°C (68°F)	
Explosive properties	No information available	
Oxidizing properties	No information available	

Other Information

Softening point	No information available
Molecular weight	No information available
VOC content	<3%
Density	No information available
Bulk density	No information available
SADT (self-accelerating decomposition temperature)	No information available

10. STABILITY AND REACTIVITY

Reactivity

No information available

Chemical stability

Stable under normal conditions

Possibility of Hazardous Reactions

None under normal processing.

Conditions to avoid

Heat, flames and sparks.

Incompatible materials

Strong oxidizing agents, Peroxides, Reducing agents

Hazardous Decomposition Products

Carbon oxides

11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure

Inhalation	May cause drowsiness or dizziness. May cause damage to organs through prolonged or repeated exposure if inhaled.
Eye contact	Contact with eyes may cause irritation. May cause redness and tearing of the eyes.
Skin contact	May cause skin irritation and/or dermatitis.
Ingestion	Ingestion may cause irritation to mucous membranes.

Chemical Name	Oral LD50	Dermal LD50	Inhalation LC50
DIMETHYLBENZYL HYDROPEROXIDE 80-15-9	= 382 mg/kg (Rat)	= 0.126 mL/kg (Rabbit)	= 220 ppm (Rat) 4 h
TITANIUM DIOXIDE 13463-67-7	> 10000 mg/kg (Rat)	-	-
CUMENE 98-82-8	= 1400 mg/kg (Rat)	= 12300 µL/kg (Rabbit)	> 3577 ppm (Rat) 6 h

Information on toxicological effects

Symptoms No information available.

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Sensitization No information available.
Germ cell mutagenicity No information available.
Carcinogenicity The table below indicates whether each agency has listed any ingredient as a carcinogen.

Chemical Name	ACGIH	IARC	NTP	OSHA
TITANIUM DIOXIDE 13463-67-7	-	Group 2B	-	X
CUMENE 98-82-8	-	Group 2B	Reasonably Anticipated	X

IARC (International Agency for Research on Cancer)
Group 2B - Possibly Carcinogenic to Humans
Not classifiable as a human carcinogen
 NTP (National Toxicology Program)
Reasonably Anticipated - Reasonably Anticipated to be a Human Carcinogen
 OSHA (Occupational Safety and Health Administration of the US Department of Labor)
 X - Present

The following values are calculated based on chapter 3.1 of the GHS document .

ATEmix (oral) 18864 mg/kg
ATEmix (dermal) 54321 mg/kg
ATEmix (inhalation-dust/mist) 24.7 mg/l

12. ECOLOGICAL INFORMATION

Ecotoxicity

0.094 % of the mixture consists of component(s) of unknown hazards to the aquatic environment

Persistence and degradability

No information available.

Bioaccumulation

No information available.

Mobility

No information available.

Chemical Name	Partition coefficient
CUMENE 98-82-8	3.7

Other adverse effects

No information available

13. DISPOSAL CONSIDERATIONS

Waste treatment methods

Disposal of wastes Disposal should be in accordance with applicable regional, national and local laws and regulations.

Contaminated packaging Do not reuse container.

US EPA Waste Number U055 U096 U166

This product contains one or more substances that are listed with the State of California as a hazardous waste.

Chemical Name	California Hazardous Waste Status
DIMETHYLBENZYL HYDROPEROXIDE 80-15-9	Toxic Ignitable
CUMENE 98-82-8	Toxic Ignitable

14. TRANSPORT INFORMATION

DOT
Proper shipping name Not regulated

IATA
Proper shipping name Not regulated

IMDG
Proper shipping name Not regulated

15. REGULATORY INFORMATION

International Inventories

TSCA Complies
 DSL/NDSL Complies
 EINECS/ELINCS Complies
 ENCS Complies
 IECSC Complies
 KECL Complies
 PICCS Complies
 AICS Not Listed

Legend:

TSCA - United States Toxic Substances Control Act Section 8(b) Inventory
 DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List
 EINECS/ELINCS - European Inventory of Existing Chemical Substances/European List of Notified Chemical Substances
 ENCS - Japan Existing and New Chemical Substances
 IECSC - China Inventory of Existing Chemical Substances
 KECL - Korean Existing and Evaluated Chemical Substances

PICCS - Philippines Inventory of Chemicals and Chemical Substances
AICS - Australian Inventory of Chemical Substances

US Federal Regulations

SARA 313

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product contains a chemical or chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372

Chemical Name	SARA 313 - Threshold Values %
DIMETHYLBENZYL HYDROPEROXIDE - 80-15-9	1.0
SACCHARIN - 81-07-2	1.0
CUMENE - 98-82-8	0.1

SARA 311/312 Hazard Categories

Acute health hazard	Yes
Chronic Health Hazard	No
Fire hazard	No
Sudden release of pressure hazard	No
Reactive Hazard	No

CWA (Clean Water Act)

This product does not contain any substances regulated as pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42)

CERCLA

This material, as supplied, contains one or more substances regulated as a hazardous substance under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302)

Chemical Name	Hazardous Substances RQs	CERCLA/SARA RQ	Reportable Quantity (RQ)
DIMETHYLBENZYL HYDROPEROXIDE 80-15-9	10 lb	-	RQ 10 lb final RQ RQ 4.54 kg final RQ
CUMENE 98-82-8	5000 lb	-	RQ 5000 lb final RQ RQ 2270 kg final RQ

US State Regulations

California Proposition 65

This product contains the following Proposition 65 chemicals

Chemical Name	California Proposition 65
TITANIUM DIOXIDE 13463-67-7	*Carcinogen (airborne, unbound particles of respirable size)
CUMENE 98-82-8	Carcinogen

*The asterisked chemical(s) listed are not subject to Proposition 65 because they are not airborne in the finished product

U.S. State Right-to-Know Regulations

Chemical Name	New Jersey	Massachusetts	Pennsylvania
DIMETHYLBENZYL HYDROPEROXIDE 80-15-9	X	X	X
SACCHARIN 81-07-2	X	X	X
CUMENE 98-82-8	X	X	X
2-BUTOXYETHANOL 111-76-2	X	X	X
1,4-NAPHTHOQUINONE 130-15-4	X	X	X

U.S. EPA Label Information

EPA Pesticide Registration Number Not applicable

WHMIS Hazard Class

D2B - Toxic materials

16. OTHER INFORMATION, INCLUDING DATE OF PREPARATION OF THE LAST REVISION

NFPA	Health hazards 2	Flammability 1	Instability 0	-
HMIS	Health hazards 2	Flammability 1	Physical hazards 0	Personal protection B

NFPA (National Fire Protection Association)
HMIS (Hazardous Material Information System)

Revision Date 05-Oct-2020

Disclaimer

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End of Safety Data Sheet

SAFETY DATA SHEET

ULINE ALL PURPOSE FOAMING SOAP

SECTION 1 – PRODUCT AND COMPANY IDENTIFICATION

Product Name : ULINE ALL PURPOSE FOAMING SOAP

Product Code : S18230, S19492, S18233

Recommended use : General purpose hand cleaner

Product dilution information : Product is sold ready to use.

Company : ULINE
12575 Uline Drive
Pleasant Prairie, WI 53158

Chemtrec Phone : 1-800-424-9300

Emergency Phone : 1-800-958-5463

Issuing date : 3/2/2020

SECTION 2 – HAZARD(S) IDENTIFICATION

GHS Classification : Category 2B
Eye irritation

GHS Label Element :
Hazards pictograms



Signal Word : Warning

Hazard Statements : **Response:**
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do so. Continue rinsing. If eye irritation persists: Get medical advice/attention.

Other Hazards : None known.

SECTION 3 – COMPOSITION / INFORMATION ON INGREDIENTS

Pure substance/mixture : Mixture

<u>Chemical Name</u>	<u>Concentration (%)</u>	<u>CAS No.</u>
AMMONIUM LAURYL SULFATE	0 - 5	68585-34-2
AMMONIUM LAURETH SULFATE	0 - 5	67762-19-0
PEG-80 GLYCERYL COCOATE	0 - 5	68201-46-7
DISODIUM COCOAMPHODIACETATE	0 - 5	68650-39-5
PROPYLENE GLYCOL	0 - 5	57-55-6

SAFETY DATA SHEET

ULINE ALL PURPOSE FOAMING SOAP

SECTION 4 – FIRST AID MEASURES

- In case of eye contact : Flush eyes under eyelids with plenty of cool water for at least 15 minutes. If irritation persists, seek medical/advice attention.
- In case of skin contact : If irritation persists, wash with water.
- If ingested : Contact a physician or Poison Control Center immediately. Do not induce vomiting never give anything by mouth to an unconscious person.
- If inhaled : Get medical attention if symptoms occur.
- Protection of first-aiders : No special precautions are necessary.
- Notes to physicians : Treat symptomatically.

SECTION 5 – FIRE-FIGHTING MEASURES

- Suitable extinguishing media : Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
- Unsuitable extinguishing media : None known.
- Specific hazards during firefighting : No flammable or combustible.
- Hazardous combustions products : Carbon oxides
- Special protective equipment for fire-fighters : Use personal protective equipment.
- Specific extinguishing methods : Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations. In the event of fire and/or explosion do not breathe fumes.

SECTION 6 – ACCIDENTAL RELEASE MEASURES

- Personal precautions : No special measures required.
- Environmental precautions : Avoid contact of large amounts of spilled material runoff with soil and surface waterways.
- Methods of cleaning up : Absorb with inert material. Use a water rinse for final clean-up.

SECTION 7 – HANDLING AND STORAGE

- Handling : Wash hands after handling.
- Storage : Keep out of reach of children. Keep container tightly closed.
Store between 32 to 122 degrees F.

SECTION 8 – EXPOSURE CONTROLS / PERSONAL PROTECTION

Ingredients with workplace control parameters.

<u>Ingredients</u>	<u>CAS-No.</u>	<u>Form of exposure</u>	<u>Permissible Concentration</u>	<u>Basis</u>
PROPYLENE GLYCOL	57-55-6	TWA	10 mg/m3	WEEL

SAFETY DATA SHEET

ULINE ALL PURPOSE FOAMING SOAP

Engineering measures : Good general ventilation should be sufficient to control workers exposure to airborne contamination.

Personal protection

Eyes : Eye protection should be used when splashing may occur.
Hands : No protective equipment is needed under normal use.
Skin : No protective equipment is needed under normal use.
Respiratory : No protective equipment is needed under normal use.

Consult local authorities for acceptable exposure limits.

SECTION 9 – PHYSICAL AND CHEMICAL PROPERTIES

Appearance: Water thin medium green liquid	Upper/lower flammability limits: N/A
Odor: Jasmine fragrance	Vapor pressure: N/A
Odor Threshold: No data available	Vapor density: N/A
ph: 6.5 typical	Relative density: No data available.
Melting point/freezing point: N/A	Solubility (ies): No data available.
Initial boiling and boiling range: N/A	Partition coefficient: n-octanol/water: No data available.
Flash point: N/A	Auto ignition temperature: N/A
Evaporation rate: <1	Decomposition temperature: No data available.
Flammability (solid, gas): No data available	Viscosity: N/A

SECTION 10 – STABILITY AND REACTIVITY

Stability : The product is stable under normal conditions.
Possibility of hazardous reactions : No dangerous reaction is known under conditions of normal use.
Conditions to avoid : None known.
Incompatible materials : None known.
Hazardous decomposition products : Carbon oxides

SECTION 11 – TOXICOLOGICAL INFORMATION

Information on likely routines of exposure : Inhalation, eye contact, skin contact.

Potential Health Effects

Eyes : Cause of irritation.
Skin : Health injuries are not known or expected under normal use.
Ingestion : Health injuries are not known or expected under normal use.
Inhalation : Health injuries are not known or expected under normal use.
Chronic exposure : Health injuries are not known or expected under normal use.

Experience with Human Exposure

Eye contact : Redness, irritation.
Skin contact : No symptoms known or expected.
Ingestion : No symptoms known or expected.
Inhalation : No symptoms known or expected.

SAFETY DATA SHEET

ULINE ALL PURPOSE FOAMING SOAP

Toxicity

Acute oral toxicity	:	Acute toxicity estimate: >5,000 mg/kg
Acute inhalation toxicity	:	No data available
Acute dermal toxicity	:	Acute toxicity estimate: >5,000 mg/kg
Skin corrosion/irritation	:	No data available
Serious eye damage/eye irritation	:	Mild eye irritation.
Respiratory or skin sensitization	:	No data available.

Carcinogenicity

IARC	:	No component of this product present at levels greater than or equal to 0.1% is identified as a probable, possible or confirmed human carcinogen by IARC.
OSHA	:	No ingredient of this product presents at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.
NTP	:	No ingredient of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

SECTION 12 – ECOLOGICAL INFORMATION

Ecological Tests	:	Data is not available.
Environmental Impact	:	The product ingredients are expected to be safe for the environment at the concentrations predicted under normal use and accidental spill scenarios. Packaging components are compatible with the conventional solid waste management practices.

SECTION 13 – DISPOSAL CONSIDERATIONS

Disposal methods	:	The product should not be allowed to enter drains, water courses or the soil. When possible recycling is preferred to disposal or incineration. If recycling is not practicable, dispose of in compliance with local regulations. Dispose of wastes in an approved waste disposal facility.
Disposal considerations	:	Dispose of as unused product. Empty containers should be taken to an approved waste handling site for recycling or disposal. Do not reuse empty containers.

SAFETY DATA SHEET

ULINE ALL PURPOSE FOAMING SOAP

SECTION 14 – TRANSPORT INFORMATION

Certain shipping modes or package sizes may have exceptions from the transport regulations. The classification provided may not reflect those exceptions and may not apply to all shipping modes or package sizes. The shipper / consignor / sender are responsible to ensure that the packaging, labeling, and markings are in compliance with the selected mode of transport.

Shipment	Identification Number	Proper Shipping Name	Hazardous Classification	Packaging Group
US DOT	Not dangerous goods	N/A	N/A	None
IATA (Air)	Not dangerous goods	N/A	N/A	None
IMDG (Vessel)	Not dangerous goods	N/A	N/A	None

SECTION 15 – REGULATORY INFORMATION

U.S. Federal regulations

TSCA 8(b) Inventory : All components are listed or exempted.

SARA 302/304/311/312 : No listed substance.

Extremely Hazardous Substances

SARA 302/304 Emergency : No listed substance.

Planning and Notification

SAFETY DATA SHEET

ULINE ALL PURPOSE FOAMING SOAP

SECTION 16 - OTHER INFORMATION

NFPA 704:



HMIS III:

HEALTH	1
FLAMMABILITY	0
PHYSICAL HAZARDS	0

Issuing date : 3/2/2020

Version : 2.0

Prepared by : Regulatory Compliance

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in conjunction with any other materials or in any process, unless specified in the text.

MSDS Number: 96003589 Rev:002 MSDS Status: ASSIGNED
Mfr MSDS No: 017256 Mfr Date : 11/28/01 MSDS Section(s)
Product:UNIVIS J 13 01 to 16

Section 01 MANUFACTURER IDENTIFICATION

Product Name: UNIVIS J 13
Catalog ID : Part Number :
Chem Family :
Synonyms : UNIVIS J 13

Manufacturer: EXXON OIL REFINING CO
Mfr Address : P.O. BOX 2180

HOUSTON TX 77252-2180 US
Mfr Contacts: (BAYTOWN) TRANSPOR FAXED MSDSS
Telephone No: EMERGENCY ALT PHONE FAX
(713) 656-3424 (281) 834-3296 1-800-298-4007

- Section 02 COMPOSITION INGREDIENTS INFO

COMPONENT HYDROTREATED LIGHT NAPHTHENCAS No.:64742-53-6 Pct: 70.00

ADDITIONAL INFORMATION ON COMPONENTS (E.G. EXPOSURE THRESHOLDS)

OTHER TEXT
HYDROTREATED LIGHT NAPHTHENIC DISTILLATE (PETROLEUM)
MIN PERCENT 60 PCT

SEE SECTION 8 FOR EXPOSURE LIMITS (IF APPLICABLE).
SEE SECTION 8 FOR EXPOSURE LIMITS (IF APPLICABLE).

- Section 03 HAZARDS IDENTIFICATION

HAZARDS IDENTIFICATION Procedure
ACUTE :SEE BELOW
CHRONIC :SEE BELOW
EMERGENCY OVERVIEW :SEE BELOW
OTHER TEXT :SEE BELOW

EMERGENCY OVERVIEW
EMERGENCY OVERVIEW
EMERGENCY OVERVIEW: CLEAR RED LIQUID.
NOTE: PRESSURIZED MISTS MAY FORM A FLAMMABLE MIXTURE.
DOT ERG NO.: NA

ACUTE
ON PROLONGED REPEATED CONTACT, THIS MATERIAL MAY DEFA
THE SKIN RESULTING IN POSSIBLE IRRITATION AND
DERMATITIS. LOW VISCOSITY MATERIAL-IF SWALLOWED MAY

Material Safety Data Sheet Page: 2
Printed Date:06/12/04

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EMERGENCY OVERVIEW
ENTER THE LUNGS AND CAUSE LUNG DAMAGE. EXCESSIVE
EXPOSURE MAY RESULT IN EYE, SKIN OR RESPIRATORY
IRRITATION.
FOR FURTHER HEALTH EFFECTS/TOXICOLOGICAL DATA, SEE
SECTION 11.

CHRONIC
ON PROLONGED REPEATED CONTACT, THIS MATERIAL MAY DEFA
THE SKIN RESULTING IN POSSIBLE IRRITATION AND
DERMATITIS. LOW VISCOSITY MATERIAL-IF SWALLOWED MAY
ENTER THE LUNGS AND CAUSE LUNG DAMAGE. EXCESSIVE
EXPOSURE MAY RESULT IN EYE, SKIN OR RESPIRATORY
IRRITATION.
FOR FURTHER HEALTH EFFECTS/TOXICOLOGICAL DATA, SEE

SECTION 11.

OTHER TEXT

THIS PRODUCT IS CONSIDERED HAZARDOUS ACCORDING TO REGULATORY GUIDELINES (SEE SECTION 15).

- Section 04 FIRST AID MEASURES

	FIRST AID MEASURES AND INSTRUCTIONS	Procedure
EYE CONTACT	:SEE BELOW	
INGESTION	:SEE BELOW	
INHALATION	:SEE BELOW	
NOTES TO PHYSICIAN	:SEE BELOW	
SKIN CONTACT	:SEE BELOW	

INSTRUCTIONS TO MEDICAL PERSONNEL OR ADDITIONAL INFORMATION

EYE CONTACT
FLUSH THOROUGHLY WITH WATER. IF IRRITATION OCCURS, CALL A PHYSICIAN.

SKIN CONTACT
WASH CONTACT AREAS WITH SOAP AND WATER. REMOVE AND CLEAN OIL SOAKED CLOTHING DAILY AND WASH AFFECTED AREA. INJECTION INJURY WARNING: IF PRODUCT IS INJECTED INTO OR UNDER THE SKIN, OR INTO ANY PART OF THE BODY, REGARDLESS OF THE APPEARANCE OF THE WOUND OR ITS SIZE, THE INDIVIDUAL SHOULD BE EVALUATED IMMEDIATELY BY A PHYSICIAN AS A SURGICAL EMERGENCY. EVEN THOUGH INITIAL SYMPTOMS FROM HIGH PRESSURE INJECTION MAY BE MINIMAL OR ABSENT, EARLY SURGICAL TREATMENT WITHIN THE FIRST FEW HOURS MAY SIGNIFICANTLY REDUCE THE ULTIMATE EXTENT OF INJURY.

INHALATION
NOT EXPECTED TO BE A PROBLEM. HOWEVER, IF RESPIRATORY IRRITATION, DIZZINESS, NAUSEA, OR UNCONSCIOUSNESS OCCURS DUE TO EXCESSIVE VAPOR OR MIST EXPOSURE, SEEK IMMEDIATE MEDICAL ASSISTANCE. IF BREATHING HAS STOPPED, ASSIST VENTILATION WITH A MECHANICAL DEVICE OR MOUTH-TO-MOUTH RESUSCITATION.

Material Safety Data Sheet

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Printed Date:06/12/04

MSDS Number: 96003589 Rev:002 MSDS Status: ASSIGNED
Mfr MSDS No: 017256 Mfr Date : 11/28/01 MSDS Section(s)
Product:UNIVIS J 13 01 to 16

INSTRUCTIONS TO MEDICAL PERSONNEL OR ADDITIONAL INFORMATION

INGESTION
SEEK IMMEDIATE MEDICAL ATTENTION. DO NOT INDUCE VOMITING.

NOTES TO PHYSICIAN
MATERIAL IF ASPIRATED INTO THE LUNGS MAY CAUSE CHEMICAL PNEUMONITIS.

Section 05 FIRE FIGHTING MEASURES

	FIRE EXPLOSION HAZARD DATA	VALUE	UOM	Procedure
AUTO IGNITE TEMP	:NA			
COMBUSTION PRODUCTS	:SEE BELOW			
EXPLOSION HAZARD	:SEE BELOW			
EXTINGUISHING MEDIA	:SEE BELOW			
FIRE FIGHTING CLOTH	:SEE BELOW			
FIRE FIGHTING PROC	:SEE BELOW			
FLASH POINT C	:(201F) (ASTM D-93)	94.0000	DEGC	
LOWER EXPLOSION LEL	:NE			
NFPA FLAMMABILITY	:1			
NFPA HEALTH	:0			
NFPA REACTIVITY	:0			
OTHER TEXT	:SEE BELOW			
UPPER EXPLOSION UEL	:NE			

PROCEDURES AND GUIDANCE IN AVOIDING AND FIGHTING FIRES

EXTINGUISHING MEDIA
CARBON DIOXIDE, FOAM, DRY CHEMICAL AND WATER FOG.
FIRE FIGHTING PROC
WATER OR FOAM MAY CAUSE FROTHING. USE WATER TO KEEP FIRE EXPOSED CONTAINERS COOL. WATER SPRAY MAY BE USED

TO FLUSH SPILLS AWAY FROM EXPOSURE. PREVENT RUNOFF FROM FIRE CONTROL OR DILUTION FROM ENTERING STREAMS, SEWERS, OR DRINKING WATER SUPPLY.

FIRE FIGHTING CLOTH

FOR FIRES IN ENCLOSED AREAS, FIRE FIGHTERS MUST USE SELF-CONTAINED BREATHING APPARATUS.

EXPLOSION HAZARD

NOTE: PRESSURIZED MISTS MAY FORM A FLAMMABLE MIXTURE.

COMBUSTION PRODUCTS

FUMES, SMOKE, CARBON MONOXIDE, SULFUR OXIDES, ALDEHYDES AND OTHER DECOMPOSITION PRODUCTS, IN THE CASE OF INCOMPLETE COMBUSTION.

OTHER TEXT

FLAMMABILITY (SOLIDS): NE
AUTO FLAMMABILITY: NA
EXPLOSIVE PROPERTIES: NA
OXIDIZING PROPERTIES: NA

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- Section 06 ACCIDENTAL RELEASE MEASURES

	ACCIDENTAL RELEASE MEASURES DATA	Procedure
ENVIRONMENTAL EFFECT	:SEE BELOW	
LAND SPILL	:SEE BELOW	
OTHER TEXT	:SEE BELOW	
WATER SPILL	:SEE BELOW	

ACTIONS TO MINIMIZE ADVERSE EFFECTS OF ACCIDENTAL SPILLS/RELEASES
LAND SPILL

SHUT OFF SOURCE TAKING NORMAL SAFETY PRECAUTIONS.
TAKE MEASURES TO MINIMIZE THE EFFECTS ON GROUND WATER.
RECOVER BY PUMPING OR CONTAIN SPILLED MATERIAL WITH SAND OR OTHER SUITABLE ABSORBENT AND REMOVE MECHANICALLY INTO CONTAINERS. IF NECESSARY, DISPOSE OF ADSORBED RESIDUES AS DIRECTED IN SECTION 13.

WATER SPILL

CONFINE THE SPILL IMMEDIATELY WITH BOOMS. WARN OTHER SHIPS IN THE VICINITY. NOTIFY PORT AND OTHER RELEVANT AUTHORITIES. REMOVE FROM THE SURFACE BY SKIMMING OR WITH SUITABLE ABSORBENTS. IF PERMITTED BY REGULATORY AUTHORITIES THE USE OF SUITABLE DISPERSANTS SHOULD BE CONSIDERED WHERE RECOMMENDED IN LOCAL OIL SPILL PROCEDURES.

ENVIRONMENTAL EFFECT

PREVENT MATERIAL FROM ENTERING SEWERS, WATER SOURCES OR LOW LYING AREAS; ADVISE THE RELEVANT AUTHORITIES IF IT HAS, OR IF IT CONTAMINATES SOIL/VEGETATION.

OTHER TEXT

NOTIFICATION PROCEDURES: REPORT SPILLS/RELEASES AS REQUIRED TO APPROPRIATE AUTHORITIES. U.S. COAST GUARD AND EPA REGULATIONS REQUIRE IMMEDIATE REPORTING OF SPILLS/RELEASES THAT COULD REACH ANY WATERWAY INCLUDING INTERMITTENT DRY CREEKS. REPORT SPILL/RELEASE TO COAST GUARD NATIONAL RESPONSE CENTER TOLL FREE NUMBER (800)424-8802. IN CASE OF ACCIDENT OR ROAD SPILL NOTIFY CHEMTREC (800) 424-9300.

PERSONAL PRECAUTIONS: SEE SECTION 8

- Section 07 HANDLING AND STORAGE

	SPECIAL PRECAUTIONS	Procedure
HANDLING	:SEE BELOW	
OTHER PRECAUTIONS	:SEE BELOW	
STORAGE	:SEE BELOW	

APPROPRIATE PRACTICES FOR SAFE HANDLING AND STORAGE
HANDLING

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APPROPRIATE PRACTICES FOR SAFE HANDLING AND STORAGE
HIGH PRESSURE INJECTION UNDER THE SKIN MAY OCCUR DUE TO THE RUPTURE OF PRESSURIZED LINES. ALWAYS SEEK MEDICAL ATTENTION. AVOID PROLONGED REPEATED SKIN CONTACT. SEE SECTION 8 FOR ADDITIONAL PERSONAL PROTECTION ADVICE WHEN HANDLING THIS PRODUCT.

STORAGE
KEEP CONTAINERS CLOSED WHEN NOT IN USE. DO NOT STORE IN OPEN OR UNLABELLED CONTAINERS. STORE AWAY FROM STRONG OXIDIZING AGENTS AND COMBUSTIBLE MATERIALS. DO NOT STORE NEAR HEAT, SPARKS, FLAME OR STRONG OXIDANTS.

OTHER PRECAUTIONS
SPECIAL PRECAUTIONS: PREVENT SMALL SPILLS AND LEAKAGES TO AVOID SLIP HAZARD.
EMPTY CONTAINER WARNING: EMPTY CONTAINERS RETAIN RESIDUE (LIQUID AND/OR VAPOR) AND CAN BE DANGEROUS. DO NOT PRESSURIZE, CUT, WELD, BRAZE, SOLDER, DRILL, GRIND OR EXPOSE SUCH CONTAINERS TO HEAT, FLAME, SPARKS, STATIC ELECTRICITY, OR OTHER SOURCES OF IGNITION; THEY MAY EXPLODE AND CAUSE INJURY OR DEATH. DO NOT ATTEMPT TO REFILL OR CLEAN CONTAINER SINCE RESIDUE IS DIFFICULT TO REMOVE. EMPTY DRUMS SHOULD BE COMPLETELY DRAINED, PROPERLY BUNGED AND PROMPTLY RETURNED TO A DRUM RECONDITIONER. ALL CONTAINERS SHOULD BE DISPOSED OF IN AN ENVIRONMENTALLY SAFE MANNER AND IN ACCORDANCE WITH GOVERNMENTAL REGULATIONS.

- Section 08 EXPOSURE CNTL/PERSONAL PROTCTN

	EXPOSURE CONTROLS/PERSONAL PROTECTION	Procedure
EYE PROTECTION	:SEE BELOW	
HYGIENIC PRACTICES	:SEE BELOW	
PROTECTIVE GLOVES	:SEE BELOW	
RESPIRATOR	:SEE BELOW	
THRESHOLD LIMIT	:SEE BELOW	
VENTILATION	:SEE BELOW	

OTHER PRACTICES OR EQUIPMENT USEFUL IN MINIMIZING WORKER EXPOSURE
THRESHOLD LIMIT

OCCUPATIONAL EXPOSURE LIMITS: WHEN MISTS/AEROSOLS CAN OCCUR, THE FOLLLOWING ARE RECOMMENDED: 5 MG/M3 (AS OIL MIST)- ACGIH THRESHOLD LIMIT VALUE (TLV), 10 MG/M3 (AS OIL MIST) - ACGIH SHORT TERM EXPOSURE LIMIT (STEL), 5 MG/M3 (AS OIL MIST) - OSHA PERMISSIBLE EXPOSURE LIMIT (PEL)

VENTILATION
IF MISTS ARE GENERATED, USE ADEQUATE VENTILATION, LOCAL EXHAUST OR ENCLOSURES TO CONTROL BELOW EXPOSURE LIMITS.

RESPIRATOR

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OTHER PRACTICES OR EQUIPMENT USEFUL IN MINIMIZING WORKER EXPOSURE
IF MISTS ARE GENERATED, AND/OR WHEN VENTILATION IS NOT ADEQUATE, WEAR APPROVED RESPIRATOR.

EYE PROTECTION
IF EYE CONTACT IS LIKELY, SAFETY GLASSES WITH SIDE SHIELDS OR CHEMICAL TYPE GOGGLES SHOULD BE WORN.

PROTECTIVE GLOVES
IF PROLONGED OR REPEATED SKIN CONTACT IS LIKELY, OIL IMPERVIOUS GLOVES SHOULD BE WORN. GOOD PERSONAL HYGIENE PRACTICES SHOULD ALWAYS BE FOLLOWED.

HYGIENIC PRACTICES
HYGIENE PRACTICES SHOULD ALWAYS BE FOLLOWED.

Section 09 PHYSICAL CHEMICAL PROPERTIES

	PHYSICAL CHEMICAL PROPERTIES DATA	VALUE	UOM
APPEARANCE	:LIQUID		
BOILING POINT C	:C(F): > 154(310)	154.0000	DEGC
COLOR	:CLEAR RED		
DENSITY	:RELATIVE DENSITY, 15/4 C: 0.86		
EVAPORATION RATE	:NE		
FREEZING POINT	:NE		
MELTING POINT	:NA		
ODOR	:MILD		
ODOR THRESHOLD	:NE		
OTHER TEXT	:SEE BELOW		
PARTITION COEFFICIENT	:> 3.5		
PH VALUE	:NA		
POUR POINT	:C(F): -60(-76)		
SOLUBILITY	:IN WATER: NEGLIGIBLE		
VAPOR DENSITY	:> 2.0		
VAPOR PRESSURE	:20 C:	.1000	MMHG
VISCOSITY	:SEE BELOW		
VOC	:12.00 (WT. %); 0.850 LBS/GAL	12.0000	PCT

ADDITIONAL CHARACTERISTICS (E.G. APPEARANCE AND ODOR)

VISCOSITY

VISCOSITY AT 40 C, CST: 13.5 VISCOSITY AT 100 C, CST:

OTHER TEXT

FLAMMABILITY (SOLIDS): NE

AUTO FLAMMABILITY: NA

EXPLOSIVE PROPERTIES: NA

OXIDIZING PROPERTIES: NA

DMSO EXTRACT, IP-346 (WT.%): 1000 MG/L) INDICATES THAT ADVERSE EFFECTS TO AQUATIC ORGANISMS ARE NOT EXPECTED FROM THIS PRODUCT. BIOACCUMULATION IS UNLIKELY DUE TO THE VERY LOW WATER SOLUBILITY OF THIS PRODUCT, THEREFORE BIOAVAILABILITY TO AQUATIC ORGANISMS IS MINIMAL. THIS PRODUCT IS EXPECTED TO BE INHERENTLY BIODEGRADABLE.

ENVIRONMENTAL FATE

IN THE ABSENCE OF SPECIFIC ENVIRONMENTAL DATA FOR THIS PRODUCT, THIS ASSESSMENT IS BASED ON INFORMATION FOR REPRESENTATIVE PRODUCTS. WHEN RELEASED INTO THE ENVIRONMENT, ADSORPTION TO SEDIMENT AND SOIL WILL BE THE PREDOMINANT BEHAVIOR. AVAILABLE ECOTOXICITY DATA (LL50 >1000 MG/L) INDICATES THAT ADVERSE EFFECTS TO AQUATIC ORGANISMS ARE NOT EXPECTED FROM THIS PRODUCT. BIOACCUMULATION IS UNLIKELY DUE TO THE VERY LOW WATER SOLUBILITY OF THIS PRODUCT, THEREFORE BIOAVAILABILITY TO AQUATIC ORGANISMS IS MINIMAL. THIS PRODUCT IS EXPECTED TO BE INHERENTLY BIODEGRADABLE.

- Section 13 DISPOSAL CONSIDERATIONS

	DISPOSAL INFORMATION AND DATA	Procedure
WASTE DISPOSAL	:SEE BELOW	

DETERMINING APPROPRIATE MEASURES

WASTE DISPOSAL

PRODUCT IS SUITABLE FOR BURNING IN AN ENCLOSED, CONTROLLED BURNER FOR FUEL VALUE. SUCH BURNING MAY BE LIMITED PURSUANT TO THE RESOURCE CONSERVATION AND RECOVERY ACT. IN ADDITION, THE PRODUCT IS SUITABLE FOR PROCESSING BY AN APPROVED RECYCLING FACILITY OR CAN BE DISPOSED OF AT AN APPROPRIATE GOVERNMENT WASTE DISPOSAL FACILITY. USE OF THESE METHODS IS SUBJECT TO USER COMPLIANCE WITH APPLICABLE LAWS AND REGULATIONS AND CONSIDERATION OF PRODUCT CHARACTERISTICS AT TIME OF DISPOSAL. RCRA INFORMATION: THE UNUSED PRODUCT,

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DETERMINING APPROPRIATE MEASURES

IN OUR OPINION, IS NOT SPECIFICALLY LISTED BY THE EPA AS A HAZARDOUS WASTE (40 CFR, PART 261D), NOR IS IT FORMULATED TO CONTAIN MATERIALS WHICH ARE LISTED HAZARDOUS WASTES. IT DOES NOT EXHIBIT THE HAZARDOUS

CHARACTERISTICS OF IGNITABILITY, CORROSIVITY, OR REACTIVITY. THE UNUSED PRODUCT IS NOT FORMULATED WITH SUBSTANCES COVERED BY THE TOXICITY CHARACTERISTIC LEACHING PROCEDURE (TCLP). HOWEVER, USED PRODUCT MAY BE REGULATED.

- Section 14 TRANSPORT INFORMATION

	SHIPPING CLASSIFICATION INFORMATION	Procedure
ADR	:RID/ADR: NOT REGULATED BY RID/ADR.	
DOMESTIC (DOT)	:USA DOT: NOT REGULATED BY USA DOT.	
IATA	:IATA: NOT REGULATED BY IATA.	
OTHER TEXT	:SEE BELOW	
RID	:RID/ADR: NOT REGULATED BY RID/ADR.	
WATER (IMO)	:IMO: NOT REGULATED BY IMO.	

OTHER TRANSPORT INFORMATION

OTHER TEXT
STATIC ACCUMULATOR (50 PICOSIEMENS OR LESS): YES

Section 15 REGULATORY INFORMATION

REGULATIONS AFFECTING MATERIAL
INTERNATIONAL :SEE NOTES

Notes

INTERNATIONAL

EU LABELING:
PRODUCT IS NOT DANGEROUS AS DEFINED BY THE EUROPEAN UNION DANGEROUS SUBSTANCES/PREPARATIONS DIRECTIVES.
SYMBOL: NOT APPLICABLE.
RISK PHRASE(S): NOT APPLICABLE.
SAFETY PHRASE(S): S24-62.
AVOID CONTACT WITH SKIN. IF SWALLOWED, DO NOT INDUCE VOMITING; SEEK MEDICAL ADVICE IMMEDIATELY AND SHOW THIS CONTAINER OR LABEL.
CONTAINS: BASE OIL-UNSPECIFIED.

OSHA :SEE NOTES

Notes

OSHA

PRODUCT ASSESSED IN ACCORDANCE WITH OSHA 29 CFR 1910.1200 AND DETERMINED TO BE HAZARDOUS.
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Notes

SARA :SEE NOTES

Notes

SARA

THIS PRODUCT CONTAINS NO "EXTREMELY HAZARDOUS SUBSTANCES".
SARA (311/312) REPORTABLE HAZARD CATEGORIES: CHRONIC ACUTE
THIS PRODUCT CONTAINS NO CHEMICALS SUBJECT TO THE SUPPLIER NOTIFICATION REQUIREMENTS OF SARA (313) TOXIC RELEASE PROGRAM. THE FOLLOWING PRODUCT INGREDIENTS ARE CITED ON THE LISTS BELOW:

CHEMICAL NAME	CAS NUMBER
TRIPHENYL PHOSPHATE (0.15%)	115-86-6
22	

--- REGULATORY LISTS SEARCHED ---

1=ACGIH ALL	6=IARC 1	11=TSCA 4	16=CA P65 CARC
21=LA RTK			
2=ACGIH A1	7=IARC 2A	12=TSCA 5A2	17=CA P65 REPRO
22=MI 293			
3=ACGIH A2	8=IARC 2B	13=TSCA 5E	18=CA RTK
23=MN RTK			

4=NTP CARC 9=OSHA CARC 14=TSCA 6 19=FL RTK
24=NJ RTK
5=NTP SUS 10=OSHA Z 15=TSCA 12B 20=IL RTK
25=PA RTK
26=RI RTK
CODE KEY: CARC=CARCINOGEN; SUS=SUSPECTED CARCINOGEN;
REPRO=REPRODUCTIVE

TSCA :ALL COMPONENTS COMPLY WITH TSCA.

Section 16 OTHER INFORMATION

NFPA Ratings	NPCA-HMIS Ratings	Tier II	Tier II Composition
Health Hazard :0	Health :	Fire :Y	Pure :N
Fire Hazard :1	Flammability:	Reactivity:N	Mix :Y
Reactivity :0	Reactivity :	Pressure :N	Solid :N
Special Hazard :	:	Acute :Y	Liquid :Y
	:	Chronic :N	Gas :N
			Trade Secret:

ADDITIONAL INFORMATION

VENDOR CONTROL NUMBER = 017256
DISCLAIMER

LEGALLY REQUIRED INFORMATION IS GIVEN IN ACCORDANCE
WITH APPLICABLE INFORMATION GIVEN HEREIN IS OFFERED IN
GOOD FAITH AS ACCURATE, BUT WITHOUT GUARANTEE.

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ADDITIONAL INFORMATION

CONDITIONS OF USE AND SUITABILITY OF THE PRODUCT FOR PARTICULAR USES ARE BEYOND OUR CONTROL; ALL RISKS OF USE OF THE PRODUCT ARE THEREFORE ASSUMED BY THE USER AND WE EXPRESSLY DISCLAIM ALL WARRANTIES OF EVERY KIND AND NATURE, INCLUDING WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE IN RESPECT TO THE USE OR SUITABILITY OF THE PRODUCT. NOTHING IS INTENDED AS A RECOMMENDATION FOR USES WHICH INFRINGE VALID PATENTS OR AS EXTENDING ANY LICENSE UNDER VALID PATENTS. APPROPRIATE WARNINGS AND SAFE HANDLING PROCEDURES SHOULD BE PROVIDED TO HANDLERS AND USERS. USE OR RETRANSMISSION OF THE INFORMATION CONTAINED HEREIN IN ANY OTHER FORMAT THAN THE FORMAT AS PRESENTED IS STRICTLY PROHIBITED. MOBIL NEITHER REPRESENTS NOR WARRANTS THAT THE FORMAT, CONTENT OR PRODUCT FORMULAS CONTAINED IN THIS DOCUMENT COMPLY WITH THE LAWS OF ANY OTHER COUNTRY EXCEPT THE UNITED STATES OF AMERICA.

OTHER TEXT

7343127-00 UNIVIS J 13
USE: HYDRAULIC OIL

NOTE:

PRODUCTS OF EXXON MOBIL CORPORATION AND ITS AFFILIATED COMPANIES ARE NOT FORMULATED TO CONTAIN PCBS.

HEALTH STUDIES HAVE SHOWN THAT MANY HYDROCARBONS POSE POTENTIAL HUMAN HEALTH RISKS WHICH MAY VARY FROM PERSON TO PERSON. INFORMATION PROVIDED ON THIS MSDS REFLECTS INTENDED USE. THIS PRODUCT SHOULD NOT BE USED FOR OTHER APPLICATIONS. IN ANY CASE, THE FOLLOWING ADVICE SHOULD BE CONSIDERED:

PRECAUTIONARY LABEL TEXT:
CONTAINS LOW VISCOSITY OIL
WARNING!

MAY CAUSE SKIN IRRITATION ON PROLONGED, REPEATED CONTACT. LOW VISCOSITY MATERIAL-IF SWALLOWED, MAY BE ASPIRATED AND CAN CAUSE SERIOUS OR FATAL LUNG DAMAGE. EXCESSIVE EXPOSURE MAY RESULT IN EYE, SKIN OR RESPIRATORY IRRITATION. AVOID PROLONGED, REPEATED CONTACT WHICH MAY DEFAT SKIN.

FIRST AID:

IN CASE OF CONTACT, WASH SKIN WITH SOAP AND WATER.
REMOVE CONTAMINATED CLOTHING. CALL A PHYSICIAN IF
IRRITATION PERSISTS. WASH OR DISPOSE OF CONTAMINATED
CLOTHING. IF SWALLOWED, SEEK IMMEDIATE MEDICAL
ATTENTION. DO NOT INDUCE VOMITING. ONLY INDUCE
VOMITING AT THE INSTRUCTION OF A PHYSICIAN.

.
FOR INDUSTRIAL USE ONLY. NOT INTENDED OR SUITABLE FOR
USE IN OR AROUND A HOUSEHOLD OR DWELLING.

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ADDITIONAL INFORMATION

.
REFER TO PRODUCT MATERIAL SAFETY DATA SHEET FOR
FURTHER SAFETY AND HEALTH INFORMATION.

.
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FOR INTERNAL USE ONLY: MHC: 1* 1* 1* 1* 1*, MPPEC: C,
TRN: 7343127-00, CMCS97:
97Q043, REQ: PS+C, SAFE USE: L
EHS APPROVAL DATE: 28NOV2001

- End of Report -



SAFETY DATA SHEET

SDS00459
VAN-SOL 53

Preparation Date: 18/Jan/2021

Version: 1

1. IDENTIFICATION

Product identifier

Product Name VAN-SOL 53

Other means of identification

SDS Number SDS00459

Synonyms None

Recommended use of the chemical and restrictions on use

Recommended Use Solvent

Restricted Uses No information available

Initial Supplier Identifier

Univar Canada Ltd.
9800 Van Horne Way
Richmond, BC V6X 1W5
Telephone: 1-866-686-4827

Emergency telephone number

24 Hour Emergency Phone Number (CANUTEC): 1-888-226-8832 (1-888-CAN-UTEC)

2. HAZARD IDENTIFICATION

Hazardous Classification of the substance or mixture

Flammable liquids	Category 3
Germ cell mutagenicity	Category 1B
Carcinogenicity	Category 1B
Specific target organ toxicity (single exposure)	Category 3
Aspiration toxicity	Category 1

Label elements

Hazard pictograms**Signal Word: Danger****Hazard statements**

Flammable liquid and vapor
May be fatal if swallowed and enters airways
May cause respiratory irritation
May cause drowsiness or dizziness
Suspected of causing cancer
May cause genetic defects

Precautionary Statements**Prevention**

Obtain special instructions before use
Do not handle until all safety precautions have been read and understood
Wear protective gloves/protective clothing/eye protection/face protection
Ground and bond container and receiving equipment
Use non-sparking tools
Take action to prevent static discharges
Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking
Keep container tightly closed
Use explosion-proof electrical/ ventilating / lighting/ equipment

Response

IF exposed or concerned: Get medical advice/attention
IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water or shower
IF SWALLOWED: Immediately call a POISON CENTER or doctor
Do NOT induce vomiting

In case of fire: Use dry sand, dry chemical or alcohol-resistant foam to extinguish

Storage

Store locked up
Store in a well-ventilated place. Keep cool

Disposal

Disposal of all wastes must be done in accordance with municipal, provincial and federal regulations

May be harmful in contact with skin Toxic to aquatic life with long lasting effects

Unknown acute toxicity No information available

3. COMPOSITION/INFORMATION ON INGREDIENTS**Substance**

Chemical Name	CAS No	Weight-% (W/W)	Synonyms
Light aromatic solvent naphtha (petroleum)	64742-95-6	80-100	Light aromatic solvent naphtha (petroleum)

Notes:

The Light Aromatic Naphtha (CAS 64742-95-6) contains Pseudocumene (1,2,4-Trimethylbenzene) cas no 95-63-6 (<32%), Cumene, cas no 98-82-8 (<1.1%) and Xylene, cas no 1330-20-7 (<2.2%) as part of its composition. The actual percentage concentration has been withheld as a trade secret.

4. FIRST-AID MEASURES

Description of first aid measures

General advice

Show this safety data sheet to the doctor in attendance. IF exposed or concerned: Get medical advice/attention. Immediate medical attention is required.

Inhalation

Aspiration into lungs can produce severe lung damage. If breathing has stopped, give artificial respiration. Get medical attention immediately. Remove to fresh air. Avoid direct contact with skin. Use barrier to give mouth-to-mouth resuscitation. If breathing is difficult, (trained personnel should) give oxygen. Delayed pulmonary edema may occur.

Eye contact

Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Keep eye wide open while rinsing. Do not rub affected area.

Skin contact

Wash off immediately with soap and plenty of water while removing all contaminated clothes and shoes.

Ingestion

ASPIRATION HAZARD IF SWALLOWED - CAN ENTER LUNGS AND CAUSE DAMAGE. Do NOT induce vomiting. If vomiting occurs spontaneously, keep head below hips to prevent aspiration. Clean mouth with water and drink afterwards plenty of water. Never give anything by mouth to an unconscious person. Get immediate medical advice/attention.

Self-protection of the first aider

Remove all sources of ignition. Ensure that medical personnel are aware of the material(s) involved, take precautions to protect themselves and prevent spread of contamination. Use personal protective equipment as required. See section 8 for more information. Avoid direct contact with skin. Use barrier to give mouth-to-mouth resuscitation.

Most important symptoms and effects, both acute and delayed:

May cause slight eye irritation Small amounts of liquid aspirated into the respiratory system during ingestion or from vomiting may cause mild to severe pulmonary injury and possibly death. Respiratory irritation signs and symptoms may include a temporary burning sensation of the nose and throat, coughing and difficulty breathing. If material enters lungs, signs and symptoms may include coughing, choking, wheezing, difficulty in breathing, chest congestion, shortness of breath and fever. High concentrations may cause central nervous system depression resulting in headaches, dizziness and nausea; continued inhalation may result in unconsciousness and/or death. Repeated exposure may cause skin dryness or cracking

Indication of any immediate medical attention and special treatment needed:**Note to physicians**

Treatment based on sound judgment of physician and individual reactions of patient. Causes central nervous system depression. Dermatitis may result from prolonged or repeated exposure. Potential for chemical pneumonitis. Consider: gastric lavage with protected airway, administration of activated charcoal.

5. FIRE-FIGHTING MEASURES

Suitable Extinguishing Media

Dry chemical. Carbon dioxide (CO₂). Water spray. Alcohol resistant foam.

Unsuitable extinguishing media CAUTION: Use of water spray when fighting fire may be inefficient.

Specific hazards arising from the substance or mixture

Product will float and can be reignited on surface of water. Combustible. Avoid spraying water directly into storage containers due to danger of boil over. Do not use water except as a fog. Containers exposed to direct flame contact should be cooled with large quantities of water as needed to prevent weakening of container structure. Shut off fuel to fire. Either the liquid or vapor may settle in low areas or travel along the ground or surface to ignition sources where they may ignite, flashback, or explode.

Hazardous combustion products

Material does not decompose at ambient temperatures.

Special protective equipment and precautions for fire-fighters

Firefighters should wear self-contained breathing apparatus and full firefighting turnout gear. Use personal protection equipment.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

Evacuate personnel to safe areas. Use personal protective equipment as required. See section 8 for more information. Avoid contact with skin, eyes or clothing. Ensure adequate ventilation. Keep people away from and upwind of spill/leak. ELIMINATE all ignition sources (no smoking, flares, sparks or flames in immediate area). Pay attention to flashback. Take precautionary measures against static discharges. All equipment used when handling the product must be grounded. Do not touch or walk through spilled material.

Environmental precautions

Refer to protective measures listed in Sections 7 and 8. Prevent further leakage or spillage if safe to do so. Prevent product from entering drains.

Methods and materials for containment and cleaning up

Stop leak if you can do it without risk. Do not touch or walk through spilled material. A vapor suppressing foam may be used to reduce vapors. Dike far ahead of spill to collect runoff water. Keep out of drains, sewers, ditches and waterways. Absorb with earth, sand or other non-combustible material and transfer to containers for later disposal.

Take precautionary measures against static discharges. Dam up. Soak up with inert absorbent material. Pick up and transfer to properly labeled containers.

7. HANDLING AND STORAGE

Precautions for safe handling

Flammable. For industrial use only. Handle and open containers with care. Avoid contact with eyes, skin and clothing. Do not ingest. Avoid inhalation of chemical. DO NOT handle or store near an open flame, heat, or other sources of ignition. Fixed equipment as well as transfer containers and equipment should be grounded to prevent accumulation of static charge. DO NOT pressurize, cut, heat, or weld containers. Empty containers may contain hazardous product residues. Keep the containers closed when not in use. Protect against physical damage. Use appropriate personnel

protective equipment. Handling Temperature: Ambient. Static Accumulator: This material is a static accumulator. A liquid is typically considered a nonconductive, static accumulator if its conductivity is below 100 pS/m (100x10E-12 Siemens per meter) and is considered a semi conductive, static accumulator if its conductivity is below 10,000 pS/m. Whether a liquid is nonconductive or semi conductive, the precautions are the same. A number of factors, for example liquid temperature, presence of contaminants, anti-static additives and filtration can greatly influence the conductivity of a liquid. Avoid prolonged contact with natural, butyl or nitrile rubbers.

Conditions for safe storage, including any incompatibilities

Store in a cool, dry, well ventilated area, away from heat and ignition sources. Place away from incompatible materials. Use explosion-proof ventilation to prevent vapor accumulation. Store at ambient temperature. Keep containers tightly closed. Containers of this material may be hazardous when empty since they retain product residues (vapors, liquid). Suitable Containers/Packing: Railcars; Tank Trucks; Barges; Drums; Tankers. Suitable Materials and Coatings: Carbon steel; Stainless steel; Copper Bronze; Inorganic Zinc Coatings; Epoxy Phenolic; Polyamide Epoxy; Amine Epoxy; Viton. Unsuitable Materials and Coatings: Vinyl Coatings; Butyl rubber; Natural rubber; Ethylene-propylene-diene monomer (EPDM); Polyethylene; Polystyrene; Polypropylene; PVC; Polyacrylonitrile.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

Exposure Limits

This product, as supplied, does not contain any hazardous materials with occupational exposure limits established by the region specific regulatory bodies.

Chemical Name	Alberta OEL	British Columbia OEL	Ontario	Quebec OEL	Exposure Limit - ACGIH	Immediately Dangerous to Life or Health - IDLH
Light aromatic solvent naphtha (petroleum) 64742-95-6	Not available	Not available	Not available	Not available	Not available	Not available

Consult local authorities for recommended exposure limits

Appropriate engineering controls

Engineering controls

Use explosion proof equipment. Local exhaust ventilation is generally preferred because it can control the emissions of the contaminant at its source, preventing dispersion of it into the general work area.

Individual protection measures, such as personal protective equipment

Eye/face protection

Chemical safety goggles and/or full face shield to protect eyes and face, if product is handled such that it could be splashed into eyes.

Hand protection

Nitrile gloves. Viton gloves. If prolonged or repeated contact is likely, chemical-resistant gloves are recommended. If contact with forearms is likely, wear gauntlet-style gloves.

Skin and body protection

Wear suitable protective clothing. Long sleeved clothing. Chemical resistant apron. Antistatic boots.

Respiratory protection

If engineering controls do not maintain airborne contaminant concentrations at a level which is adequate to protect

worker health, an approved respirator may be appropriate. Respirator selection, use, and maintenance must be in accordance with regulatory requirements, if applicable. Types of respirators to be considered for this material include: Half-face filter respirator. For high airborne concentrations, use an approved supplied-air respirator, operated in positive pressure mode. Supplied air respirators with an escape bottle may be appropriate when oxygen levels are inadequate, gas/vapor warning properties are poor, or if air purifying filter capacity/rating may be exceeded.

General hygiene considerations

Do not eat, drink or smoke when using this product. Contaminated work clothing should not be allowed out of the workplace. Regular cleaning of equipment, work area and clothing is recommended. Wash hands before breaks and immediately after handling the product.

9. PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

Appearance

Physical state	Liquid
Color	Colorless
Odor	Aromatic
Odor threshold	No information available

<u>PROPERTIES</u>	<u>Values</u>	<u>Remarks • Method</u>
pH	No data available	None known
Melting point / freezing point	-58 °C / -72 °F	(ASTM D2386)
Initial boiling point/boiling range	161 °C / 322 °F	
Flash point	46 °C / 115 °F	ASTM D56
Evaporation rate	0.27	
Flammability (solid, gas)	No data available	None known
Flammability Limit in Air		
Upper flammability limit:	6.2	
Lower flammability limit:	0.9	
Vapor pressure	0.262 kPa (1.97 mm Hg) at 20°C; 0.815 kPa (6.13 mm Hg) at 38°C	
Relative vapor density	(Air = 1): 4.2 at 101 kPa	
Specific Gravity	0.874 @ 15.6°C	
Water solubility	Negligible in water.	
Solubility in other solvents	No data available	
Partition coefficient	No data available	
Autoignition temperature	485 °C / 905 °F	
Decomposition temperature	No data available	None known
Kinematic viscosity	0.75 cSt (0.75 mm ² /sec) @ 40°C	
Dynamic viscosity	No data available	None known
Explosive properties	No information available.	
Oxidizing properties	No information available.	
Molecular weight	121	
VOC Percentage Volatility	No information available	
Liquid Density	No information available	
Bulk density	No information available	

10. STABILITY AND REACTIVITY

Reactivity/Chemical Stability

Stable under normal conditions

Possibility of hazardous reactions

Subject to static discharge hazards.

Hazardous polymerization

Will not occur.

Conditions to avoid

Avoid excessive heat, open flames and all ignition sources.

Incompatible materials

Strong oxidizing agents. Nitric acid. Sulphuric acid.

Hazardous decomposition products

Material does not decompose at ambient temperatures.

11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure**Inhalation**

Respiratory irritation signs and symptoms may include a temporary burning sensation of the nose and throat, coughing and difficulty breathing. If material enters lungs, signs and symptoms may include coughing, choking, wheezing, difficulty in breathing, chest congestion, shortness of breath and fever. High concentrations may cause central nervous system depression resulting in headaches, dizziness and nausea; continued inhalation may result in unconsciousness and/or death.

Eye contact

May cause slight eye irritation.

Skin contact

Specific test data for the substance or mixture is not available.

Ingestion

Small amounts of liquid aspirated into the respiratory system during ingestion or from vomiting may cause mild to severe pulmonary injury and possibly death. Aspiration into the lungs may occur during ingestion or vomiting, resulting in lung injury.

Information on toxicological effects**Symptoms**

(based on components). Long term exposure of xylene may cause nervous system effects with symptoms such as headaches, irritability, depression, insomnia, agitation, extreme tiredness, tremors, impaired concentration and short term memory. The blood platelet count may be reduced on exposure to xylene which is reversible when exposure is stopped. Repeated contact can produce dermatitis (dryness and cracking). Chronic inhalation exposure to xylene causes mid-frequency hearing loss in laboratory animals. Xylene reacts synergistically with n-hexane to enhance hearing loss. Reduced body weight was observed in male rats during one test. Very high exposure (confined spaces / abuse) to light hydrocarbons may result in abnormal heart rhythm (arrhythmias). Concurrent high stress levels and/or co-exposure to high levels of hydrocarbons (above occupational exposure limits), and to heart-stimulating substances like epinephrine, nasal decongestants, asthma drugs, or cardiovascular drugs may initiate arrhythmias. Health studies have shown that many petroleum hydrocarbons pose potential human health risks which may vary from person to person. As a precaution, exposure to liquids, vapors, mists or fumes should be minimized.

Numerical measures of toxicity**Acute toxicity**

The following values are calculated based on chapter 3.1 of the GHS document .

ATEmix (oral) 8,400.00 mg/kg
ATEmix (dermal) 2,002.00 mg/kg

Unknown acute toxicity No information available

Chemical Name	Oral LD50	Dermal LD50	Inhalation LC50
Light aromatic solvent naphtha (petroleum) 64742-95-6	= 8400 mg/kg (Rat)	> 2000 mg/kg (Rabbit)	= 3400 ppm (Rat) 4 h

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Skin corrosion/irritation

No information available.

Serious eye damage/eye irritation

May cause slight eye irritation.

Respiratory or skin sensitization

No information available.

Germ cell mutagenicity

Classification based on data available for ingredients. Contains a known or suspected mutagen.

Carcinogenicity

This product contains ethylbenzene. The International Agency for Research on Cancer has evaluated ethylbenzene and classified it as a possible human carcinogen (Group 2B) based on sufficient evidence for carcinogenicity in experimental animals, but inadequate evidence for cancer in exposed humans.

Chemical Name	ACGIH	IARC	NTP	OSHA
Light aromatic solvent naphtha (petroleum) 64742-95-6	Not available	Not available	Not available	Not available

Reproductive toxicity

Although abnormal sperm were observed after an interperitoneal injection in rats, xylene did not produce reproductive effects. An increase in menstrual disorders has been reported in women exposed to organic solvents but it is not possible to attribute this to xylene alone. Xylene has produced fetotoxic effects (delayed ossification and behavioral effects) in animals, in the absence of maternal toxicity. One study found that significant fetal effects at doses that did not cause high maternal toxicity included reduced fetal weight and increased incidence of malformed fetuses. In other studies where rats and mice were exposed by inhalation or ingestion, harmful effects in the offspring (teratogenicity, embryotoxicity and/or fetotoxicity) were either not observed or were observed in the presence of significant harmful effects in the mothers. There have been a few studies investigating the mutagenic potential of xylenes. These studies (induction of sister chromatid exchanges and chromosomal aberrations in human lymphocytes (white blood cells)) were negative.

Specific target organ systemic toxicity - single exposure

May cause drowsiness or dizziness. May cause respiratory irritation.

Specific target organ systemic toxicity - repeated exposure

No information available.

Aspiration hazard

May be fatal if swallowed and enters airways.

12. ECOLOGICAL INFORMATION

Ecotoxicity

Chemical Name	Ecotoxicity - Freshwater Algae Data	Ecotoxicity - Fish Species Data	Toxicity to microorganisms	Crustacea
Light aromatic solvent naphtha (petroleum) 64742-95-6	Not available	9.22 mg/L LC50 (Oncorhynchus mykiss) 96 h	Not available	EC50: =6.14mg/L (48h, Daphnia magna)

Persistence and degradability No information available.

Bioaccumulation No information available.

Chemical Name	Partition coefficient
Light aromatic solvent naphtha (petroleum) 64742-95-6	Not available

Other adverse effects No information available.

13. DISPOSAL CONSIDERATIONS

Waste treatment methods

Should not be released into the environment. Dispose of in accordance with local regulations. Dispose of waste in accordance with environmental legislation.

Empty containers should be recycled or disposed of through an approved waste management facility. Empty containers are hazardous, may contain flammable/explosive dusts, liquid residue or vapors. Do not cut, drill, grind, weld or perform similar operations on or near containers.

14. TRANSPORT INFORMATION

TDG (Canada):

UN Number UN1268
Shipping name PETROLEUM DISTILLATES, N.O.S.
Class 3
Packing Group III
Marine pollutant Yes.
Note Not regulated under the Transportation of Dangerous Goods Act when transported by road or rail in packagings or containers of 450 L or less (waste excluded). Marine Pollutant designation is applicable only if shipped over water.

DOT (U.S.)

UN Number UN1268
Shipping name PETROLEUM DISTILLATES, N.O.S.
Class 3
Packing Group III
Marine pollutant Not available

15. REGULATORY INFORMATION

Safety, health and environmental regulations/legislation specific for the substance or mixture

U.S. Regulatory Rules

Chemical Name	CERCLA/SARA - Section 302:	SARA (311, 312) Hazard Class:	CERCLA/SARA - Section 313:

Light aromatic solvent naphtha (petroleum) - 64742-95-6	Not Listed	Not Listed	Not Listed
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International Inventories

TSCA All components of this product are either on the Toxic Substances Control Act (TSCA) Inventory List or exempt.

DSL/NDSL All components of this product are either on the Domestic Substances List (DSL), the Non-Domestic Substances List (NDSL) or exempt.

Legend:

TSCA - United States Toxic Substances Control Act Section 8(b) Inventory
DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List

16. OTHER INFORMATION

NFPA:	Health hazards 2	Flammability 2	Instability 0	Physical and chemical properties -
HMIS:	Health hazards 2 *	Flammability 2	Physical hazards 0	Personal protection X

Legend Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

TWA	TWA (time-weighted average)	STEL	STEL (Short Term Exposure Limit)
Ceiling	Maximum limit value	*	Skin designation

Prepared By: The Environment, Health and Safety Department of Univar Canada Ltd.

Preparation Date: 18/Jan/2021

Revision Date: 18/Jan/2021

Disclaimer

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End of Safety Data Sheet

Dispose of contents and container in accordance with local and national regulations.

3 **Aliphatic Hydrocarbon**

Aliphatic Hydrocarbon	64742-47-8	50-70%	Flammable Liquid Category 3 Aspiration Toxicity Category 1 Specific Target Organ Toxicity Single Exposure Category 3 (nervous system effects)
Petroleum Base Oil	Mixture	30-35%	Not Hazardous
Carbon Dioxide	124-38-9	2-3%	Simple Asphyxiant

1 - First Aid Measures

Inhalation: Aspiration Hazard. DO NOT induce vomiting. Call physician, poison control center or the WD-40 Safety Hotline at 1-888-324-7596 immediately.

Eye Contact: Flush thoroughly with water. Remove contact lenses if present after the first 5 minutes and continue flushing for several more minutes. Get medical attention if irritation persists.

Skin Contact: Wash with soap and water. If irritation develops and persists, get medical attention.

Ingestion: If irritation is experienced, move to fresh air. Get medical attention if irritation or other symptoms develop and persist.

Other: Harmful or fatal if swallowed. If swallowed, may be aspirated and cause lung damage. May cause eye irritation. Inhalation of mists or vapors may cause nasal and respiratory tract irritation and central nervous system effects such as headache, dizziness and nausea. Skin contact may cause drying of the skin.

Medical Attention: Immediate medical attention is needed for ingestion.

2 - Fire and Explosion Hazards

Flammable: Use water fog, dry chemical, carbon dioxide or foam. Do not use water jet or flooding amounts of water. Burning product will float on the surface and spread fire.

Pressurized: Contents under pressure. Keep away from ignition sources and open flames. Exposure of containers to extreme heat and flames can cause them to rupture often with violent force. Vapors are heavier than air and may travel along surfaces to remote ignition sources and flash back. Combustion will produce oxides of carbon and hydrocarbons.

Firefighting: Firefighters should always wear positive pressure self-contained breathing apparatus and full protective clothing. Cool fire-exposed containers with water. Use shielding to protect against bursting containers.

6 - Release, Reaction, and Material

Leakage: Wear appropriate protective clothing (see Section 8). Eliminate all sources of ignition and ventilate area.

Spills: Leaking cans should be placed in a plastic bag or open pail until the pressure has dissipated. Contain and collect liquid with an inert absorbent and place in a container for disposal. Clean spill area thoroughly. Report spills to authorities as required.

7 - Personal Protection

Eye Protection: Avoid contact with eyes. Avoid prolonged contact with skin. Avoid breathing vapors or aerosols. Use only with adequate ventilation. Keep away from heat, sparks, pilot lights, hot surfaces and open flames. Unplug electrical tools, motors and appliances before spraying or bringing the can near any source of electricity. Electricity can burn a hole in the can and cause contents to burst into flames. To avoid serious burn injury, do not let the can touch battery terminals, electrical connections on motors or appliances or any other source of electricity. Wash thoroughly with soap and water after handling. Keep containers closed when not in use. Keep out of the reach of children. Do not puncture, crush or incinerate containers, even when empty.

Store in a cool, well-ventilated area, away from incompatible materials. Do not store above 120°F or in direct sunlight. U.F.C (NFPA 30B) Level 3 Aerosol. Store away from oxidizers.

10 – Physical and Chemical Properties

Aliphatic Hydrocarbon	1200 mg/m3 TWA (manufacturer recommended)
Petroleum Base Oil	5 mg/m3 TWA (Inhalable) ACGIH TLV (as mineral oil) 5 mg/m3 TWA, 10 mg/m3 STEL Canada- Québec (as oil mist, mineral) 5 mg/m3 TWA, 10 mg/m3 STEL Canada- Ontario (as oil mist, mineral) 1 mg/m3 TWA British Columbia (as Oil mist-mineral, severely refined)
Carbon Dioxide	5000 ppm TWA, 30,000 ppm STEL ACGIH TLV 5000 ppm TWA, 30,000 ppm STEL Canada-Ontario 5000 ppm TWA, 30,000 ppm STEL Canada-Québec 5000 ppm TWA, 15,000 ppm STEL British Columbia

Use in a well-ventilated area.

Avoid eye contact. Always spray away from your face.

Avoid prolonged skin contact. Chemical resistant gloves recommended for operations where skin contact is likely.

None needed for normal use with adequate ventilation.

Use adequate general and local exhaust ventilation to maintain exposure levels below that occupational exposure limits.

Safety goggles recommended where eye contact is possible.

Wear chemical resistant gloves.

None required if ventilation is adequate. If the occupational exposure limits are exceeded, wear a NIOSH approved organic vapor/particulate or supplied air respirator in accordance with local and national regulations. Respirator selection and use should be based on contaminant type, form and concentration. Follow applicable regulations and good Industrial Hygiene practice.

Wash with soap and water after handling.

10 – Physical and Chemical Properties

Appearance:	Light green to amber liquid	Flammable Limits: (Solvent Portion)	LEL: 0.6% UEL: 8%
Odor:	Mild petroleum odor	Vapor Pressure:	95-115 PSI @ 70°F
Odor Threshold:	Not established	Vapor Density:	Greater than 1 (air=1)
pH:	Not Applicable	Relative Density:	0.8 – 0.82 @ 60°F
Melting/Freezing Point:	Not established	Solubilities:	Insoluble in water
Boiling Point/Range:	361 - 369°F (183 - 187°C)	Partition Coefficient; n-octanol/water:	Not established
Flash Point:	122°F (49°C) Tag Open Cup (liquid)	Autoignition Temperature:	Not established
Evaporation Rate:	Not established	Decomposition Temperature:	Not established
Flammability (solid, gas):	Flammable Aerosol	Viscosity:	2.79-2.96 cSt @ 100°F
VOC:	65%	Pour Point:	-63°C (-81.4°F) ASTM D-97

10 – Physical and Chemical Properties

Not reactive under normal conditions

Stable

May react with strong oxidizers generating heat.

Avoid heat, sparks, flames and other sources of ignition. Do not puncture or incinerate containers.

Strong oxidizing agents.

Carbon monoxide and carbon dioxide.

11 –

High concentrations may cause nasal and respiratory irritation and central nervous system effects such as headache, dizziness and nausea. Intentional abuse may be harmful or fatal.

Prolonged and/or repeated contact may produce mild irritation and defatting with possible dermatitis.

Contact may be irritating to eyes. May cause redness and tearing.

This product has low oral toxicity. Swallowing may cause gastrointestinal irritation, nausea, vomiting and diarrhea. This product is an aspiration hazard. If swallowed, can enter the lungs and may cause chemical pneumonitis, severe lung damage and death.

None expected.

None of the components are listed as a carcinogen or suspect carcinogen by IARC, NTP, ACGIH or OSHA.

None of the components is considered a reproductive hazard.

Acute Toxicity Estimates: Oral > 5,000 mg/kg; Dermal >2,000 mg/kg based on an assessment of the ingredients. This product is not classified as toxic by established criteria. It is an aspiration hazard.

1 –

No specific aquatic toxicity data is currently available; however components of this product are not expected to be harmful to aquatic organisms

Components are readily biodegradable.

Bioaccumulation is not expected based on an assessment of the ingredients.

No data available

None known

13 –

Aerosol containers should not be punctured, compacted in home trash compactors or incinerated. Empty containers may be disposed of through normal waste management options. Dispose of all waste product, absorbents, and other materials in accordance with applicable Federal, state and local regulations.

1 –

DOT Surface Shipping Description: UN1950, Aerosols, 2.1 Ltd. Qty

(Note: Shipping Papers are not required for Limited Quantities unless transported by air or vessel – each package must be marked with the Limited Quantity Mark)

Canadian TDG Classification: Limited Quantity

IMDG Shipping Description: UN1950, Aerosols, 2.1, LTD QTY

ICAO Shipping Description: UN1950, Aerosols, flammable, 2.1

NOTE: WD-40 Company does not test aerosol cans to assure that they meet the pressure and other requirements for transport by air. We do not recommend that our aerosol products be transported by air.

1 – R

This product contains the following chemicals that are listed on the NPRI Substance List: Aliphatic Hydrocarbon (64742-47-8) 50-70%

All of the ingredients are listed on the Canadian Domestic Substances List or exempt from notification.

16 –

M **R**
- 1 **R**, **R** - **R**, **R** - 0 **R**

Revision Date: August 2, 2021

Supersedes: April 29, 2020

Prepared by: Industrial Health & Safety Consultants, Inc. Shelton, CT, USA

Reviewed by: I. Kowalski

Regulatory Affairs Dept.

1014100/No.0084106



SAFETY DATA SHEET

1. Identification

Product identifier White Lithium Grease

Other means of identification
Product Code No. 03080 (Item# 1003341)

Recommended use Lubricating grease

Recommended restrictions None known.

Manufacturer/Importer/Supplier/Distributor information
Manufactured or sold by:

Company name CRC Industries, Inc.
Address 885 Louis Dr.
Warminster, PA 18974 US

Telephone

General Information 215-674-4300
Technical Assistance 800-521-3168
Customer Service 800-272-4620
24-Hour Emergency 800-424-9300 (US)
(CHEMTREC) 703-527-3887 (International)
Website www.crcindustries.com

2. Hazard(s) identification

Physical hazards Flammable aerosols Category 1
Gases under pressure Liquefied gas

Health hazards Skin corrosion/irritation Category 2
Serious eye damage/eye irritation Category 2B
Reproductive toxicity (fertility) Category 2
Specific target organ toxicity, single exposure Category 3 narcotic effects
Aspiration hazard Category 1

Environmental hazards Hazardous to the aquatic environment, acute hazard Category 2
Hazardous to the aquatic environment, long-term hazard Category 2

OSHA defined hazards Not classified.

Label elements



Signal word

Danger

Hazard statement

Extremely flammable aerosol. Contains gas under pressure; may explode if heated. May be fatal if swallowed and enters airways. Causes skin irritation. Causes eye irritation. May cause drowsiness or dizziness. Suspected of damaging fertility. Toxic to aquatic life with long lasting effects.

Precautionary statement

Prevention

Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Keep away from heat/sparks/open flames/hot surfaces. - No smoking. Do not spray on an open flame or other ignition source. Pressurized container: Do not pierce or burn, even after use. Do not apply while equipment is energized. Extinguish all flames, pilot lights and heaters. Vapors will accumulate readily and may ignite. Use only with adequate ventilation; maintain ventilation during use and until all vapors are gone. Open doors and windows or use other means to ensure a fresh air supply during use and while product is drying. If you experience any symptoms listed on this label, increase ventilation or leave the area. Avoid breathing mist or vapor. Wash thoroughly after handling. Wear protective gloves/protective clothing/eye protection/face protection. Avoid release to the environment.

Response

If swallowed: Immediately call a poison center/doctor. Do NOT induce vomiting. If on skin: Wash with plenty of water. If skin irritation occurs: Get medical advice/attention. Take off contaminated clothing and wash before reuse. If inhaled: Remove person to fresh air and keep comfortable for breathing. Call a poison center/doctor if you feel unwell. If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention. If exposed or concerned: Get medical advice/attention. Collect spillage.

Storage

Store in a well-ventilated place. Store locked up. Protect from sunlight. Do not expose to temperatures exceeding 50°C/122°F. Exposure to high temperature may cause can to burst.

Disposal

Dispose of contents/container in accordance with local/regional/national regulations.

Hazard(s) not otherwise classified (HNOC)

Static accumulating flammable liquid can become electrostatically charged even in bonded and grounded equipment. Sparks may ignite liquid and vapor. May cause flash fire or explosion.

3. Composition/information on ingredients

Mixtures

Chemical name	Common name and synonyms	CAS number	%
liquefied petroleum gas		68476-86-8	30 - 40
2-methylpentane		107-83-5	20 - 30
distillates (petroleum), hydrotreated heavy naphthenic		64742-52-5	10 - 20
naphtha (petroleum), hydrotreated light		64742-49-0	10 - 20
n-hexane		110-54-3	3 - 5
zinc oxide		1314-13-2	< 1
2,2-dimethylbutane		75-83-2	< 0.3
2,3-dimethylbutane		79-29-8	< 0.3
3-methylpentane		96-14-0	< 0.3
calcium bis(dinonylnaphthalenesulphonate)		57855-77-3	< 0.3

Specific chemical identity and/or percentage of composition has been withheld as a trade secret.

4. First-aid measures

Inhalation

Remove victim to fresh air and keep at rest in a position comfortable for breathing. Call a POISON CENTER or doctor/physician if you feel unwell.

Skin contact

Remove contaminated clothing. Wash with plenty of soap and water. If skin irritation occurs: Get medical advice/attention. Wash contaminated clothing before reuse.

Eye contact

Immediately flush eyes with plenty of water for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention.

Ingestion

Call a physician or poison control center immediately. Rinse mouth. Do not induce vomiting. If vomiting occurs, keep head low so that stomach content doesn't get into the lungs.

Most important symptoms/effects, acute and delayed

Aspiration may cause pulmonary edema and pneumonitis. May cause drowsiness and dizziness. Headache. Nausea, vomiting. Irritation of eyes. Exposed individuals may experience eye tearing, redness, and discomfort. Skin irritation. May cause redness and pain.

Indication of immediate medical attention and special treatment needed

Provide general supportive measures and treat symptomatically. Keep victim under observation. Symptoms may be delayed.

General information

IF exposed or concerned: Get medical advice/attention. Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves. Show this safety data sheet to the doctor in attendance.

5. Fire-fighting measures

Suitable extinguishing media	Water fog. Foam. Carbon dioxide (CO ₂). Dry chemical powder, carbon dioxide, sand or earth may be used for small fires only.
Unsuitable extinguishing media	Do not use water jet as an extinguisher, as this will spread the fire.
Specific hazards arising from the chemical	Contents under pressure. Pressurized container may rupture when exposed to heat or flame. This product is a poor conductor of electricity and can become electrostatically charged. If sufficient charge is accumulated, ignition of flammable mixtures can occur. Static electricity accumulation may be significantly increased by the presence of small quantities of water or other contaminants. Material will float and may ignite on surface of water. During fire, gases hazardous to health may be formed.
Special protective equipment and precautions for firefighters	Firefighters must use standard protective equipment including flame retardant coat, helmet with face shield, gloves, rubber boots, and in enclosed spaces, SCBA.
Fire-fighting equipment/instructions	In case of fire: Stop leak if safe to do so. Move containers from fire area if you can do so without risk. Containers should be cooled with water to prevent vapor pressure build up.
General fire hazards	Extremely flammable aerosol. Contents under pressure. Pressurized container may rupture when exposed to heat or flame.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures	Keep unnecessary personnel away. Keep people away from and upwind of spill/leak. Remove all possible sources of ignition in the surrounding area. Keep out of low areas. Many gases are heavier than air and will spread along ground and collect in low or confined areas (sewers, basements, tanks). Wear appropriate protective equipment and clothing during clean-up. Avoid breathing mist or vapor. Emergency personnel need self-contained breathing equipment. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Ventilate closed spaces before entering them. Use appropriate containment to avoid environmental contamination. Local authorities should be advised if significant spillages cannot be contained. For personal protection, see section 8 of the SDS.
Methods and materials for containment and cleaning up	Eliminate all ignition sources (no smoking, flares, sparks, or flames in immediate area). Keep combustibles (wood, paper, oil, etc.) away from spilled material. The product is immiscible with water and will spread on the water surface. Prevent product from entering drains. Stop the flow of material, if this is without risk. Wipe up with absorbent material (e.g. cloth, fleece). Clean surface thoroughly to remove residual contamination. For waste disposal, see section 13 of the SDS.
Environmental precautions	Avoid release to the environment. Inform appropriate managerial or supervisory personnel of all environmental releases. Prevent further leakage or spillage if safe to do so. Avoid discharge into drains, water courses or onto the ground. Use appropriate containment to avoid environmental contamination.

7. Handling and storage

Precautions for safe handling	Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Minimize fire risks from flammable and combustible materials (including combustible dust and static accumulating liquids) or dangerous reactions with incompatible materials. Pressurized container: Do not pierce or burn, even after use. Do not use if spray button is missing or defective. Do not spray on a naked flame or any other incandescent material. Do not smoke while using or until sprayed surface is thoroughly dry. Do not cut, weld, solder, drill, grind, or expose containers to heat, flame, sparks, or other sources of ignition. Use caution around energized equipment. The metal container will conduct electricity if it contacts a live source. This may result in injury to the user from electrical shock and/or flash fire. Protect containers from physical damage; do not drag, roll, slide, or drop. When moving containers, even for short distances, use a cart (trolley, hand truck, etc.) designed to transport containers. Avoid breathing mist or vapor. Avoid contact with eyes, skin, and clothing. Avoid prolonged exposure. Pregnant or breastfeeding women must not handle this product. Should be handled in closed systems, if possible. Use only in well-ventilated areas. Wear appropriate personal protective equipment. Wash hands thoroughly after handling. Avoid release to the environment. Observe good industrial hygiene practices. For product usage instructions, see the product label.
Conditions for safe storage, including any incompatibilities	Level 3 Aerosol. Pressurized container. Protect from sunlight and do not expose to temperatures exceeding 50°C/122 °F. Do not puncture, incinerate or crush. Do not handle or store near an open flame, heat or other sources of ignition. This material can accumulate static charge which may cause spark and become an ignition source. Avoid spark promoters. These alone may be insufficient to remove static electricity. Store in a well-ventilated place. Store away from incompatible materials (see Section 10 of the SDS).

8. Exposure controls/personal protection

Occupational exposure limits

The following constituents are the only constituents of the product which have a PEL, TLV or other recommended exposure limit. At this time, the other constituents have no known exposure limits.

US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000)

Components	Type	Value	Form
distillates (petroleum), hydrotreated heavy naphthenic (CAS 64742-52-5)	PEL	5 mg/m3	Mist.
naphtha (petroleum), hydrotreated light (CAS 64742-49-0)	PEL	2000 mg/m3	
		500 ppm	
		400 mg/m3	
n-hexane (CAS 110-54-3)	PEL	100 ppm	
		1800 mg/m3	
zinc oxide (CAS 1314-13-2)	PEL	500 ppm	Respirable fraction. Fume. Total dust.
		5 mg/m3	
		15 mg/m3	

US. ACGIH Threshold Limit Values

Components	Type	Value	Form
2,2-dimethylbutane (CAS 75-83-2)	STEL	1000 ppm	
	TWA	500 ppm	
2,3-dimethylbutane (CAS 79-29-8)	STEL	1000 ppm	
	TWA	500 ppm	
2-methylpentane (CAS 107-83-5)	STEL	1000 ppm	
	TWA	500 ppm	
3-methylpentane (CAS 96-14-0)	STEL	1000 ppm	
	TWA	500 ppm	
distillates (petroleum), hydrotreated heavy naphthenic (CAS 64742-52-5)	TWA	500 ppm	Inhalable fraction.
	TWA	5 mg/m3	
n-hexane (CAS 110-54-3)	TWA	50 ppm	
zinc oxide (CAS 1314-13-2)	STEL	10 mg/m3	Respirable fraction.
	TWA	2 mg/m3	Respirable fraction.

US. NIOSH: Pocket Guide to Chemical Hazards

Components	Type	Value	Form
2,2-dimethylbutane (CAS 75-83-2)	Ceiling	1800 mg/m3	
	TWA	510 ppm	
		350 mg/m3	
2,3-dimethylbutane (CAS 79-29-8)	Ceiling	100 ppm	
	TWA	1800 mg/m3	
		510 ppm	
2-methylpentane (CAS 107-83-5)	Ceiling	350 mg/m3	
	TWA	100 ppm	
		1800 mg/m3	
	TWA	510 ppm	
		350 mg/m3	
		100 ppm	

US. NIOSH: Pocket Guide to Chemical Hazards

Components	Type	Value	Form
3-methylpentane (CAS 96-14-0)	Ceiling	1800 mg/m3	
	TWA	510 ppm	
		350 mg/m3	
distillates (petroleum), hydrotreated heavy naphthenic (CAS 64742-52-5)	Ceiling	1800 mg/m3	
	STEL	10 mg/m3	Mist.
	TWA	5 mg/m3	Mist.
naphtha (petroleum), hydrotreated light (CAS 64742-49-0)	TWA	400 mg/m3	
		100 ppm	
n-hexane (CAS 110-54-3)	TWA	180 mg/m3	
		50 ppm	
zinc oxide (CAS 1314-13-2)	Ceiling	15 mg/m3	Dust.
	STEL	10 mg/m3	Fume.
	TWA	5 mg/m3	Fume.
		5 mg/m3	Dust.

Biological limit values

ACGIH Biological Exposure Indices

Components	Value	Determinant	Specimen	Sampling Time
n-hexane (CAS 110-54-3)	0.4 mg/l	2,5-Hexanedio n, without hydrolysis	Urine	*

* - For sampling details, please see the source document.

Exposure guidelines

US - California OELs: Skin designation

n-hexane (CAS 110-54-3) Can be absorbed through the skin.

US ACGIH Threshold Limit Values: Skin designation

n-hexane (CAS 110-54-3) Can be absorbed through the skin.

Appropriate engineering controls

Good general ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level. Provide eyewash station. Eye wash fountain and emergency showers are recommended.

Individual protection measures, such as personal protective equipment

Eye/face protection Wear safety glasses with side shields (or goggles).

Skin protection

Hand protection Wear protective gloves such as: Nitrile. Polyvinyl chloride (PVC). Viton/butyl.

Other Wear appropriate chemical resistant clothing.

Respiratory protection

If engineering controls are not feasible or if exposure exceeds the applicable exposure limits, use a NIOSH-approved cartridge respirator with an organic vapor cartridge. Use a self-contained breathing apparatus in confined spaces and for emergencies. Air monitoring is needed to determine actual employee exposure levels.

Thermal hazards

Wear appropriate thermal protective clothing, when necessary.

General hygiene considerations

Observe any medical surveillance requirements. When using do not smoke. Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants.

9. Physical and chemical properties

Appearance

Physical state Liquid.

Form	Aerosol. Grease.
Color	Off-white.
Odor	Solvent.
Odor threshold	Not available.
pH	Not available.
Melting point/freezing point	-244.7 °F (-153.7 °C) estimated
Initial boiling point and boiling range	118.4 °F (48 °C) estimated
Flash point	< 0 °F (< -17.8 °C) Tag Closed Cup
Evaporation rate	Fast.
Flammability (solid, gas)	Not available.
Upper/lower flammability or explosive limits	
Flammability limit - lower (%)	1 % estimated
Flammability limit - upper (%)	8 % estimated
Vapor pressure	2377.8 hPa estimated
Vapor density	> 1 (air = 1)
Relative density	0.64 estimated
Solubility (water)	Insoluble.
Partition coefficient (n-octanol/water)	Not available.
Auto-ignition temperature	437 °F (225 °C) estimated
Decomposition temperature	Not available.
Viscosity (kinematic)	Not available.
Percent volatile	98.4 % estimated

10. Stability and reactivity

Reactivity	The product is stable and non-reactive under normal conditions of use, storage and transport.
Chemical stability	Material is stable under normal conditions.
Possibility of hazardous reactions	No dangerous reaction known under conditions of normal use.
Conditions to avoid	Heat, flames and sparks. Contact with incompatible materials.
Incompatible materials	Strong oxidizing agents.
Hazardous decomposition products	No hazardous decomposition products are known.

11. Toxicological information

Information on likely routes of exposure

Inhalation	May cause drowsiness and dizziness. Headache. Nausea, vomiting. Prolonged inhalation may be harmful.
Skin contact	Causes skin irritation.
Eye contact	Causes eye irritation.
Ingestion	Droplets of the product aspirated into the lungs through ingestion or vomiting may cause a serious chemical pneumonia.

Symptoms related to the physical, chemical and toxicological characteristics Aspiration may cause pulmonary edema and pneumonitis. May cause drowsiness and dizziness. Headache. Nausea, vomiting. Irritation of eyes. Exposed individuals may experience eye tearing, redness, and discomfort. Skin irritation. May cause redness and pain.

Information on toxicological effects

Acute toxicity May be fatal if swallowed and enters airways.

Components	Species	Test Results
calcium bis(dinonylnaphthalenesulphonate) (CAS 57855-77-3)		
Acute		
Dermal		
LD50	Rabbit	> 20 g/kg
Oral		
LD50	Rat	> 5000 mg/kg
distillates (petroleum), hydrotreated heavy naphthenic (CAS 64742-52-5)		
Acute		
Dermal		
LD50	Rabbit	> 2000 mg/kg
Oral		
LD50	Rat	> 5000 mg/kg
naphtha (petroleum), hydrotreated light (CAS 64742-49-0)		
Acute		
Dermal		
LD50	Rabbit	> 2000 mg/kg
n-hexane (CAS 110-54-3)		
Acute		
Dermal		
LD50	Rabbit	> 1300 mg/kg
Oral		
LD50	Rat	15840 mg/kg
zinc oxide (CAS 1314-13-2)		
Acute		
Oral		
LD50	Rat	> 5000 mg/kg

* Estimates for product may be based on additional component data not shown.

Skin corrosion/irritation	Causes skin irritation.
Serious eye damage/eye irritation	Causes eye irritation.
Respiratory sensitization	Not a respiratory sensitizer.
Skin sensitization	This product is not expected to cause skin sensitization.
Germ cell mutagenicity	No data available to indicate product or any components present at greater than 0.1% are mutagenic or genotoxic.
Carcinogenicity	Not classifiable as to carcinogenicity to humans.
IARC Monographs. Overall Evaluation of Carcinogenicity	
Not listed.	
OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)	
Not regulated.	
US. National Toxicology Program (NTP) Report on Carcinogens	
Not listed.	
Reproductive toxicity	Suspected of damaging fertility.
Specific target organ toxicity - single exposure	May cause drowsiness and dizziness.
Specific target organ toxicity - repeated exposure	Not classified.
Aspiration hazard	May be fatal if swallowed and enters airways. If aspirated into lungs during swallowing or vomiting, may cause chemical pneumonia, pulmonary injury or death.
Chronic effects	Prolonged inhalation may be harmful.

12. Ecological information

Ecotoxicity Toxic to aquatic life with long lasting effects.

Components		Species	Test Results
2-methylpentane (CAS 107-83-5)			
Aquatic			
<i>Acute</i>			
Crustacea	EC50	Daphnia	1 - 10 mg/l, 48 hours
Fish	LC50	Fish	1 - 10 mg/l, 96 hours
distillates (petroleum), hydrotreated heavy naphthenic (CAS 64742-52-5)			
Aquatic			
Crustacea	EC50	Water flea (Daphnia magna)	1000 mg/l, 48 hours
Fish	LC50	Rainbow trout,donaldson trout (Oncorhynchus mykiss)	5000 mg/l, 96 hours
naphtha (petroleum), hydrotreated light (CAS 64742-49-0)			
Aquatic			
<i>Acute</i>			
Crustacea	EC50	Daphnia	1 - 10 mg/l, 48 hours
Fish	LC50	Fish	1 - 10 mg/l, 96 hours
n-hexane (CAS 110-54-3)			
Aquatic			
Fish	LC50	Fathead minnow (Pimephales promelas)	2.101 - 2.981 mg/l, 96 hours
zinc oxide (CAS 1314-13-2)			
Aquatic			
<i>Acute</i>			
Crustacea	EC50	Water flea (Daphnia magna)	0.098 mg/l, 48 hours
Fish	LC50	Rainbow trout,donaldson trout (Oncorhynchus mykiss)	1.1 mg/l, 96 hours

* Estimates for product may be based on additional component data not shown.

Persistence and degradability

Bioaccumulative potential

Partition coefficient n-octanol / water (log Kow)

2,2-dimethylbutane	3.82
2,3-dimethylbutane	3.42
2-methylpentane	3.74
3-methylpentane	3.6
n-hexane	3.9

Bioconcentration factor (BCF)

naphtha (petroleum), hydrotreated light	10 - 25000
zinc oxide	60690

Mobility in soil No data available.

Other adverse effects No other adverse environmental effects (e.g. ozone depletion, photochemical ozone creation potential, endocrine disruption, global warming potential) are expected from this component.

13. Disposal considerations

Disposal of waste from residues / unused products If discarded, this product is considered a RCRA ignitable waste, D001. Collect and reclaim or dispose in sealed containers at licensed waste disposal site. Contents under pressure. Do not puncture, incinerate or crush. Do not allow this material to drain into sewers/water supplies. Do not contaminate ponds, waterways or ditches with chemical or used container. Dispose in accordance with all applicable regulations.

Hazardous waste code D001: Waste Flammable material with a flash point <140 F

Contaminated packaging Since emptied containers may retain product residue, follow label warnings even after container is emptied. Empty containers should be taken to an approved waste handling site for recycling or disposal.

14. Transport information

DOT

UN number	UN1950
UN proper shipping name	Aerosols, flammable, Limited Quantity
Transport hazard class(es)	
Class	2.1
Subsidiary risk	-
Label(s)	2.1
Packing group	Not applicable.
Special precautions for user	Read safety instructions, SDS and emergency procedures before handling.
Special provisions	N82
Packaging exceptions	306
Packaging non bulk	None
Packaging bulk	None

IATA

UN number	UN1950
UN proper shipping name	Aerosols, flammable, Limited Quantity
Transport hazard class(es)	
Class	2.1
Subsidiary risk	-
Packing group	Not applicable.
ERG Code	10L
Special precautions for user	Read safety instructions, SDS and emergency procedures before handling.
Other information	
Passenger and cargo aircraft	Allowed with restrictions.
Cargo aircraft only	Allowed with restrictions.

IMDG

UN number	UN1950
UN proper shipping name	AEROSOLS, LIMITED QUANTITY
Transport hazard class(es)	
Class	2
Subsidiary risk	-
Packing group	Not applicable.
Environmental hazards	
Marine pollutant	No.
EmS	Not available.
Special precautions for user	Read safety instructions, SDS and emergency procedures before handling.

15. Regulatory information

US federal regulations This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)

Not regulated.

SARA 304 Emergency release notification

Not regulated.

OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)

Not regulated.

US EPCRA (SARA Title III) Section 313 - Toxic Chemical: Listed substance

n-hexane (CAS 110-54-3)

zinc oxide (CAS 1314-13-2)

CERCLA Hazardous Substance List (40 CFR 302.4)

n-hexane (CAS 110-54-3)

Listed.

zinc oxide (CAS 1314-13-2)

Listed.

CERCLA Hazardous Substances: Reportable quantity

n-hexane (CAS 110-54-3)

5000 LBS

Spills or releases resulting in the loss of any ingredient at or above its RQ require immediate notification to the National Response Center (800-424-8802) and to your Local Emergency Planning Committee.

Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List

n-hexane (CAS 110-54-3)

Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130)

Not regulated.

Safe Drinking Water Act (SDWA) Not regulated.**Food and Drug Administration (FDA)** Not regulated.**Superfund Amendments and Reauthorization Act of 1986 (SARA)****Section 311/312 Hazard categories**
Immediate Hazard - Yes
Delayed Hazard - Yes
Fire Hazard - Yes
Pressure Hazard - Yes
Reactivity Hazard - No**SARA 302 Extremely hazardous substance** No**US state regulations****US. California. Candidate Chemicals List. Safer Consumer Products Regulations (Cal. Code Regs, tit. 22, 69502.3, subd. (a))**distillates (petroleum), hydrotreated heavy naphthenic (CAS 64742-52-5)
liquefied petroleum gas (CAS 68476-86-8)
naphtha (petroleum), hydrotreated light (CAS 64742-49-0)
n-hexane (CAS 110-54-3)**US. New Jersey Worker and Community Right-to-Know Act**2,2-dimethylbutane (CAS 75-83-2)
2,3-dimethylbutane (CAS 79-29-8)
2-methylpentane (CAS 107-83-5)
naphtha (petroleum), hydrotreated light (CAS 64742-49-0)
n-hexane (CAS 110-54-3)
zinc oxide (CAS 1314-13-2)**US. Massachusetts RTK - Substance List**2,2-dimethylbutane (CAS 75-83-2)
2,3-dimethylbutane (CAS 79-29-8)
2-methylpentane (CAS 107-83-5)
3-methylpentane (CAS 96-14-0)
naphtha (petroleum), hydrotreated light (CAS 64742-49-0)
n-hexane (CAS 110-54-3)
zinc oxide (CAS 1314-13-2)**US. Pennsylvania Worker and Community Right-to-Know Law**2,2-dimethylbutane (CAS 75-83-2)
2,3-dimethylbutane (CAS 79-29-8)
2-methylpentane (CAS 107-83-5)
3-methylpentane (CAS 96-14-0)
naphtha (petroleum), hydrotreated light (CAS 64742-49-0)
n-hexane (CAS 110-54-3)
zinc oxide (CAS 1314-13-2)**US. Rhode Island RTK**distillates (petroleum), hydrotreated heavy naphthenic (CAS 64742-52-5)
naphtha (petroleum), hydrotreated light (CAS 64742-49-0)
n-hexane (CAS 110-54-3)**US. California Proposition 65**

WARNING: This product contains a chemical known to the State of California to cause cancer.

US - California Proposition 65 - CRT: Listed date/Carcinogenic substance

titanium dioxide (CAS 13463-67-7)

Listed: September 2, 2011

Volatile organic compounds (VOC) regulations**EPA****VOC content (40 CFR 51.100(s))** 100 %**Consumer products (40 CFR 59, Subpt. C)** Not regulated

State	
Consumer products	Not regulated (semi-solid lubricant)
VOC content (CA)	84.7 %
VOC content (OTC)	84.7 %

International Inventories

Country(s) or region	Inventory name	On inventory (yes/no)*
Australia	Australian Inventory of Chemical Substances (AICS)	Yes
Canada	Domestic Substances List (DSL)	Yes
Canada	Non-Domestic Substances List (NDSL)	No
China	Inventory of Existing Chemical Substances in China (IECSC)	Yes
Europe	European Inventory of Existing Commercial Chemical Substances (EINECS)	Yes
Europe	European List of Notified Chemical Substances (ELINCS)	No
Japan	Inventory of Existing and New Chemical Substances (ENCS)	No
Korea	Existing Chemicals List (ECL)	Yes
New Zealand	New Zealand Inventory	Yes
Philippines	Philippine Inventory of Chemicals and Chemical Substances (PICCS)	Yes
United States & Puerto Rico	Toxic Substances Control Act (TSCA) Inventory	Yes

*A "Yes" indicates that all components of this product comply with the inventory requirements administered by the governing country(s)

A "No" indicates that one or more components of the product are not listed or exempt from listing on the inventory administered by the governing country(s).

16. Other information, including date of preparation or last revision

Issue date	01-16-2015
Revision date	10-06-2017
Prepared by	Allison Yoon
Version #	03
Further information	CRC # 568F-G/1002591-1002592
HMIS® ratings	Health: 2* Flammability: 4 Physical hazard: 0 Personal protection: B
NFPA ratings	Health: 2 Flammability: 4 Instability: 0
NFPA ratings	



Disclaimer The information contained in this document applies to this specific material as supplied. It may not be valid for this material if it is used in combination with any other materials. This information is accurate to the best of CRC's knowledge or obtained from sources believed by CRC to be accurate. Before using any product, read all warnings and directions on the label. For further clarification of any information contained on this (M)SDS consult your supervisor, a health & safety professional, or CRC Industries, Inc..

Revision Information Product and Company Identification: Product Codes
Physical & Chemical Properties: Multiple Properties
Transport Information: Agency Name, Packaging Type, and Transport Mode Selection
Other information, including date of preparation or last revision: Further information

Safety Data Sheet

according to Hazard Communication Standard; 29 CFR 1910.1200



1.0 IDENTIFICATION

Version 1.1

Print Date 04/27/2015

Revision Date 02/25/2015

SDS Number 350000014153

1.1 Recommended Precautionary Statements

Prevent contact with skin and eyes.

Prevent contact with clothing. Do not breathe dust.

R : Hard Surface Cleaner

M : S.C. Johnson & Son, Inc.
1525 Howe Street
Racine WI 53403-2236

Emergency phone number : +18005585252

24 Hour Medical Emergency Phone: (866)231-5406

24 Hour International Emergency Phone: (703)527-3887

24 Hour Transport Emergency Phone: (800)424-9300

1.2 Recommended Precautionary Statements

Prevent contact with skin and eyes.

This product does not meet the criteria for classification in any hazard class according to regulation OSHA 29 CFR 1910.1200.

None identified

Prevent contact with skin and eyes.

None identified

3.0 Other Information

This product does not contain hazardous chemicals at or above a reportable level as defined by OSHA 29 CFR 1910.1200

For additional information on product ingredients, see www.whatsinsidescjohnson.com.

1.16 Recommended Precautionary Statements

None identified : No special requirements

Safety Data Sheet

according to Hazard Communication Standard; 29 CFR 1910.1200



D **R**

Version 1.1

Print Date 04/27/2015

Revision Date 02/25/2015

SDS Number 350000014153

: No special requirements

: No special requirements.

: No special requirements

R **M** **R**

: Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

: Container may melt and leak in heat of fire.

: Fight fire with normal precautions from a reasonable distance. Standard procedure for chemical fires. Wear full protective clothing and positive pressure self-contained breathing apparatus.

6 **D** **R** **M** **R**

: Wash thoroughly after handling.

: Outside of normal use, avoid release to the environment.

: Dike large spills.
Clean residue from spill site.

D **D** **R**

d

: Avoid contact with skin, eyes and clothing.
For personal protection see section 8.
KEEP OUT OF REACH OF CHILDREN AND PETS.

: Normal measures for preventive fire protection.

Safety Data Sheet

according to Hazard Communication Standard; 29 CFR 1910.1200



D **R**

Version 1.1

Print Date 04/27/2015

Revision Date 02/25/2015

SDS Number 350000014153

Preparation and use instructions

Precautions

R : Keep container closed when not in use.

D

D : Stable under normal conditions.

R **R** **R** **R**

Exposure limits

ACGIH or OSHA exposure limits have not been established for this product or reportable ingredients unless noted in the table above.

Preparation and use instructions

R : No special requirements.

D : No special requirements.

D : No special requirements.

D : No special requirements.

D : Handle in accordance with good industrial hygiene and safety practice. Wash thoroughly after handling.

D **M** **R** **R**

R : liquid

R : blue

D : pleasant

D : Test not applicable for this product type

D : 10.7
at (25 C)

Safety Data Sheet

according to Hazard Communication Standard; 29 CFR 1910.1200



D

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Melting point : 0 C

Boiling point : 100 C

Flash point : > 93 °C
> 199.4 °F
Approximate

Autoignition temperature : No data available

Flammable liquid, solid : Does not sustain combustion.

Flammable gas, aerosol : No data available

Flammable solid : No data available

Flammable liquid, solid : No data available

Relative density : 1.00 g/cm³ at 25 C

Water solubility : soluble

Volatility : No data available

Stability : No data available

Density : No data available

Safety Data Sheet

according to Hazard Communication Standard; 29 CFR 1910.1200



D **R**

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: No data available

: No data available

: No data available

: 0.2 % - additional exemptions may apply
*as defined by US Federal and State Consumer Product Regulations

: None identified :

10 **D R**

: If accidental mixing occurs and toxic gas is formed, exit area immediately. Do not return until well ventilated.

: Direct sources of heat.

: Do not mix with bleach or any other household cleaners. Strong bases

: Thermal decomposition can lead to release of irritating gases and vapours.

11 **RM**

: This product does not meet the criteria for classification in any hazard class according to regulation OSHA 29 CFR 1910.1200.

: LD50 estimated > 5,000 mg/kg

Safety Data Sheet

according to Hazard Communication Standard; 29 CFR 1910.1200



D **R**

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LC50 : LC50
estimated
> 2.58 mg/l

LD50 : LD50
estimated
> 5,000 mg/kg

Acute toxicity	No classification proposed	R
Acute toxicity	No classification proposed	-
Skin corrosion/irritation	No classification proposed	-
Serious eye damage/eye irritation	No classification proposed	-
Skin sensitisation	No classification proposed	-
Respiratory sensitisation	No classification proposed	-
Germ cell mutagenicity	No classification proposed	-
Carcinogenicity	No classification proposed	-
Reproductive toxicity	No classification proposed	-
Specific target organ toxicity - single exposure	No classification proposed	-
Specific target organ toxicity - repeated exposure	No classification proposed	-
Aspiration hazard	No classification proposed	-

None known.

Safety Data Sheet

according to Hazard Communication Standard; 29 CFR 1910.1200



D **R**

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listing on the U.S. Toxic Substances Control Act (TSCA) Chemical Substance Inventory.

: All ingredients of this product comply with the New Substances Notification requirements under the Canadian Environmental Protection Act (CEPA).

: This product does not contain any chemicals known to State of California to cause cancer, birth defects, or any other reproductive harm.

16 **R** **RM**

M **R**

	1
	2
R	0

R

	1
r	2
R	0
	-

This information is being provided in accordance with the Occupational Safety and Health Administration (OSHA) regulation (29 CFR 1910.1200). The information supplied is designed for workplaces where product use and frequency of exposure exceeds that established for the labeled consumer use.

r **r**

Safety Data Sheet

according to Hazard Communication Standard; 29 CFR 1910.1200



□ □ □ **D** □ □ □ □ □ **R** □ □ □ □ □ □ □ □

Version 1.1

Print Date 04/27/2015

Revision Date 02/25/2015

SDS Number 350000014153

This document has been prepared using data from sources considered to be technically reliable. It does not constitute a warranty, expressed or implied, as to the accuracy of the information contained herein. Actual conditions of use are beyond the seller's control. User is responsible to evaluate all available information when using product for any particular use and to comply with all Federal, State, Provincial and Local laws and regulations.

Prepared by	SC Johnson Global Safety Assessment & Regulatory Affairs (GSARA)
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Safety Data Sheet

1. IDENTIFICATION

Product Identifier: WINDSHIELD WASHER CONC. **Date of Revision:** March 09, 2023
Product Code: H544
Other Name(s): not applicable
Distributed By: not applicable
Recommended Use and Restrictions on Use: not available
Manufactured By: Ostrem Chemical Co. Ltd. Phone/Emergency Phone:
2310 - 80th Avenue NW 780-440-1911
Edmonton, Alberta, Canada T6P 1N2 Mon. - Fri. 8:00am - 4:30pm MT
www.ostrem.com

2. HAZARDS IDENTIFICATION

Classification of the Mixture: Acute Toxicity, Oral - Category 3
Acute Toxicity, Dermal - Category 3
Acute Toxicity, Inhalation - Category 3
Specific Target Organ Toxicity (Single Exposure) - Category 1
Flammable Liquids - Category 2

Label Elements:

Hazard Pictogram(s):



Signal Word: DANGER

Hazard Statement(s): Toxic if swallowed.
Toxic if in contact with skin.
Toxic if inhaled.
Causes damage to organs (eyes and central nervous system).
Highly flammable liquid and vapour.

Precautionary Statement(s):

Prevention: Use only outdoors or in a well-ventilated area.
Do not breathe fumes or vapours.
Wash hands thoroughly after handling.
Do not eat, drink or smoke when using this product.
Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
Wear protective gloves, protective clothing, and eye/face protection.

Response: IF SWALLOWED: Call a poison centre or physician.
Rinse mouth.
IF ON SKIN: Wash with plenty of water.
Call a poison centre or physician if you feel unwell.
Take off immediately all contaminated clothing and wash it before reuse.
IF INHALED: Remove person to fresh air and keep comfortable for breathing.
Call a poison centre or physician.
If exposed or concerned: Call a poison centre or physician.

Storage: Store in a well-ventilated place. Keep cool.
Keep container tightly closed.
Store locked up.

Disposal: Dispose of contents/container in accordance with local/regional/national/international regulations.

Physical/health hazards not otherwise classified:

not applicable

3. COMPOSITION/INFORMATION ON INGREDIENTS

Safety Data Sheet

<u>Chemical Name</u>	<u>Conc. w/w</u>	<u>CAS #</u>	<u>Common Names</u>
methanol	80 - 100%	67-56-1	methyl alcohol

4. FIRST-AID MEASURES

Necessary Measures:

IF SWALLOWED: Call a poison centre or physician.

Rinse mouth.

IF ON SKIN: Wash with plenty of water.

Call a poison centre or physician if you feel unwell.

Take off immediately all contaminated clothing and wash it before reuse.

IF INHALED: Remove person to fresh air and keep comfortable for breathing.

Call a poison centre or physician.

If exposed or concerned: Call a poison centre or physician.

Most important symptoms, both acute and delayed:

Toxic if swallowed.

Toxic if in contact with skin.

Toxic if inhaled.

Causes damage to organs (eyes and central nervous system).

Indication of immediate medical attention and special treatment needed, if necessary:

not applicable

5. FIRE-FIGHTING MEASURES

Suitable (and unsuitable) extinguishing media:

Use extinguishing media appropriate for surrounding fire.

Specific hazards arising from the chemical (e.g.: hazardous combustion products):

May liberate carbon monoxide, carbon dioxide.

Special protective equipment and precautions for firefighters:

As for surrounding fire. Firefighters should wear full protective clothing and self contained breathing equipment.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures:

Wear appropriate protective equipment. See section 8.

Environmental precautions:

Prevent from entering sewers, waterways or low areas.

Methods and materials for containment and cleaning up:

Isolate hazard area and restrict access. Small spills: soak up with inert absorbent material and scoop into containers. Large spills: prevent contamination of waterways. Dike and pump into suitable containers. Clean up residual with absorbent material, place in appropriate container and flush with water.

7. HANDLING AND STORAGE

Precautions for safe handling:

Use only outdoors or in a well-ventilated area.

Do not breathe fumes or vapours.

Wash hands thoroughly after handling.

Do not eat, drink or smoke when using this product.

Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.

Do not ingest. Avoid contact with eyes, skin and clothing.

Conditions for safe storage, including any incompatibilities:

Store in a well-ventilated place. Keep cool.

Keep container tightly closed.

Store locked up.

Keep out of reach of children. Store in a cool, dry area.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Safety Data Sheet

Control parameters - Exposure limits:

Ingredient:
methanol

Limit:
ACGIH TWA: 200 ppm
STEL: 250 ppm

Appropriate engineering controls:

Provide exhaust ventilation to keep airborne levels below recommended exposure limits.

Respiratory protection:

If exposure exceeds occupational exposure limits, use an appropriate NIOSH approved respirator.

Other protection:

Wear protective gloves, protective clothing, and eye/face protection.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance (physical state, colour etc.):	clear blue liquid
Odour:	a pungent alcohol odour
Odour threshold:	not available
pH:	not applicable
Melting/Freezing point:	not available
Initial boiling point and range:	not available
Flash point:	12 C
Evaporation rate:	not available
Flammability (solid, gas):	not available
Upper/lower flammability or explosive limits:	not available
Vapour pressure:	not available
Vapour density:	not available
Relative density (specific gravity):	0.800
Solubility(ies):	complete
Partition co-efficient: n-octanol/water:	not available
Auto-ignition temperature:	not available
Decomposition temperature:	not available
Viscosity:	not available

10. STABILITY AND REACTIVITY

Reactivity:

This material is considered to be non-reactive under normal use conditions.

Chemical stability:

Stable.

Possibility of hazardous reactions:

not available

Conditions to avoid (e.g.: static discharge, shock or vibration):

Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.

Incompatible materials:

Oxidizers

Hazardous decomposition products:

not available

11. TOXICOLOGICAL INFORMATION

POTENTIAL ACUTE HEALTH EFFECTS

Inhalation:	Toxic if inhaled.
Ingestion:	Toxic if swallowed.
Eye contact:	May cause eye irritation.
Skin contact:	Toxic if in contact with skin.
Skin absorption:	not available

POTENTIAL CHRONIC HEALTH EFFECTS

Safety Data Sheet

Inhalation: not available
Ingestion: not available
Eye contact: not available
Skin contact: not available
Skin absorption: not available

Mutagenicity: not available
Carcinogenicity: This information, if applicable, can be found in Section 2.
Reproductive toxicity: This information, if applicable, can be found in Section 2.
Sensitization of product: This information, if applicable, can be found in Section 2.
Specific Target Organ Toxicity - single exposure: This information, if applicable, can be found in Section 2.
Specific Target Organ Toxicity - repeated exposure: This information, if applicable, can be found in Section 2.

Toxicological Data:

Ingredient:
methanol

Data:
Oral LD50: 100 mg/kg (rat)
Inhalation LC50: 5 mg/L (rat)
Dermal LD50: 300 mg/kg (rabbit)

Other Toxicological Information on Ingredients:

12. ECOLOGICAL INFORMATION

Ecotoxicity (aquatic and terrestrial, where available): not available
Persistence and degradability: not available
Bioaccumulative potential: not available
Mobility in soil: not available
Other adverse effects: not available
Ecological Information on Ingredients: not available

13. DISPOSAL CONSIDERATIONS

Waste disposal: Disposal of all waste must be done according to local, provincial and federal regulations.

14. TRANSPORT INFORMATION

TDG classification: UN 1230; METHANOL; CLASS 3 (6.1); PG II

15. REGULATORY INFORMATION

This product has been classified in accordance with the hazard criteria of the Hazardous Products Regulations (HPR) and the SDS contains all the information required by the HPR.

16. PREPARATION INFORMATION

Prepared by: Technical Services Department, Ostrem Chemical Co. Ltd., Ph.: 780-440-1911
Date of Preparation: March 09, 2023
Date of Revision: March 09, 2023

This Safety Data Sheet may not be changed or altered in any way without the express knowledge and permission of Ostrem Chemical Co. Ltd.

End of Document

SAFETY DATA SHEET

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Version 1.6 Revision Date: 06/11/2020 SDS Number: 100000003319 Date of last issue: 12-19-2018
 Date of first issue: 08-30-2015

Most important symptoms and effects, both acute and delayed : None known.

Notes to physician : No hazards which require special first aid measures.

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Suitable extinguishing media : Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

Further information : Standard procedure for chemical fires.

Special protective equipment for fire-fighters : In the event of fire, wear self-contained breathing apparatus.

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Personal precautions, protective equipment and emergency procedures : No conditions to be specially mentioned.

Environmental precautions : No special environmental precautions required.

Methods and materials for containment and cleaning up : Wipe up with absorbent material (e.g. cloth, fleece).
 Keep in suitable, closed containers for disposal.

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Advice on protection against fire and explosion : Normal measures for preventive fire protection.

Advice on safe handling : For personal protection see section 8.
 No special handling advice required.

Conditions for safe storage : Keep container tightly closed in a dry and well-ventilated place.

Materials to avoid : No special restrictions on storage with other products.

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Contains no substances with occupational exposure limit values.

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Components	CAS-No.
C9-11 PARETH-6	68439-46-3

□□□□□□r□□ □ □□□□r□□ : Not applicable

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SECTION 1. PRODUCT AND COMPANY IDENTIFICATION

Material name : ZEP 45 NC
 Material number : 00000000000014901

Manufacturer or supplier's details

Company : Zep Inc.
 Address : 1310 Seaboard Industrial Blvd., NW
 Atlanta, GA 30318
 Telephone : 404-352-1680

Emergency telephone numbers

For SDS Information : Compliance Services 1-877-428-9937
For a Medical Emergency : 877-541-2016 Toll Free - All Calls Recorded
For a Transportation Emergency : CHEMTREC: 800-424-9300 - All Calls Recorded.
 In the District of Columbia 202-483-7616

SECTION 2. HAZARDS IDENTIFICATION**Emergency Overview**

Appearance	Aerosol containing a compressed gas
Colour	amber
Odour	solvent-like

GHS Classification

Flammable aerosols : Category 1
 Gases under pressure : Compressed gas
 Skin irritation : Category 2
 Eye irritation : Category 2A
 Skin sensitisation : Category 1
 Carcinogenicity : Category 1A
 Reproductive toxicity : Category 2

GHS Label element

Hazard pictograms :



Signal word : Danger

Hazard statements : H222 Extremely flammable aerosol.
 H280 Contains gas under pressure; may explode if heated.
 H315 Causes skin irritation.
 H317 May cause an allergic skin reaction.
 H319 Causes serious eye irritation.
 H350 May cause cancer.
 H361 Suspected of damaging fertility or the unborn child.

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Precautionary statements

: **Prevention:**

P201 Obtain special instructions before use.

P202 Do not handle until all safety precautions have been read and understood.

P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.

P211 Do not spray on an open flame or other ignition source.

P251 Pressurized container: Do not pierce or burn, even after use.

P261 Avoid breathing dust/ fume/ gas/ mist/ vapours/ spray.

P264 Wash skin thoroughly after handling.

P272 Contaminated work clothing should not be allowed out of the workplace.

P280 Wear eye protection/ face protection.

P280 Wear protective gloves.

P281 Use personal protective equipment as required.

Response:

P302 + P352 IF ON SKIN: Wash with plenty of soap and water.

P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P308 + P313 IF exposed or concerned: Get medical advice/ attention.

P333 + P313 If skin irritation or rash occurs: Get medical advice/ attention.

P337 + P313 If eye irritation persists: Get medical advice/ attention.

P362 Take off contaminated clothing and wash before reuse.

Storage:

P405 Store locked up.

P410 + P412 Protect from sunlight. Do not expose to temperatures exceeding 50 °C/ 122 °F.

Disposal:

P501 Dispose of contents/container in accordance with local regulation.

Potential Health Effects**Carcinogenicity:**

IARC	Group 2B: Possibly carcinogenic to humans	
	cumene	98-82-8
ACGIH	Group 1: Carcinogenic to humans	
	benzene	71-43-2
OSHA	No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by ACGIH.	
	Confirmed human carcinogen	
NTP	benzene	71-43-2
	OSHA specifically regulated carcinogen	
OSHA	benzene	71-43-2
	benzene	71-43-2
NTP	Known to be human carcinogen	
	benzene	71-43-2

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SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance / Mixture : Mixture

Hazardous components

Chemical Name	CAS-No.	Concentration [%]
Distillates (petroleum), hydrotreated heavy naphthenic	64742-52-5	>= 10 - < 20
Distillates (petroleum), hydrotreated light ethanol	64742-47-8	>= 10 - < 20
Distillates (petroleum), straight-run middle	64-17-5	>= 5 - < 10
1,2,4-trimethylbenzene	64741-44-2	>= 5 - < 10
mesitylene	95-63-6	>= 5 - < 10
1,2,3-trimethylbenzene	108-67-8	>= 5 - < 10
2-(2-butoxyethoxy)ethanol	526-73-8	>= 5 - < 10
carbon dioxide	112-34-5	>= 1 - < 5
pentyl acetate	124-38-9	>= 1 - < 5
2-methylbutyl acetate	628-63-7	>= 1 - < 5
toluene	624-41-9	>= 1 - < 5
benzene	108-88-3	>= 0.1 - < 1
	71-43-2	>= 0.1 - < 1

SECTION 4. FIRST AID MEASURES

- General advice : Move out of dangerous area.
Show this safety data sheet to the doctor in attendance.
Do not leave the victim unattended.
- If inhaled : If unconscious place in recovery position and seek medical advice.
Consult a physician after significant exposure.
- In case of skin contact : If skin irritation persists, call a physician.
Wash off immediately with plenty of water for at least 15 minutes.
If on clothes, remove clothes.
Wash contaminated clothing before re-use.
- In case of eye contact : Remove contact lenses.
Protect unharmed eye.
Keep eye wide open while rinsing.
If eye irritation persists, consult a specialist.
In case of contact, immediately flush eyes with plenty of water for at least 15 minutes.
- If swallowed : Keep respiratory tract clear.
DO NOT induce vomiting unless directed to do so by a physician or poison control center.
Never give anything by mouth to an unconscious person.
If symptoms persist, call a physician.
Take victim immediately to hospital.

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SECTION 5. FIREFIGHTING MEASURES

- Suitable extinguishing media : Alcohol-resistant foam
Carbon dioxide (CO₂)
Dry chemical
Water spray jet
- Unsuitable extinguishing media : High volume water jet
- Specific hazards during firefighting : Do not allow run-off from fire fighting to enter drains or water courses.
- Hazardous combustion products : Carbon dioxide (CO₂)
Carbon monoxide
Smoke
- Specific extinguishing methods : Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
- Further information : Collect contaminated fire extinguishing water separately. This must not be discharged into drains.
Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations.
For safety reasons in case of fire, cans should be stored separately in closed containments.
Use a water spray to cool fully closed containers.
- Special protective equipment for firefighters : Wear self-contained breathing apparatus for firefighting if necessary.
-

SECTION 6. ACCIDENTAL RELEASE MEASURES

- Personal precautions, protective equipment and emergency procedures : Use personal protective equipment.
Ensure adequate ventilation.
Remove all sources of ignition.
Evacuate personnel to safe areas.
Beware of vapours accumulating to form explosive concentrations. Vapours can accumulate in low areas.
- Environmental precautions : Prevent product from entering drains.
Prevent further leakage or spillage if safe to do so.
If the product contaminates rivers and lakes or drains inform respective authorities.
- Methods and materials for containment and cleaning up : Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust).
Sweep up or vacuum up spillage and collect in suitable container for disposal.
-

SECTION 7. HANDLING AND STORAGE

- Advice on safe handling : Avoid exposure - obtain special instructions before use.
-

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Avoid contact with skin and eyes.
 For personal protection see section 8.
 Smoking, eating and drinking should be prohibited in the application area.
 Take precautionary measures against static discharges.
 Provide sufficient air exchange and/or exhaust in work rooms.
 Open drum carefully as content may be under pressure.
 Dispose of rinse water in accordance with local and national regulations.
 Persons susceptible to skin sensitisation problems or asthma, allergies, chronic or recurrent respiratory disease should not be employed in any process in which this mixture is being used.
 Do not breathe vapours or spray mist.
 Always replace cap after use.

Conditions for safe storage : BEWARE: Aerosol is pressurized. Keep away from direct sun exposure and temperatures over 50 °C. Do not open by force or throw into fire even after use. Do not spray on flames or red-hot objects.
 No smoking.
 Keep in a dry, cool and well-ventilated place.
 Observe label precautions.
 Electrical installations / working materials must comply with the technological safety standards.

Materials to avoid : Oxidizing agents

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION
Components with workplace control parameters

Components	CAS-No.	Value type (Form of exposure)	Control parameters / Permissible concentration	Basis
Distillates (petroleum), hydrotreated heavy naphthenic	64742-52-5	TWA (Mist)	5 mg/m ³	OSHA Z-1
		TWA (Inhalable fraction)	5 mg/m ³	ACGIH
Distillates (petroleum), hydrotreated light	64742-47-8	TWA	500 ppm 2,000 mg/m ³	OSHA Z-1
		TWA	400 ppm 1,600 mg/m ³	OSHA P0
ethanol	64-17-5	TWA	1,000 ppm	ACGIH
		TWA	1,000 ppm 1,900 mg/m ³	NIOSH REL
		TWA	1,000 ppm 1,900 mg/m ³	OSHA Z-1
		TWA	1,000 ppm 1,900 mg/m ³	OSHA P0
1,2,4-trimethylbenzene	95-63-6	TWA	25 ppm 125 mg/m ³	NIOSH REL
mesitylene	108-67-8	TWA	25 ppm 125 mg/m ³	NIOSH REL

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1,2,3-trimethylbenzene	526-73-8	TWA	25 ppm 125 mg/m3	NIOSH REL
carbon dioxide	124-38-9	TWA	5,000 ppm	ACGIH
		STEL	30,000 ppm	ACGIH
		TWA	5,000 ppm 9,000 mg/m3	NIOSH REL
		ST	30,000 ppm 54,000 mg/m3	NIOSH REL
		TWA	5,000 ppm 9,000 mg/m3	OSHA Z-1
		TWA	10,000 ppm 18,000 mg/m3	OSHA P0
		STEL	30,000 ppm 54,000 mg/m3	OSHA P0
pentyl acetate	628-63-7	TWA	100 ppm 525 mg/m3	NIOSH REL
		TWA	100 ppm 525 mg/m3	OSHA Z-1
		TWA	100 ppm 525 mg/m3	OSHA P0
2-methylbutyl acetate	624-41-9	TWA	50 ppm	ACGIH
		STEL	100 ppm	ACGIH
xylenes	1330-20-7	TWA	100 ppm	ACGIH
		STEL	150 ppm	ACGIH
cumene	98-82-8	TWA	50 ppm	ACGIH
		TWA	50 ppm 245 mg/m3	NIOSH REL
		TWA	50 ppm 245 mg/m3	OSHA Z-1
		TWA	50 ppm 245 mg/m3	OSHA P0
benzene	71-43-2	TWA	0.5 ppm	ACGIH
		STEL	2.5 ppm	ACGIH
		TWA	0.1 ppm	NIOSH REL
		ST	1 ppm	NIOSH REL
		TWA	10 ppm	OSHA Z-2
		CEIL	25 ppm	OSHA Z-2
		Peak	50 ppm	OSHA Z-2
		PEL	1 ppm	OSHA CARC
		STEL	5 ppm	OSHA CARC

Biological occupational exposure limits

Component	CAS-No.	Control parameters	Biological specimen	Sampling time	Permissible concentration	Basis
METHYLBENZENE	108-88-3	Toluene	In blood	Prior to last shift of workweek	0.02 mg/l	ACGIH BEI
METHYLBENZENE		Toluene	Urine	End of shift (As soon as possible after exposure ceases)	0.03 mg/l	ACGIH BEI

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METHYLBENZENE		o-Cresol	Urine	End of shift (As soon as possible after exposure ceases)	0.3 mg/g	ACGIH BEI
Remarks: Creatinine						
benzene	71-43-2	S-Phenylmercapturic acid	Urine	End of shift (As soon as possible after exposure ceases)	0.03 mg/g	ACGIH BEI
Remarks: Creatinine						
benzene		t,t-Muconic acid	Urine	End of shift (As soon as possible after exposure ceases)	0.5 mg/g	ACGIH BEI
Remarks: Creatinine						

Personal protective equipment

- Respiratory protection : Use respiratory protection unless adequate local exhaust ventilation is provided or exposure assessment demonstrates that exposures are within recommended exposure guidelines.
- Hand protection
Remarks : The suitability for a specific workplace should be discussed with the producers of the protective gloves.
- Eye protection : Ensure that eyewash stations and safety showers are close to the workstation location.
Safety glasses
- Skin and body protection : impervious clothing
Choose body protection according to the amount and concentration of the dangerous substance at the work place.
- Hygiene measures : When using do not eat or drink.
When using do not smoke.
Wash hands before breaks and at the end of workday.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

- Appearance : Aerosol containing a compressed gas
- Colour : amber
- Odour : solvent-like

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Odour Threshold	: no data available
pH	: not applicable
Melting point/freezing point	: no data available
Boiling point	: 179.44 °C
Flash point	: no data available
Evaporation rate	: < 1 n-Butyl Acetate = 1.0
Upper explosion limit	: no data available
Lower explosion limit	: no data available
Vapour pressure	: not determined
Relative vapour density	: no data available
Density	: 0.845 g/cm ³
Solubility(ies)	
Water solubility	: insoluble
Solubility in other solvents	: not determined
Partition coefficient: n-octanol/water	: no data available
Auto-ignition temperature	: not determined
Thermal decomposition	: no data available
Viscosity	
Viscosity, kinematic	: no data available
Heat of combustion	: 36.09 kJ/g

SECTION 10. STABILITY AND REACTIVITY

Reactivity	: Stable
Chemical stability	: Stable under normal conditions.
Possibility of hazardous reactions	: No decomposition if stored and applied as directed. Vapours may form explosive mixture with air.
Conditions to avoid	: Heat, flames and sparks. Extremes of temperature and direct sunlight.
Incompatible materials	: Oxidizing agents
Hazardous decomposition products	: Carbon monoxide Carbon dioxide (CO ₂)

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SECTION 11. TOXICOLOGICAL INFORMATION**Acute toxicity****Product:**

Acute inhalation toxicity : Acute toxicity estimate : > 10 mg/l
Exposure time: 4 h
Test atmosphere: dust/mist
Method: Calculation method

Components:**Distillates (petroleum), hydrotreated heavy naphthenic:**

Acute oral toxicity : LD50 rat: > 5,000 mg/kg

Acute inhalation toxicity : LC50 rat: > 5 mg/l
Exposure time: 4 h

Acute dermal toxicity : LD50 rabbit: > 5,000 mg/kg

ethanol:

Acute oral toxicity : LD50 Oral rat: 7,060 mg/kg

Acute inhalation toxicity : LC50 rat: 124.7 mg/l
Exposure time: 4 h

Skin corrosion/irritation**Product:**

Remarks: Irritating to skin.

Serious eye damage/eye irritation**Product:**

Remarks: Severe eye irritation

Respiratory or skin sensitisation**Product:**

Remarks: Causes sensitisation.

Germ cell mutagenicity

no data available

Carcinogenicity

no data available

Reproductive toxicity

no data available

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Distillates (petroleum), hydrotreated heavy naphthenic:
Distillates (petroleum), hydrotreated light:
ethanol:
Distillates (petroleum), straight-run middle:
1,2,4-trimethylbenzene:
mesitylene:
1,2,3-trimethylbenzene:
2-(2-butoxyethoxy)ethanol:
carbon dioxide:
pentyl acetate:
2-methylbutyl acetate:
toluene:
benzene:

STOT - single exposure

no data available

STOT - repeated exposure

no data available

Aspiration toxicity

no data available

Further information**Product:**

Remarks: no data available

Remarks: no data available

Components:**Distillates (petroleum), hydrotreated light:**

Remarks: no data available

SECTION 12. ECOLOGICAL INFORMATION**Ecotoxicity**

no data available

Persistence and degradability

no data available

Bioaccumulative potential**Product:**Partition coefficient: n- : Remarks: no data available
octanol/water**Components:****2-(2-butoxyethoxy)ethanol :**Partition coefficient: n- : Pow: 1
octanol/water**pentyl acetate :**

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Partition coefficient: n-
octanol/water : log Pow: 2.3

toluene :
Partition coefficient: n-
octanol/water : Pow: 2.73

Mobility in soil

no data available

Other adverse effects

no data available

Product:

Regulation 40 CFR Protection of Environment; Part 82 Protection of
Stratospheric Ozone - CAA Section 602 Class I
Substances

Remarks This product neither contains, nor was manufactured
with a Class I or Class II ODS as defined by the U.S.
Clean Air Act Section 602 (40 CFR 82, Subpt. A, App.A
+ B).

Additional ecological : no data available
information

An environmental hazard cannot be excluded in the
event of unprofessional handling or disposal., Toxic to
aquatic life with long lasting effects.

Components:

Distillates (petroleum), hydrotreated light :

Additional ecological : no data available
information

SECTION 13. DISPOSAL CONSIDERATIONS
Disposal methods

Waste from residues : The product should not be allowed to enter drains, water
courses or the soil.
Do not contaminate ponds, waterways or ditches with
chemical or used container.
Dispose of in accordance with local regulations.

Contaminated packaging : Empty remaining contents.
Dispose of as unused product.
Do not re-use empty containers.
Do not burn, or use a cutting torch on, the empty drum.

SECTION 14. TRANSPORT INFORMATION

Transportation Regulation: 49 CFR (USA): ORM-D, CONSUMER COMMODITY

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Transportation Regulation: IMDG (Vessel):
UN1950, AEROSOLS, 2.1, - Limited quantity

Transportation Regulation: IATA (Cargo Air):
UN1950, Aerosols, flammable, 2.1, - Limited quantity

Transportation Regulation: IATA (Passenger Air):
UN1950, Aerosols, flammable, 2.1, - Limited quantity

Transportation Regulation: TDG (Canada):
UN1950, AEROSOLS, FLAMMABLE, 2.1, (LQ), - Limited quantity

SECTION 15. REGULATORY INFORMATION

EPCRA - Emergency Planning and Community Right-to-Know Act

CERCLA Reportable Quantity

Components	CAS-No.	Component RQ (lbs)	Calculated product RQ (lbs)
benzene	71-43-2	10	*

*: Calculated RQ exceeds reasonably attainable upper limit.

SARA 304 Extremely Hazardous Substances Reportable Quantity

This material does not contain any components with a section 304 EHS RQ.

SARA 311/312 Hazards : Acute Health Hazard
Fire Hazard
Sudden Release of Pressure Hazard
Chronic Health Hazard

SARA 302 : SARA 302: No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.

SARA 313 : The following components are subject to reporting levels established by SARA Title III, Section 313:

1,2,4-trimethylbenzene	95-63-6	5.8366 %
benzene	71-43-2	0.199 %

California Prop 65 WARNING: This product contains a chemical known to the State of California to cause birth defects or other reproductive harm.

toluene	108-88-3
benzene	71-43-2

The components of this product are reported in the following inventories:

TSCA On TSCA Inventory
DSL This product contains one or several components that are not on the

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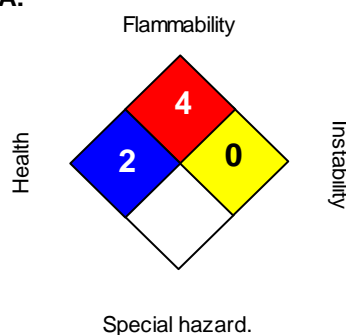
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AICS	Canadian DSL nor NDSL.
NZIoC	Not in compliance with the inventory
PICCS	Not in compliance with the inventory
IECSC	Not in compliance with the inventory

Inventory Acronym and Validity Area Legend:

AICS (Australia), DSL (Canada), IECSC (China), REACH (European Union), ENCS (Japan), ISHL (Japan), KECI (Korea), NZIoC (New Zealand), PICCS (Philippines), TSCA (USA)

SECTION 16. OTHER INFORMATION**Further information****NFPA:****HMIS III:**

HEALTH	2*
FLAMMABILITY	4
PHYSICAL HAZARD	2

0 = not significant, 1 = Slight,
2 = Moderate, 3 = High
4 = Extreme, * = Chronic

OSHA GHS Label Information:

Hazard pictograms



Signal word

Hazard statements

Precautionary statements

- Danger:**
Extremely flammable aerosol. Contains gas under pressure; may explode if heated.
Causes skin irritation. May cause an allergic skin reaction. Causes serious eye irritation.
May cause cancer. Suspected of damaging fertility or the unborn child.
- Prevention:** Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Do not spray on an open flame or other ignition source. Pressurized container: Do not pierce or burn, even after use. Avoid breathing dust/ fume/ gas/ mist/ vapours/ spray. Wash skin thoroughly after handling. Contaminated work clothing should not be allowed out of the workplace. Wear eye protection/ face protection. Wear protective gloves. Use personal protective equipment as required.
- Response:** IF ON SKIN: Wash with plenty of soap and water. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. IF exposed or concerned: Get medical advice/ attention. If skin irritation or rash occurs: Get medical advice/ attention. If eye irritation persists: Get medical advice/ attention. Take off contaminated clothing and wash before reuse.
- Storage:** Store locked up. Protect from sunlight. Do not expose to temperatures exceeding 50 °C/ 122 °F.
- Disposal:** Dispose of contents/container in accordance with local regulation.

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