Safety Data Sheets

Safety Data Sheet

Anchorlube G-771 5/6/2015

SECTION 1: IDENTIFICATION

Product Name: Anchorlube G-771

Manufacturer: Anchor Chemical Company
777 Canterbury Road
Westlake, OH 44145

Information Phone Number: (440) 871-1660
Fax: (440) 871-0665
Emergency Phone Number: (440) 871-1660

Product Use: Metalworking lubricant/coolant for cutting metals

Restriction on Use: None known

SDS Date of Preparation: 5/6/2015

SECTION 2: HAZARDS IDENTIFICATION

GHS Classification (Hazcom-2012):

Physical	Health
Not Hazardous	Not Hazardous

Labeling Elements:

None required

Hazard statement(s)
None

Precautionary statement(s)
None

Other Hazards: None

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Name	CAS#	%
Non-hazardous Ingredients	Proprietary	100%

The specific identity and/or exact percentage of composition has been withheld as a trade secret.

SECTION 4: FIRST AID MEASURES

Eye: Flush eyes with water, holding the eyelids apart. Get medical attention if irritation develops or persists.

Skin: Wash thoroughly with plenty of water. Get medical attention if irritation persists.

Inhalation: Remove to fresh air and keep comfortable for breathing. If irritation occurs, get medical attention.

Ingestion: If large amounts ingested, seek medical attention.

Most Important symptoms and effects, both acute and delayed: May cause slight eye and skin irritation. Inhalation of vapors or mist may cause respiratory irritation.

Indication of any immediate medical attention and special treatment needed: Immediate medical attention generally not required.

SECTION 5: FIRE-FIGHTING MEASURES

Suitable and Unsuitable Extinguishing Media: Use media that is suitable for the surrounding fire.

Special Hazards Arising from the Chemical: This product is not classified as combustible. Thermal decomposition may yield oxides of carbon and unidentified compounds.

Special Equipment and Precautions for Fire-Fighters: Wear NIOSH approved positive pressure, self-contained breathing apparatus and full protective clothing. Cool fire exposed containers with water.

SECTION 6: ACCIDENTAL RELEASE MEASURES

Personal Precautions, Protective Equipment and Emergency Procedures: Wear appropriate personal protective equipment. Use caution: slip hazard.

Environmental Hazards: Report spills and releases as required to appropriate authorities.

Methods and Material for Containment and Cleaning Up: Because of its viscous nature, this product is not expected to leak or spill. Collect liquid spill with an inert absorbent material and place into a suitable container for disposal. Clean area thoroughly.

SECTION 7: HANDLING AND STORAGE

Precautions for Safe Handling: Avoid contact with eyes. Avoid prolonged skin contact. Avoid inhalation of vapor or mist. Do not transfer to unlabeled containers.

Conditions for Safe Storage, Including any Incompatibilities: Store at room temperature away from extreme heat and open flames.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

Chemical Name	Exposure Limits
Non-hazardous Ingredients	None Established

Appropriate Engineering Controls: Use with adequate general or local exhaust ventilation to minimize exposure levels. If the product is used at high temperatures, local exhaust ventilation may be required.

Individual Protection Measures:
Respiratory Protection: In operations where exposures are excessive, a NIOSH approved respirator with organic vapor/particulate cartridges or supplied air respirator appropriate for the form and concentration of the contaminants should be used. Selection and use of respiratory equipment must be in accordance with OSHA 1910.134 and good industrial hygiene practice.

Skin Protection: If skin irritation occurs, **i**mpervious gloves such as rubber or nitrile recommended where needed to avoid skin contact

Eye Protection: Safety glasses or goggles recommended where needed to avoid eye contact.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

Appearance: Green semi paste	**Vapor Density (air = 1):** Not available
Odor: Slight almond odor	**Specific Gravity:** 1.0365
Odor Threshold: Not established	**Water Solubility:** Dispersable
pH: 6.0-6.5	**Octanol/Water Partition Coefficient:** Not available
Melting Point/Freezing Point: 0ºC (32ºF)	**Autoignition Temperature:** Not available
Boiling Point: 107.22º (225ºF)	**Decomposition Temperature:** Not available
Flash Point: Not available	**Viscosity:** Not available
Evaporation Rate: Not available	**Explosion Properties:** Not explosive
Flammable Limits: **LEL**: Not established **UEL:** Not established	**Oxidizing Properties:** Not oxidizing
Vapor Pressure: Not established	**Flammability (solid, gas):** Not available

SECTION 10: STABILITY AND REACTIVITY

Reactivity: Not reactive under normal conditions of use.

Chemical Stability: Stable under normal storage and handling conditions.

Possibility of Hazardous Reactions: None known

Conditions to Avoid: Extreme heat and freezing.

Incompatible Materials: Avoid magnesium as this product is water based.

Hazardous Decomposition Products: Thermal decomposition may yield oxides of carbon and other unidentified compounds.

SECTION 11: TOXICOLOGICAL INFORMATION

Potential Health Effects:

Eye: May cause mild irritation.

Skin: Prolonged contact may cause irritation and drying of the skin.

Inhalation: No adverse effects expected at ambient temperatures. Inhalation of vapors and fumes from thermal decomposition may cause respiratory irritation.

Ingestion: Swallowing may cause gastrointestinal irritation, nausea, vomiting, diarrhea.

Chronic Hazards: Prolonged skin contact may cause an allergic reaction.

Carcinogen Status: None of the other components of this product are listed as carcinogens by OSHA, IARC, NTP, or the EU CLP.

Acute Toxicity Values:
No data available. Components are not acutely toxic.

SECTION 12: ECOLOGICAL INFORMATION

Ecotoxicity:
No data available. This product is not expected to be harmful to the environment

Persistence and Degradability: Product is degradable. Unsealed will begin to degrade rapidly.

Bioaccumulative Potential: No data available

Mobility in Soil: No data available

Other Adverse Effects: None known

SECTION 13: DISPOSAL CONSIDERATIONS

Dispose in accordance with all local, regional and national regulations.

SECTION 14: TRANSPORT INFORMATION

DOT Proper Shipping Name: Not regulated
DOT Technical Name: None
DOT Hazard Class: None
UN Number: None
DOT Labels Required (49CFR172.101): None

IMDG Shipping Description: Not regulated
ID Number: None
Hazard Class: None
Packing Group: None
Labels Required: None
Marking Required: None
Placards Required: None

SECTION 15: REGULATORY INFORMATION

Safety, health, and environmental regulations specific for the product in question.

CERCLA Hazardous Substances (Section 103)/RQ: This product is not subject to CERCLA reporting requirements. Many states have more stringent release reporting requirements. Report spills required under federal, state and local regulations.

SARA Hazard Category (311/312): Not hazardous

SARA 313: This product contains the following chemicals regulated under SARA Title III, section 313: None.

EPA TSCA Inventory: All of the components of this product are listed on the TSCA inventory.

CALIFORNIA PROPOSITION 65: This product contains trace amounts of substances known to the state of California to cause cancer and/or reproductive toxicity.

SECTION 16: OTHER INFORMATION

Revision Summary: New format to comply with OSHA Hazcom 2012

SDS Date of Preparation/Revision: 5/6/2015

Disclaimer: Information contained herein is presented in good faith and is based on data believed to be accurate. However no warranty is expressed or implied regarding this information or the results obtained from the use of this Safety Data Sheet, whether it originates with Anchor Chemical name or others. This Safety Data Sheet relates only to the specific material designated herein. It does not relate to use with other material or processes. This information is supplied with the condition that the user will make appropriate determination as to its suitability for their purpose prior to using it.

Initial Preparation Date: *12/10/2003*
Last Revision Date: *None*
Effective Date: *10/19/2005*

MATERIAL SAFETY DATA SHEET

PRODUCT IDENTITY: VALUECRAFT 50/50 PREDILUTED ANTIFREEZE & COOLANT

1. CHEMICAL PRODUCT & COMPANY INFORMATION

OLD WORLD INDUSTRIES, INC.
4065 COMMERCIAL AVENUE
NORTHBROOK, ILLINOIS 60062
PHONE: 847-559-2000
EMERGENCY PHONE: 1-800-424-9300 (CHEMTREC)

2. COMPOSITION/INFORMATION ON INGREDIENTS

Material	*CAS#*	*% by Wt*	*PEL (OSHA)*	*TLV (ACGIH)*
Water	7732-18-5	49 - 50	None	None
Ethylene Glycol	107-21-1	45 - 48	50 ppm	50 ppm
Diethylene Glycol	111-46-6	0 - 2	None	None
Dipotassium Phosphate	7758-11-4	< 2	None	None

3. HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW

Slight odor.	***May be fatal if swallowed.***	***Vapors can cause eye irritation.***

Lowest Known LD50 (Oral)	107-21-1	11,680 mg/kg (Rats)
Lowest Known LD50 (Skin)	107-21-1	19,060 mg/kg (Rabbits)

HAZARD RATING SYSTEM

NFPA: HEALTH: 1	**FLAMMABILITY: 1**	**REACTIVITY: 0**
HMIS: HEALTH: 2	**FLAMMABILITY: 1**	**REACTIVITY: 0**

KEY: 0 – Minimal 1 – Slight 2 - Moderate 3 - Serious 4 - Severe

POTENTIAL HEALTH EFFECTS

Routes of Exposure: Inhalation, Ingestion, Skin Contact/Absorption, Eye Contact

Eye: May cause slight transient (temporary) eye irritation. Corneal injury is unlikely. Vapors or mists may cause eye irritation.

Skin: Prolonged or repeated exposure not likely to cause significant skin irritation. A single prolonged exposure is not likely to result in the material being absorbed through skin in harmful amounts. Repeated skin exposure may result in absorption of harmful amounts. Massive contact with damaged skin or of material sufficiently hot to burn skin may result in absorption of potential lethal amounts.

Ingestion: Single dose oral toxicity is considered to be moderate. Excessive exposure may cause central nervous system effects, cardiopulmonary effects (metabolic acidosis), and kidney failure. Small amounts swallowed incidental to normal handling operations are not likely to cause injury; however, swallowing amounts larger than that may cause serious injury, even death.

Inhalation: At room temperature, exposures to vapors are minimal due to physical properties; higher temperatures may generate vapor levels sufficient to cause adverse effects.

Systemic (Other Target Organ) Effects: Repeated excessive exposures may cause severe kidney and also liver and gastrointestinal effects. Signs and symptoms of excessive exposure may be central nervous system effects. Signs and symptoms of excessive exposure may be nausea and/or vomiting. Signs and symptoms of excessive exposure may be anesthetic or narcotic effects. Observations in animals include formation of bladder stones after repeated oral doses of ethylene glycol. Reports of kidney failure and death in burn patients suggest the ethylene glycol may have been a factor. The use of topical applications containing this material may not be appropriate in severely burned patients or individuals with impaired renal function.

Cancer Information: Based on data from long-term animal studies, ethylene glycol is not believed to pose a carcinogenic risk to man.

Teratology (Birth Defects): Exposure to ethylene glycol has caused birth defects in laboratory animals only at doses toxic to the mother.

Reproductive Effects: Ethylene glycol has not interfered with reproduction in animal studies except at very high doses.

CHRONIC, PROLONGED OR REPEATED OVEREXPOSURE

Effects of Repeated Overexposure: Repeated inhalation of ethylene glycol mist may produce signs of central nervous system involvement, particularly dizziness and nystagmus.

Other Effects of Overexposure: repeated skin contact with ethylene glycol may, in a very small proportion of cases, cause sensitization with the development of allergic contact dermatitis. The incidence is significantly less than 1% with the undiluted material.

4. FIRST AID MEASURES
Ensure physician has access to this MSDS.

TREATMENT

Eyes: Immediately flush eyes with large amounts of water for 15 minutes, lifting lower and upper lids. Get medical attention as soon as possible. Contact lenses should never be worn when working with this chemical.

Skin: Flush area of skin contact immediately with large amounts of water for at least 15 minutes while removing contaminated clothing. If irritation persists after flushing, get medical attention promptly. Wash clothing before re-use.

Inhalation: If inhaled, immediately remove victim to fresh air and call ***emergency medical care.*** If not breathing, give artificial respiration. If breathing is difficult, give oxygen.

Ingestion: Obtain medical attention immediately. If patient is fully conscious, give two glasses of water. Do not induce vomiting. If medical advice is delayed, and if the person has swallowed a moderate volume of material (a few ounces), then give three to four ounces of hard liquor, such as whisky. For children, give proportionally less liquor, according to weight.

Notes to Physician:
It is estimated that the lethal oral dose to adults is of the order of 1.0 ml/kg. Ethylene glycol is metabolized by alcohol dehydrogenate to various metabolites including glyceraldehydes, glycolic acid and oxalic acid which cause an elevated anion-gap metabolic acidosis and renal tubular injury. The signs and symptoms in ethylene glycol poisoning are those of metabolic acidosis, CNS depression, and kidney injury. Urinalysis may show albuminuria, hematuria and oxaluria. Clinical chemistry may reveal anion-gap metabolic acidosis and uremia. The currently recommended medical management of ethylene glycol poisoning includes elimination of ethylene glycol and metabolites, correction of metabolic acidosis and prevention of kidney injury. It is essential to have immediate and follow up urinalysis and clinical chemistry. There should be particular emphasis on acid-base balance and renal function tests. A continuous infusion of 5% sodium bicarbonate with frequent monitoring of electrolytes and fluid balance is used to achieve correction of metabolic acidosis and forced diuresis. As a competitive substrate for alcohol dehydrogenase, ethanol is antidotal. Given in the early stages of intoxication, it blocks the formulation of nephrotoxic metabolites. A therapeutically effective blood concentration of ethanol is in the range 100-150 mg/dl, and should be achieved by a rapid loading dose and maintained by intravenous infusion. For severe and/or deteriorating cases, hemodialysis may be required. Dialysis should be considered for patients who are symptomatic, have severe metabolic acidosis, a blood ethylene glycol concentration greater than 25 md/dl, or compromise of renal functions.

A more effective intravenous antidote for physician use is 4-methylpyrazole, a potent inhibitor of alcohol dehydrogenases, which effectively blocks the formation of toxic metabolites of ethylene glycol. It has been used to decrease the metabolic consequences of ethylene glycol poisoning before metabolic acidosis coma, seizures, and renal failure have occurred. A generally recommended protocol is a loading dose of 15 mg/kg followed by 10 mg/kg every 12 hours for 4 doses and then 15 mg/kg every 12 hours until ethylene glycol concentrations are below 20 mg/100 ml. Slow intravenous infusion is required. Since 4-methyplyrozole is dialyzable, increased dosage may be necessary

during hemodialysis. Additional therapeutic measures may include the administration of cofactors involved in the metabolism of ethylene glycol. Thiamine (100 mg) and pyridoxine (50 mg) should be given every six hours.

Pulmonary edema with hypoxemia has been described in a number of patients following poisoning with ethylene glycol. The mechanism of production has not been elucidated, but it appears to be non-cardiogenic in origin in several cases. Respiratory support with mechanical ventilation and positive end expiratory pressure may be required. There may be cranial nerve involvement in the late stages of toxicity from swallowed ethylene glycol. In particular, effects

have been reported involving the seventh, eighth and ninth cranial nerves, presenting with bilateral facial paralysis, diminished hearing and dysphasia.

5. FIRE FIGHTING MEASURES

Flammable Properties
Flash Point: None, since % of water is over 20.
Autoignition Temperature: Autoignition temperature for 100% ethylene glycol is 398°C (748°F).

Flammability Limits - % of vapor concentration at which product can ignite in presence of spark.
Lower Flammability Limit: Not determined
Upper Flammability Limit: Not determined

Flammability limits are not determined on this product because the solution consists of 50% water. If and when the water evaporates and 100% glycol is left, the upper and lower flammability limits would be 3.2% and 15.3% (the same as concentrated Ethylene glycol).

Hazardous Combustion Products: Hazardous combustion products may include and are not limited to carbon monoxide, carbon dioxide and trace amounts of aldehydes and organic acids. When available oxygen is limited, as in a fire or when heated to very high temperatures by a hot wire or plate, carbon monoxide and other hazardous compounds such as aldehydes might be generated.

Extinguishing Media: Water fog or fine spray. Alcohol resistant foams (ATC type) are preferred if available. General purpose synthetic foams (including AFFF) or protein foams may function, but much less effectively. Carbon dioxide. Dry chemical. Do not use direct water stream. May spread fire.

Fire Fighting Instructions: No fire and explosion hazards expected under normal storage and handling conditions (i.e. ambient temperatures). However, ethylene glycol or solutions of ethylene glycol and water can form flammable vapors with air if heated sufficiently. Keep people away. Isolate fire area and deny unnecessary entry.

Protective Equipment for Fire Fighters: Wear positive-pressure, self-contained breathing apparatus (SCBA) and protective fire fighting clothing (includes fire-fighting helmet, coat, pants, boots and gloves).

6. ACCIDENTAL RELEASE MEASURES

Protect People: Material is moderately toxic when ingested. Take adequate precautions to keep people, especially children away from spill site. PVC-coated rubber gloves and monogoggles or face shield can be used during cleanup of spill site. Product on surfaces can cause slippery conditions. Practice reasonable care and cleanliness. Avoid breathing spray mists if generated. Keep out of reach of children. Product may become a solid at temperatures below -18°C (0°F). Do not store near food, foodstuffs, drugs or potable water supplies.

Protect the Environment: Do not dump used product or diluted material into sewers, on the ground, or into any body of water.

Cleanup: Small spills: Soak up with absorbent material. Large spills: Dike and pump into suitable containers for disposal. Ensure compliance with all applicable statues that require notification of appropriate government officials.

7. HANDLING AND STORAGE

Steps to be Taken in Case Material is Released or Spilled: Eliminate all sources of ignition in vicinity of the spilled or released fluid.

Other Precautions: Use normal precautions in handling any combustible liquid. Keep container closed when not in use. Store away from heat or open flame. Product on surfaces can cause slippery conditions. Practice reasonable care and cleanliness. Avoid breathing spray mists if generated. Keep out of reach of children. Product may become a solid at temperatures below -37°C (-34°F). Do not store near food, foodstuffs, drugs or potable water supplies.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Respiratory Protection: Respiratory protection is required if airborne concentration exceeds TLV. At any detectable concentration any self-contained breathing apparatus with a full face piece and operated in a pressure-demand or other positive pressure mode or any supplied-air respirator with a full face piece and operated in a pressure-demand or other positive pressure mode in combination with an auxiliary self-contained breathing apparatus operated in pressure-demand or other positive pressure mode.

Escape: Any air-purifying full face piece respirator (gas mask) with a chin-style or front- or back-mounted organic vapor canister or any appropriate escape-type self-contained breathing apparatus.

Skin Protection: Protective gloves recommended when prolonged skin contact cannot be avoided. Polyethylene; Neoprene; Nitrile; Polyvinyl alcohol; Natural Rubber, Butyl Rubber. Safety shower should be available.

Eye Protection: Safety goggles and face shield. Emergency eyewash should be available. Contact lenses should not be worn when working with this chemical.

Engineering Controls: Use general or local exhaust ventilation to meet TLV requirements.

EXPOSURE LIMITS

Component	**Exposure Limits**	**Skin Form**
Ethylene glycol	100 mg/m3 CEILING ACGIH	Aerosol
Ethylene glycol	125 mg/m3 CEILING OSHA-vacated	
	50 ppm CEILING OSHA – vacated	
	100 mg/m3 CEILING UCC	Aerosol and Vapor
Diethylene glycol	50 ppm TWA8 AIHA WEEL	Aerosol and Vapor
Diethylene glycol	10 mg/m3 TWA8 AIHA WEEL	Aerosol

In the Exposure Limits Chart above, if there is no specific qualifier (i.e., Aerosol) listed in the Form Column for a particular limit, the listed limit includes all airborne forms of the substance that can be inhaled.

A "blank" in the Skin column indicates that exposure by the cutaneous (skin) route is not a potential significant contributor to overall exposure.

9. PHYSICAL / CHEMICAL PROPERTIES

Boiling Range:	106 - 108°C (224 - 227°F)
Freeze Point:	-37°C (-34°F)
Specific Gravity (Water =1):	1.07
Pounds/Gallons:	8.9
Vapor Pressure (mm of Hg) @ 20C:	<0.1
Vapor Density (air=1):	2.1
Water Solubility:	Complete
Evaporation Rate (BuAc = 1):	Nil
% Volatile By Volume:	50
Appearance:	Green
Odor:	Mild
pH:	10.5-11.0

10. STABILITY & REACTIVITY DATA

Stability:	Stable
Conditions to Avoid:	Keep away from flame
Incompatibility (Materials to Avoid):	Strong acid or oxidizing agents
Hazardous Decomposition Products:	Incomplete combustion may produce CO gas
Hazardous Polymerization:	Will not occur

11. TOXICOLOGICAL INFORMATION

(Concentrated Ethylene Glycol)

Skin: The dermal LD50 has not been determined.

Ingestion: The lethal dose in humans is estimated to be 100 ml (3 ozs.). The oral LD50 for rats is in the 6000-13,000-mg/kg range.

Mutagenicity (The Effects on Genetic Material): In vitro mutagenicity studies were negative. Animal mutagenicity studies were negative.

Significant Data with Possible Relevance to Humans: Ethylene glycol has been shown to produce dose-related teratogenic effects in rats and mice when given by gavage or in drinking water at high concentrations or doses. The no-effect doses for developmental toxicity for ethylene glycol given by gavage over the period of organogenesis has been shown to be 150 mg/kg/day for the mouse and 500 mg/kg/day for the rat. Also, in a preliminary study to asses the effects of exposure of pregnant rats and made to aerosis at concentrations of 150, 1000 and 25000 mg/m3 for 6 hours a day throughout the period of organogenesis, teratogenic effects were produced at the highest concentration, but only in mice. The conditions of these latter experiments did not allow a conclusion as to whether the developmental toxicity was mediated by inhalation of aerosol percutaneous absorption of ethylene glycol from contaminated skin, or swallowing ethylene glycol as a result of grooming the wetted coat. In a further study, comparing effects from high aerosol concentration by whole-body or nose-only exposure, it was shown that nose-only exposure resulted in maternal toxicity (1000 and 25000 mg/m3) and developmental toxicity with minimal evidence of teratogenicity (2500 mg/m3). The no-effects concentration (based on maternal toxicity) was 500 mg/m3. In a further study in mice, no teratogenic effects could be produced when ethylene glycol was applied to skin of pregnant

mice over the period of organogenesis. The above observations suggest that ethylene glycol is to be regarded as an animal teratogen. There is currently no available information to suggest that ethylene glycol has caused birth defects in humans. Cutaneous application of ethylene glycol is ineffective in producing developmental toxicity. Exposure to high aerosol concentrations is only minimally effective in producing developmental toxicity. The major route for producing developmental toxicity is perorally. Two chronic feeding studies, using rats and mice, have not produced any evidence that ethylene glycol causes dose-related increases in tumor incidence or a different pattern of tumors compared with untreated controls. The absence of carcinogenic potential for ethylene glycol has been supported by numerous in vitro genotoxicity studies showing that it does not produce mutagenic or clastogenic effects.

A chronic dietary feeding study of diethylene glycol with rats showed mild kidney injury at 1%, while concentrations of 2% and 4% caused more marked kidney injury. In addition, at 2% and 4% of diethylene glycol in the diet, some rats developed benign papillary tumors in the urinary bladder. These have been attributed to the presence of urinary bladder calcium oxalate stones. No evidence for carcinogenicity was found with a chronic skin-painting study with diethylene glycol in mice. The absence of a direct chemical carcinogenic effect addords with the results in vitro genotoxicity studies that show that it does not produce mutagenic or clastogenic effects. A feeding study employing up to 5.0% diethylene glycol in the diet failed to produce any teratogenic effects. In a mouse continuous breeding study with large doses of diethylene glycol in drinking water, there was evidence for reproductive toxicity at 3.5% (equivalent to 6.1 g/kg/day) as reduced number of litter, live pups per litter and live pup weight. No such effects were seen at 1.75% (approximately 3.05 g/kg/day). The relevance of these very high dosages to human health is uncertain. Pregnant rats receiving undiluted diethylene glycol by gavage over the period of organogenesis had toxic effects at 4.0 and 8.0 ml/kg/day as mortality, decreased body weight, decreased food consumption increased water consumption and increased liver and kidney weights. Fetotoxicity was seen only at these maternally toxic dosages. Decreased fetal body weight occurred at 8.0 ml/kg/day, and increased skeletal variants at 4.0 and 8.0 ml/kg/day. No embryotixic or teratogenic effects were seen. Neither maternal toxicity nor fetotoxicity occurred at 1.0 ml/kg/day. In a study with mice also receiving undiluted diethylene glycol over the period of organogenesis, maternal toxicity occurred at 2.5 and 10.0 ml/kg/day, but not at 0.5 ml/kg/day. Definitive developmental toxicity was not seen in this species.

ACUTE TOXICITY

Peroral: The lethal dose in humans is estimated to be 3 oz. or 100 ml.
Rat: LD50 (6000 – 13000) mg/kg

Percutaneous:
Rabbit: LD50 = >22270 mg/kg; 24 h occluded

Inhalation:
Rat: 8-hour exposure, substantially saturated vapor studies, dynamic generation method

Mortality: 0/6

Inhalation: Mist/vapor study, rat, at 170°C, 8-hour exposure = 2.2 mg/l

Mortality: 0/6

Inhalation:
Rat: 8-hour exposure, fog = 10000 ppm; 65° - 70°C

Mortality: 0/6

IRRITATION

Skin:

Rabbit: 24-hour occluded contact, 0.5 ml
Results: Minor erythema and edema

Skin:

Human: Primary irritation patch test, 48-hour occluded, 0.2 ml
Results: Evidence of irritation

Eye:

Rabbit: 0.1 ml
Results: Minor transient iritis, conjunctival irritation with discharge

REPEATED EXPOSURE

In a 7-day dietary study with rats, a significant increase in kidney weights in females was observed at 5.0 gm/kg. The NOEL was 2.5 gm/kg.

In a 24-month dietary study with rats, increased mortality in males was observed at the highest dose, 1.0 gm/kg/day. There were multiple signs: mineralization of several organs, including the cardiac vessels, cardiac muscle, vas deferens, stomach and pulmonary vessels; cellular hyperplasia of the parathyroids, hemosiderosis of the spleen, myocardial fibrosis, portal fibrosis of the liver, bile duct hyperplasia and hydronephrosis and oxylate nephrosis of the kidneys. Ethylene glycol was not oncogenic.

In a 90-day dietary study with dogs, repeated exposures to 2.5 gm/kg resulted in acute renal failure and deaths. The NOAEL was 1.0 gm/kg.

SENSITIZATION (ANIMAL AND HUMAN STUDIES)

Repeated skin contact with ethylene glycol may, in a very small proportion of cases, cause sensitization with the development of allergic contact dermatitis. The incidence is significantly less than 1% with the undiluted material.

REPRODUCTIVE TOXICITY

A three-generation study indicated that ethylene glycol did not affect reproductive parameters at dietary concentrations up to 1.0 gm/kg/day in any generation.

CHRONIC TOXICITY AND CARCINOGENICITY

Two chronic feeding studies, using rats and mice, have not produced any evidence that ethylene glycol causes dose-related increases in tumor incidence or a different pattern of tumors compared with untreated controls. The absence of a carcinogenic potential for ethylene glycol has been supported by numerous in vitro genotoxicity studies showing that it does not produce mutagenic or clastogenic effects.

GENETIC TOXICOLOGY

In Vitro: Ethylene glycol was devoid of genotoxic activity in an Ames test, forward gene mutation and sister chromatid exchange (SCE) studies in Chinese Hamster Ovary (CHO) cells and an in vitro cytogenetics study.

In Vivo: Ethylene glycol by three different routes (intravenous, peroral and percutaneous) demonstrates apparent first-order pharmacokinetic behavior for the disposition in and the elimination from the plasma. Dose-dependent changes occur for the elimination of metabolites in the urine and as $14CO^2$ after single doses for the intravenous and

peroral, but not the percutaneous route. The hypothesis from literature sources exists that developmental toxicity is caused by a metabolite of ethylene glycol, called glycolic acid, and not parent ethylene glycol. Under most conditions of ethylene glycol exposure, the glycolic acid metabolite is present in the blood in very low levels. However, it can become the major metabolite following large doses of ethylene glycol due to saturation of glycolic acid oxidation and/or elimination. When levels of this acidic metabolite exceed the capacity of maternal blood buffers to neutralize it, a maternal metabolic acidosis ensues, which has been hypothesized to be the true agent responsible for ethylene glycol induced developmental toxicity. Research suggests that ethylene glycol developmental toxicity is due to a dose-rate dependent toxicokinetic shift leading to glycolate accumulation and metabolic acidosis.

ADDITIONAL STUDIES

Ethylene glycol has been shown to produce dose-related teratogenic effects in rats and mice when given by gavage or in drinking water at high concentrations or doses. The no-effect doses for developmental toxicity for ethylene glycol given by gavage over the period of organogenesis has been shown to be 150 mg/kg/day for the mouse and 500 mg/kg/day for the rat. Also, in a preliminary study to assess the effects of exposure of pregnant rats and mice to aerosols at concentrations of 150, 1000 and 2500 mg/m^3 for 6 hours a day throughout the period of organogenesis, teratogenic effects were produced at the highest concentration, but only in mice. The conditions of these latter experiments did not allow a conclusion as to whether the developmental toxicity was mediated by inhalation of aerosol, percutaneous absorption of ethylene glycol from contaminated skin, or swallowing of ethylene glycol as a result of grooming the wetted coat. In a further study, comparing effects from high aerosol concentration by whole-body or nose-only exposure, it was shown that nose-only exposure resulted in maternal toxicity (1000 and 2500 mg/m^3) and developmental toxicity with minimal evidence of teratogenicity (2500 mg/m^3). The no-effects concentration (based on maternal toxicity) was 500 mg/m^3. In a further study in mice, no teratogenic effects could be produced when ethylene glycol was applied to the skin of pregnant mice over the period of organogenesis. The above observations suggest that ethylene glycol is to be regarded as an animal teratogen. There is currently no available information to suggest that ethylene glycol has caused birth defects in humans. Cutaneous application of ethylene glycol is ineffective in producing developmental toxicity. Exposure to high aerosol concentrations is only minimally effective in producing developmental toxicity.

12. ECOLOGICAL INFORMATION

(Concentrated Ethylene Glycol)

ENVIRONMENTAL FATE

Movement & Partitioning: Bioconcentration potential is low (BCF less than 100 or Log Kow less than 3). Log octanol/water partition coefficient (log Kow) is -1.36. Henry's Law Constant (H) is 6.0E-08 atm-m3/mol. Bioconcentration factor (BCF) is 10 in golden orfe.

Degradation & Transformation: Biodegradation under aerobic static laboratory conditions is high (BOD20 or BOD28/ThOD greater than 40%). 5-Day biochemical oxygen demand (BOD5) is 0.78 p/p. 10-Day biochemical oxygen demand (BOD10) is 1.06 p/p. 20-Day biochemical oxygen demand (BOD20) is 1.15 p/p. Theoretical oxygen demand (THOD) is calculated to be 1.29 p/p. Biodegradation may occur under both aerobic and anaerobic conditions (in either the presence or absence of oxygen). Inhibitory concentration (IC50) in OECD "Activated Sludge, Respiration Inhibition Test" (Guideline # 209) is < 1000 mg/L. Degradation is expected in the atmospheric environment within days to weeks.

Ecotoxicology: Material is practically non-toxic to aquatic organisms on an acute basis (LC50 greater than 100 mg/L in most sensitive species). Acute LC50 for fathead minnow (Pimephales promelas) is 51000 mg/L. Acute LC50 for bluegill (Lepomis macrochirus) is 27549 mg/L. Acute LC50 for rainbow trout (Oncorhynchus mykiss) is about 18000-46000 mg/L. Acute LC50 for guppy (Poecilia reticulata) is 49300 mg/L. Acute LC50 for water flea (Daphnia magna) is 46300-51100 mg/L. Acute LC50 for the cladoceran Ceriodaphnia dubia is 10000-25800 mg/L.

Acute LC50 for crayfish is 91430 mg/L. Acute LC50 for brine shrimp (Artemia salina) is 20000 mg/L. Acute LC50 for golden orfe (Leuciscus idus) is greater than 10000 mg/L. Acute LC50 for goldfish (Carassius auratus) is greater than 5000 mg/L. Growth inhibition EC50 for green alga Selenastrum capricornutum is 9500-13000 mg/L.

BOD (% Oxygen Consumption):

Day 5	Day 10	Day 15	Day 20	Day 30
51%	80%		97%	

ECOTOXICITY

Toxicity to Micro-organisms:
Bacterial / NA: 16 h; IC50
Result Value: >10000 mg/l

Toxicity to Aquatic Invertebrates:
Daphnia: 48 h; LC50
Result Value: >100000 mg/l

Toxicity to Fish
Fathead Minnow: 94 h; LC50
Result Value: 70000 mg/l

FURTHER INFORMATION

Chemical Oxygen Demand (COD) – Measured: 1.29 mg/mg
Theoretical Oxygen Demand (THOD) – Calculated: 1.30 mg/mg

Octanol/Water Partition Coefficient – Measured: -1.36

13. DISPOSAL CONSIDERATIONS

DO NOT discharge to sewer. Wear appropriate personal protection. Take up with sand, vermiculite, or similar inert material. Dispose in accordance with federal, state and local regulations.

14. TRANSPORT INFORMATION

U.S. DEPARTMENT OF TRANSPORTATION
Non-Bulk
Not regulated by the US D.O.T. (in quantities under 5,000 lbs in any one inner package)

Bulk

Proper Shipping Name:	Environmentally Hazardous Substance, LIQUID N.O.S. (ETHYLENE GLYCOL)
Technical Name:	ETHYLENE GLYCOL
ID Number:	UN 3082
Hazard Class:	9
Packing Group:	PG III
Reportable Quantity:	5,000 lb.

IATA
Non-Bulk
Not Regulated by IATA

IMDG
Non-Bulk
Not regulated by IMDG (in quantities under 5,000 lbs in any one inner package)

15. REGULATORY INFORMATION

THIS PRODUCT CONTAINS COMPONENT(S) CITED ON THE FOLLOWING REGULATIONS.

Chemical Name	***Cas Number***
Ethylene Glycol	107-21-1

United States - TSCA Inventory: Listed

Water Standards: No data available

Atmospheric Standards: Clean Air Act (1990) - List of Hazardous Air Contaminants: listed

CERCLA: Reportable Quantity (RQ): 5,000 pounds (532 gallons)

OSHA Hazard Communication Standard: This product is a "hazardous chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

SARA Title III: Section 311/312 - Categories: Acute hazard; chronic hazard

Section 312 - Inventory Reporting: Ethylene glycol is subject to Tier I and/or Tier II annual inventory reporting.

Section 313 - Emission Reporting: Ethylene glycol is subject to Form R reporting requirements.

Section 302 - Extremely Hazardous Substances: Ethylene glycol is not listed.

State Right-To-Know:

California - Exposure Limits - Ceilings:	vapor-50 ppm ceiling; 125 mg/m3 ceiling
Director's List of Hazardous Substances:	listed
Florida - Hazardous Substances List:	listed
Massachusetts - Right-to-Know List:	listed
Minnesota - Haz. Subs. List:	listed (particulate and vapor)
New Jersey - Right-to-Know List (Total):	Present greater than 1.0%
Pennsylvania Right-to-Know List:	environmental hazard

Canadian Regulations: 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.

WHMIS Information: D2A - material has potential toxic effects. Refer elsewhere in the MSDS for specific warnings and safe handling information. Refer to the employer's workplace education program.

California Proposition 65 (Safe Drinking Water and Toxic Enforcement Act of 1986): The normal consumer use of this product does not result in exposure to chemicals known to the state of California to cause Cancer and/or reproductive harm above the significant risk level for carcinogens or the maximum allowable dose levels for reproductive toxins. Warnings are not required for consumer packaging. However, industrial or other occupational use of this product at higher frequency and using larger quantities of this product may result in exposures exceeding these levels and are labeled accordingly.

California SCAQMD Rule 443.1 (South Coast Air Quality Management District Rule 443.1, Labeling of Materials Containing Organic Solvents):

VOC: Vapor pressure 0.06 mmHg at 20°C
1113.38 g/l

16. OTHER INFORMATION

Contact: Thomas Cholke Phone: (847) 559-2225

Old World Industries, Inc. 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, Inc. 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, Inc. assume liability arising out of the use by others of this product referred to herein. The data in this MSDS 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

BRIGGS & STRATTON SAE 30

Section 1. Identification

GHS product identifier :

Other means of identification : Not available.

Product type : Liquid.

Identified uses

Engine oil.

Supplier's details : BRIGGS & STRATTON CORPORATION
MILWAUKEE, WI 53201

Manufactured by : Pinnacle Oil Holdings, LLC
8175-B Allison Ave.
Indianapolis, IN 46268
Tel: 317-875-9465
Fax: 317-875-0889
www.pinnacleoil.com

Emergency telephone number (with hours of operation) : CHEMTREC, U.S. : 1-800-424-9300 International: +1-703-527-3887 (24/7)

Section 2. Hazards identification

OSHA/HCS status : 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 the product. This SDS should be retained and available for employees and other users of this product.

Classification of the substance or mixture : Not classified.

GHS label elements

Signal word : No signal word.

Hazard statements : No known significant effects or critical hazards.

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 : Not applicable.

Response : Not applicable.

Storage : Not applicable.

Disposal : Not applicable.

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

CAS number : Not applicable.

Product code : Not available.

There are no 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. Get medical attention if irritation occurs.

Inhalation : Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if symptoms occur.

Skin contact : Flush contaminated skin with plenty of water. Get medical attention if symptoms occur.

Ingestion : 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. 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

Potential acute health effects

Eye contact : No known significant effects or critical hazards.

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 : No known significant effects or critical hazards.

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.

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.

See toxicological information (Section 11)

Section 5. Fire-fighting measures

Extinguishing media

Suitable extinguishing media : In case of fire, use foam, dry chemical or carbon dioxide.

Unsuitable extinguishing media : Do not use high volume water jet as an extinguisher, as this may spread the fire.

Specific hazards arising from the chemical : No specific fire or explosion hazard.

Hazardous thermal decomposition products : Carbon oxides

Special protective actions for fire-fighters : No special measures are required.

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. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. 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. 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. 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. 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).

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.

Section 7. Handling and storage

Conditions for safe storage, including any incompatibilities : Store in accordance with local regulations. 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. 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

None.

Appropriate engineering controls : Good general ventilation should be sufficient to control worker exposure to airborne contaminants.

Environmental exposure controls : Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation.

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.

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.

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 supplied air 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 : Brown.

Odor : Petroleum.

Odor threshold : Not available.

pH : Not available.

Melting point : Not available.

Section 9. Physical and chemical properties

Boiling point	:	Not available.
Flash point	:	Open cup: >204°C (>399.2°F) [Cleveland.]
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	:	0.855 to 0.884
Solubility	:	Not available.
Partition coefficient: n-octanol/water	:	Not available.
Auto-ignition temperature	:	Not available.
Decomposition temperature	:	Not available.
Viscosity	:	Kinematic (40°C (104°F)): >0.4 cm^2/s (>40 cSt)[ASTM D445]
Volatility	:	Not available.
VOC content	:	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	:	No specific data.
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

There is no data available.

Irritation/Corrosion

There is no data available.

Sensitization

There is no data available.

Carcinogenicity

There is no data available.

Specific target organ toxicity (single exposure)

There is no data available.

Specific target organ toxicity (repeated exposure)

Section 11. Toxicological information

There is no data available.

Aspiration hazard

There is no data available.

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

Potential acute health effects

Eye contact : No known significant effects or critical hazards.

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 : No known significant effects or critical hazards.

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.

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 : 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.

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

There is no data available.

Section 12. Ecological information

Toxicity

There is no data available.

Persistence and degradability

There is no data available.

Bioaccumulative potential

There is no data available.

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 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. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

Section 14. Transport information

	DOT Classification	IMDG	IATA
UN number	Not regulated.	Not regulated.	Not regulated.
UN proper shipping name	-	-	-
Transport hazard class(es)	-	-	-
Packing group	-	-	-
Environmental hazards	No.	No.	No.
Additional information	-	-	-

AERG : Not applicable.

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 14. Transport information

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code : Not available.

Section 15. Regulatory information

U.S. Federal regulations :

TSCA 8(a) PAIR: Diphenylamine

TSCA 8(a) CDR Exempt/Partial exemption: Not determined

United States inventory (TSCA 8b): Not determined.

Clean Water Act (CWA) 307: Benzene; Zinc O,O,O',O'-tetrakis(1,3-dimethylbutyl) bis (phosphorodithioate); Phosphorodithioic acid, mixed O,O-bis(sec-Bu and isooctyl) esters, zinc salts

Clean Water Act (CWA) 311: Benzene; Vinyl acetate

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

Composition/information on ingredients

Name	%	EHS	SARA 302 TPQ		SARA 304 RQ	
			(lbs)	(gallons)	(lbs)	(gallons)
Vinyl acetate	0 - 0.1	Yes.	1000	129	5000	644.8

SARA 304 RQ : 5000000000 lbs / 2270000000 kg

SARA 311/312

Classification : Not applicable.

SARA 313

No products were found.

State regulations

Massachusetts : The following components are listed: Distillates (petroleum), hydrotreated light paraffinic

New York : None of the components are listed.

New Jersey : The following components are listed: Distillates (petroleum), hydrotreated heavy paraffinic; Residual oils (petroleum), solvent-dewaxed; Distillates (petroleum), hydrotreated light paraffinic

Pennsylvania : None of the components are listed.

California Prop. 65

WARNING: This product contains less than 0.1% of a chemical known to the State of California to cause cancer.
WARNING: This product contains less than 1% of a chemical known to the State of California to cause birth defects or other reproductive harm.

Section 15. Regulatory information

Ingredient name	Cancer	Reproductive	No significant risk level	Maximum acceptable dosage level
Benzene	Yes.	Yes.	6.4 µg/day (ingestion) 13 µg/day (inhalation)	24 µg/day (ingestion) 49 µg/day (inhalation)
Vinyl acetate	Yes.	No.	No.	No.

Section 16. Other information

History

Date of issue mm/dd/yyyy : 05/15/2015

Date of previous issue : 01/15/2015

Version : 1.1

Prepared by : KMK Regulatory Services Inc.

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 73/78 = 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.

PRODUCT BULLETIN

Low Sling Bar & Chain Oil

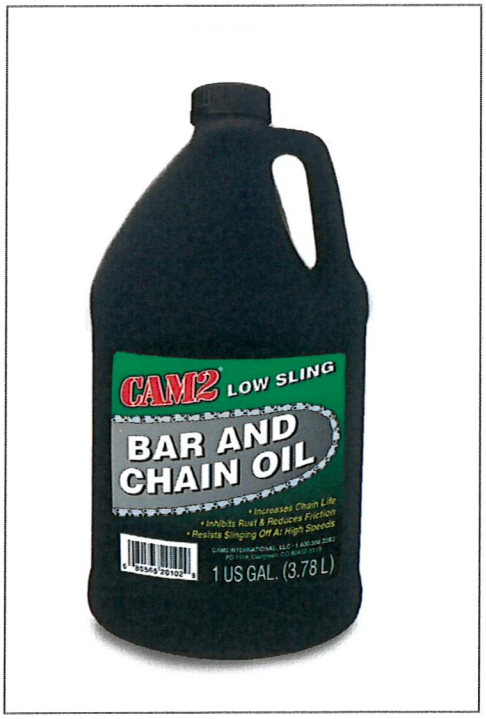
PRODUCT #174

CAM2 Low Sling Bar & Chain Oil is a professional grade oil formulated with high performance additives for improving your chainsaw's cutting performance while extending the life of the bar and chain. The low sling formula protects metal parts against corrosion and rust while reducing heat caused by friction during heavy cutting. CAM2 Low Sling Bar & Chain Oil's high tac formula ensures proper lubrication through ALL SEASONS and flows freely at low temperatures while resisting deposit build up such as pitch, sap, and gum. CAM2 Low Sling Bar & Chain Oil is suitable for use in commercial logging, landscaping, tree service applications and where oils with tack additives are required.

Always consult your owner's manual. CAUTION: This oil is not an engine lubrication oil.

FEATURES:

- **Protection for all makes of chainsaws, motorcycles and farm equipment and industrial applications using link chains**
- **Inhibits rust & reduces friction**
- **Resists slinging off at high speeds**



TYPICAL PROPERTIES

Product Code	**174**
Viscosity, SUS @ 100°F	750
Flash Point @ °F	395
Pour Point @ °F	-10
Color (ASTM D1500)	3.5 max

CAM2 INTERNATIONAL, LLC
685 Haining Road, Vicksburg, MS 39183 USA • Tel: 800-338-2262
www.CAM2.com

POWER SERVICE PRODUCTS, INC.
SAFETY DATA SHEET

SECTION 1 - IDENTIFICATION

PRODUCT NAME: DIESEL 9•1•1

Unless otherwise noted, all sections of this MSDS apply to each of the following products and part numbers.

PART NUMBERS:

8016-09, 8025-09, 8025-12, 8080-06, 8050-02, 8055-01, 8260-01 18016-09, 18025-12, 18080-06

COMPANY IDENTIFICATION:

Power Service Products, Inc.
P.O. Box 1089
Weatherford, TX 76086
Email: psp@powerservice.com
Phone: 800/643-9089 or 817-599-9486
Fax: 817-599-4893

Emergency Phone Number: Within USA 1-800-424-9300. Outside USA 001-703-527-3887 (Call Collect).

RECOMMENDED USES: Diesel fuel additive

SECTION 2 - HAZARD(S) IDENTIFICATION

CLASSIFICATION UNDER 29 CFR 1910.1200(d)

(NC=product does not meet classification criteria)

Health Hazard Criteria	Category
Acute Toxicity, Oral:	NC
Acute Toxicity, Dermal:	NC
Acute Toxicity, Inhalation, Vapors:	NC
Skin Corrosion/Irritation:	2
Serious Eye Damage/Eye Irritation:	2
Respiratory Sensitization:	NC
Skin Sensitization:	NC
Germ Cell Mutagenicity:	NC

Health Hazard Criteria	Category
Carcinogenicity:	NC
Reproductive Toxicity:	NC
Specific Target Organ Toxicity, Single Exposure:	3
Specific Target Organ Toxicity, Repeated or Prolonged Exposure:	NC
Aspiration Hazard:	1

Physical Properties Criteria	Category
Explosives:	NC
Flammable Gases:	NC
Flammable Aerosols:	NC
Oxidizing Gases:	NC
Gases Under Pressure:	NC
Flammable Liquids:	3
Flammable Solids:	NC
Self-Reactive Chemicals:	NC
Pyrophoric Liquids:	NC
Pyrophoric Solids:	NC
Self-Heating Chemicals:	NC
Chemicals Which, in Contact with Water, Emit Flammable Gases:	NC
Oxidizing Liquids:	NC
Oxidizing Solids:	NC
Organic Peroxides:	NC
Corrosive to Metals:	NC

LABEL SIGNAL WORD, HAZARD STATEMENTS, SYMBOLS AND PRECAUTIONARY STATEMENTS UNDER 29 CFR 1910.1200(f):

Please see the Note regarding product labeling in Section 16.

Signal Word(s): Danger

Hazard Statement(s): Flammable liquid and vapor. May be fatal if swallowed and enters airways. Causes skin and serious eye irritation. May cause respiratory irritation.

Symbols:

Precautionary Statement(s): Keep away from sparks and open flames. No smoking. Keep container tightly closed. Use only non-sparking tools. Ground/Bond container and receiving equipment. Use explosion-proof pumps when pumping. Take precautionary measures against static discharge. Avoid breathing vapors. Use only outdoors or in a well-ventilated area. Wash

hands thoroughly after handling. Do not eat, drink or smoke when using this product. Wear protective gloves and eye protection. Store locked up and in cool, well ventilated place. KEEP OUT OF REACH OF CHILDREN.

Hazards Not Otherwise Classified: None

SECTION 3 - COMPOSITION / INFORMATION ON INGREDIENTS

The specific chemical identity and exact concentration percentage has been withheld as a Trade Secret. Specific chemical information will be made available to health professionals in accordance with 29 CFR 1910.1200.

INGREDIENTS CLASSIFIED AS HEALTH HAZARDS

Chemical Name	Common Name/Synonyms	CAS Number	Concentration (%)
Aliphatic hydroxy hydrocarbons	Trade secret	Trade secret	40 - 90
Petroleum Distillates	Trade secret	Trade secret	10 - 30

SECTION 4 - FIRST AID MEASURES

As a precaution, exposure to liquids, vapors, mists and fumes should be minimized.

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.

SKIN CONTACT: Wash with plenty of water. Take off contaminated clothing and wash it before reuse. If skin irritation occurs get medical advice/attention.

INHALATION: Remove person to fresh air and keep comfortable for breathing. Call a doctor.

INGESTION: If swallowed, IMMEDIATELY call a doctor. Do NOT induce vomiting.

SECTION 5 - FIRE AND EXPLOSION HAZARD DATA

EXTINGUISHING MEDIA: Use water fog, alcohol-resistant foam, dry chemical or carbon dioxide (CO_2) to extinguish flames.

SPECIFIC HAZARDS: Vapors are heavier than air and may travel along the ground to a distant ignition source and flash back. See Section 10 for Stability and Reactivity. **NOTE:** EMPTY CONTAINERS CONTAIN COMBUSTIBLE VAPORS THAT CAN CAUSE FLASH FIRES OR EXPLOSIONS. CONTAINERS ARE SINGLE-TRIP CONTAINERS AND SHOULD NOT BE USED FOR ANY REASON AFTER BEING EMPTIED. DO NOT USE CUTTING TORCH

EQUIPMENT OR ANY OTHER FLAME OR OTHER SOURCES OF IGNITION ON ANY EMPTY CONTAINER.

PROTECTIVE EQUIPMENT AND PRECAUTIONS: Use standard protective equipment including self-contained breathing apparatus (SCBA).

SECTION 6 - ACCIDENTAL RELEASE MEASURES

PERSONAL PRECAUTIONS, PROTECTIVE EQUIPMENT, AND EMERGENCY PROCEDURES: Avoid contact with spilled material. Warn or evacuate occupants in surrounding and downwind areas. Eliminate all sources of ignition in the vicinity of the spill or released vapor. See Section 2 for Hazards Identification. See Section 4 for First Aid Measures. See Section 5 for Fire Fighting Information. See Section 8 for Personal Protective Equipment.

SPILL CONTAINMENT AND CLEAN-UP: Eliminate potential sources of ignition. Stop leak if it can be done without risk. Dike and contain spill. Do not touch or walk through spilled material. Prevent entry into waterways, sewer, basements or confined areas. Remove with vacuum trucks or pump to storage/salvage vessels. Soak up residue with an absorbent such as clay, sand or other suitable material and dispose of properly. A vapor suppressing foam may be used to reduce vapors. Local, state and federal laws and/or regulations may apply to releases and disposal of this material, as well as those materials and items employed in the clean-up releases. The user/responder will need to determine which local, state and federal laws and/or regulations are applicable. The National Response Center can be reached at 1-800-424-8802.

SECTION 7 - HANDLING AND STORAGE

PRECAUTIONS FOR SAFE HANDLING: Avoid contact with eyes and skin. Use only with adequate ventilation. Use proper bonding and/or grounding procedures. Prevent small spills and leakage to avoid slip hazard. Material can accumulate static charges which may cause an electrical spark (ignition source). Keep away from ignition sources such as heat, sparks, and flames. No smoking.

CONDITIONS FOR SAFE STORAGE: DO NOT USE OR STORE near heat, sparks, or flame. USE AND STORE ONLY IN A WELL-VENTILATED AREA. Handle containers with care. Keep container closed when not in use. Store locked up.

STORAGE TEMPERATURE: -40°F to 100°F (-40°C to 38°C)

EMPTY CONTAINER WARNING: EMPTY CONTAINERS MAY CONTAIN FLAMMABLE VAPORS AND CAN BE DANGEROUS. SEE SECTION 5 FOR FIRE AND EXPLOSION HAZARD DATA.

SECTION 8 - EXPOSURE CONTROLS / PERSONAL PROTECTION

EXPOSURE GUIDELINES:

		OSHA	ACGIH		NIOSH			
	CAS #	PEL	TLV	STEL	REL	STEL	IDLH	Note
Ethylbenzene	100-41-4	100 ppm	20 ppm	not est.	100 ppm	125 ppm	800 ppm (LEL)	n/a
Cumene	98-82-8	50 ppm	50 ppm	not est	50 ppm	not est.	900 ppm (LEL)	Skin
Petroleum Distillates	n/a	500 ppm	not est.	not est	not est	not est	not est	n/a
2-Butanol	78-92-2	150 ppm	100 ppm	not est	100 ppm	150 ppm	2,000 ppm	n/a
N-Butanol	71-36-3	100 ppm	20 ppm	not est	not est.	not est.	1,400 ppm (LEL)	Skin

ENGINEERING CONTROLS: The level of protection and types of controls necessary will vary depending upon potential exposure conditions. Local exhaust ventilation is recommended to control exposure.

PERSONAL PROTECTIVE EQUIPMENT (PPE):

Eyes and Face: Eye protection such as safety glasses or chemical goggles is recommended if contact is likely.

Skin: If prolonged or repeated skin contact is likely, chemical/oil resistant clothing and gloves are recommended. Wear additional protective clothing as appropriate.

Respiratory: Wear a NIOSH/MSHA approved respirator as necessary.

Specific 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 and protective equipment to remove contaminants. Practice good housekeeping.

NOTE: These precautions are for room temperature handling.

SECTION 9 - PHYSICAL AND CHEMICAL PROPERTIES

Appearance	Liquid, straw yellow
Odor	Strong solvent
Odor Threshold	Not available
pH	Not applicable
Melting point/Freezing point	Not available
Initial Boiling Point and Boiling Range	187.7°F (86.5°C)
Flash Point	74°F (TCC) 23°C
Evaporation Rate	Not available
Flammability	Not available
Upper / lower Flammability or Explosive Limits	Not available

Vapor Pressure	Not available
Vapor Density	Not available
Relative Density/Specific Gravity (at 60°F)	0.8400
Solubility	Not available
Partition Coefficient; n-octanol / water	Not available
Auto-ignition Temperature	Not available
Decomposition temperature	Not available
Viscosity	Not available
Pour Point	<-159°F (-106°C)

SECTION 10 - STABILITY AND REACTIVITY

REACTIVITY: see Incompatible Materials below

CHEMICAL STABILITY: This material is considered stable under normal ambient and anticipated storage and handling conditions of temperature and pressure.

CONDITIONS TO AVOID: Flames, high energy ignition sources, and elevated temperatures.

INCOMPATIBLE MATERIALS: May react with oxygen, oxidizing agents, such as; chlorates, nitrates, peroxides, etc., amines, caustics, alkanolamines halogens, chlorine.

HAZARDOUS DECOMPOSITION PRODUCTS: Carbon oxides, products of incomplete combustion.

HAZARDOUS POLYMERIZATION:
Hazardous polymerization will not occur.

SECTION 11 - TOXICOLOGICAL INFORMATION

LIKELY ROUTES OF EXPOSURE

INGESTION	INHALATION	SKIN CONTACT	EYE CONTACT	SKIN ABSORPTION
	X	X	X	X

SYMPTOMS RELATED TO PHYSICAL, CHEMICAL AND TOXICOLOGICAL CHARACTERISTICS: Breathing of high vapor concentrations may cause dizziness, light-headedness, headache, nausea and loss of coordination. Continued inhalation may result in unconsciousness. The vapor or fumes from this material may cause respiratory irritation. Breathing this material at elevated concentrations causes central nervous system effects. Central nervous system effects may include headache, dizziness, nausea, vomiting, weakness, loss of coordination, blurred vision, drowsiness, confusion or disorientation. At extreme exposures, central nervous system effects may include respiratory depression, tremors, or convulsions, loss of consciousness, coma or death.

DELAYED AND IMMEDIATE EFFECTS AND CHRONIC EFFECTS FROM SHORT- AND LONG-TERM EXPOSURE: Repeated skin exposure to a component of this product may cause irritation, even a burn; may cause a more severe response on covered skin, such as under clothing or gloves. Inhalation exposure to a component of this product has caused fetotoxicity in the presence of maternal toxicity in animals.

NUMERICAL MEASURES OF TOXICITY
Note: the information provided below are estimates; testing of the product is not available.

Acute Oral Toxicity (ATE_{mix} estimate)	Acute Dermal Toxicity (ATE_{mix} estimate)	Acute Inhalation (ATE_{mix} estimate)
Does not meet criteria	Does not meet criteria	Does not meet criteria

SENSITIZATION: No information available.

MUTAGENICITY: No information available.

CARCINOGENICITY LISTINGS – the following chemicals are listed as indicated:

Chemical	**List**
Cumene	IARC, NTP
Ethylbenzene	IARC

REPODUCTIVE TOXICITY: No information available.

TERATOGENICITY/EMBRYOTOXICITY: This product contains a component of a complex mixture (Xylenes (1330-20-7)) that has been shown to cause teratogenicity and/or embryotoxicity.

SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE): Respiratory tract irritation.

SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE): No information available

ASPIRATION HAZARD: Aspiration hazard identified.

SECTION 12 - ECOLOGICAL INFORMATION

ECOTOXICITY:
This material is expected to be toxic to aquatic organisms.

PERSISTENCE AND DEGRADABILITY: No information available.

BIOACCUMULATIVE POTENTIAL: No information available.

MOBILITY IN SOIL: No information available.

OTHER ADVERSE EFFECTS: No information available.

SECTION 13 - DISPOSAL CONSIDERATIONS

RCRA Information: Disposal of unused product may be subject to RCRA hazardous waste regulations (40 CFR Part 261). Disposal of the used product may also be regulated as hazardous waste due to resulting mixture characteristics, mixture components or product use. Such changes to the product may result in different and/or additional hazardous waste codes. Potential RCRA waste code based on the product as shipped: D001 IGNITABILITY.

State or local laws may impose additional regulatory requirements regarding disposal. *Waste characterizations and compliance with applicable laws are the responsibility solely of the waste generator.*

EMPTY CONTAINER WARNING: EMPTY CONTAINERS MAY CONTAIN FLAMMABLE VAPORS AND CAN BE DANGEROUS. SEE SECTION 5 FOR FIRE AND EXPLOSION HAZARD DATA.

SECTION 14 - TRANSPORTATION INFORMATION

The following part numbers are classified as Limited Quantities:

8016-09, 8025-09, 8025-12, 8080-06, 18016-09, 18025-12, 18080-06

The following part numbers are regulated by DOT:

8050-02, 8055-01, 8260-01

PROPER SHIPPING NAME: Flammable Liquid, N.O.S., (Aliphatic Hydroxy Hydrocarbons)
HAZARD CLASS: 3
I.D. NUMBER: UN 1993
PACKING GROUP: III
PLACARDING: Flammable Liquid

Air shipment is not recommended.

SECTION 15 - REGULATORY INFORMATION

§14(a) Consumer Product Safety Act General Certificate of Conformity

Power Service Products, Inc. certifies that this product meets the statutory and regulatory requirements of the US Consumer Products Safety Act, the Federal Hazardous Substances Act, and the Poison Prevention Packaging Act of 1970, as applicable. The Power Service products are manufactured in the United States in Weatherford, Texas, unless otherwise indicated on the product label. The product manufacture lot code is stamped on the product container. This Certification is based upon a reasonable testing program conducted by Power Service Products, Inc. which includes a quality control program incorporating, as necessary, confirmation of

compliance by component suppliers. Third-party testing is not required to certify compliance. Further details may be obtained by contacting the Power Service Products, Inc. EHS Manager at 1-800-643-9089.

Contents of this SDS comply with the OSHA Hazard Communication Standard 29 CFR 1910.1200

TSCA STATUS:
All chemical substances found in this product comply with the Toxic Substances Control Act inventory reporting requirements.

EPA SARA TITLE III CHEMICAL LISTINGS:

Section 302 Extremely Hazardous Substances: None

Sections 311/ 312 Hazard Class:
Acute Health Effects: Yes Sudden Release of Pressure Hazard: No
Chronic Health Effects: Yes Reactivity Hazard: No
Fire Hazard: Yes

NFPA (NATIONAL FIRE PROTECTION ASSOCIATION) RATING:
HEALTH: **2**
FIRE: **3**
REACTIVITY: **0**

Section 313:
Specific chemical information is being withheld as a Trade Secret. The following chemicals subject to the reporting requirements of EPCRA Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (40 CFR Part 372) may be present in this product at a concentration that does not exceed the specified upper weight percentage.

CAS Number	Chemical Name	Max %
100-41-4	Ethylbenzene	10.0
78-92-2	sec Butyl alcohol	25.0
71-36-3	n-Butyl alcohol	25.0

State or local laws may impose additional regulatory requirements for components of this material. It is the responsibility solely of the Employer to maintain compliance with State and Local reporting.

CA Proposition 65
⚠ **WARNING:** Cancer and Reproductive Harm – www.P65Warnings.ca.gov.

SECTION 16 – OTHER INFORMATION

DATE OF PREPARATION / REVISION: January 12, 2017

NOTE regarding product labeling: The OSHA Hazard Communication Standard applies to hazardous chemicals known to be present in the workplace. However, the labeling and Safety Data Sheet requirements do not apply to consumer products when they are used in the workplace for the purposes intended by the manufacturer and the use results in a duration and frequency of exposure which is not greater than the range of exposures that could reasonably be experienced by consumers when used for the intended purpose. Power Service Products intends for product packaged in 1 gallon or smaller containers to be used by consumers and has labeled those containers as required under the Consumer Product Safety Commission regulations. Power Service Products intends for product packaged in containers larger than 1 gallon to be used in the workplace and has labeled those products as required by the OSHA Hazard Communication Standard. The Consumer Product Safety Commission and OSHA Hazard Communication Standard labeling requirements are different and variations between the consumer and industrial labels may occur. It is the employer's responsibility to purchase the appropriate product for use in the workplace.

The information contained herein is offered in good faith and is believed to be accurate based on the data available to us as of the date of SDS preparation. The information in this document applies to this specific product as supplied. It may not be appropriate for this product if the product is used in combination with other materials. The information in this document is not intended to constitute product performance information. Some of the information presented and conclusions drawn herein are from sources other than direct test data on the product. No statement shall be construed as an endorsement of any product or process. The recommended industrial hygiene and safe handling procedures are believed to be valid in the context of the intended use as described in product labeling. However, each user should review these recommendations in the specific context of the intended use and determine whether they are appropriate. You are urged to obtain material safety data sheets for all products you buy, process, use or distribute, and are encouraged to advise those who may come in contact with such products of the information contained therein. Regulatory requirements are subject to change and may differ between locations. It is the buyer's/user's responsibility to ensure that his activities comply with all federal, state, provincial or local laws. No warranty or guarantee is expressed or implied with respect to this product, the accuracy and sufficiency of the data or recommendations herein, or the results to be obtained from the use of this product. IN NO EVENT SHALL POWER SERVICE PRODUCTS, INC. BE LIABLE FOR ANY LOSS, CLAIM, DAMAGE OR LIABILITY OF ANY KIND, WHICH MAY ARISE FROM OR IN CONNECTION WITH THE INFORMATION CONTAINED IN THIS DOCUMENT OR FROM THE USE, HANDLING OR STORAGE OF THE PRODUCT BY THE BUYER/USER, WHETHER DIRECT, INDIRECT, OR CONSEQUENTIAL, OR FOR ANY CLAIM BY ANY THIRD PARTY, BEYOND THE PURCHASE PRICE OR REPLACEMENT OF THE PRODUCT IN CONNECTION WITH WHICH SUCH LOSS, CLAIM, DAMAGE OR LIABILITY AROSE.

THE FOREGOING LIMITATIONS APPLY REGARDLESS OF THE CAUSES OR CIRCUMSTANCES GIVING RISE TO SUCH LOSS, CLAIM, DAMAGE OR LIABILITY, EVEN IF SUCH LOSS, CLAIM, DAMAGE, OR LIABILITY IS BASED ON NEGLIGENCE OR OTHER TORTS OR BREACH OF CONTRACT.

Safety Data Sheet

Issue Date: 22-Oct-2012 **Revision Date:** 18-May-2015 **Version** 1

1. IDENTIFICATION

Product Identifier

Product Name **TechSelect FLEET FARM FIELD Economy Hydraulic Fluid AW 32, AW 46, AW 68**

Other means of identification

SDS # TS-001, 17244, TS17244, TS27244, TS37244, TS57244, TS00402, TS00403; 17245, TS17245, TS27245, TS37245, TS57245, TS00404, TS00405; 17246, TS17246, TS27246, TS37246, TS57246, TS00406, TS00407

Recommended use of the chemical and restrictions on use

Recommended Use Hydraulic oil

Details of the supplier of the safety data sheet

Supplier Address
Warren Oil Company
915 E. Jefferson Ave.
West Memphis, AR 72301
Manufactured for:
AIOD
P.O. BOX 1861
Montrose, CO 81402-1861
970-249-6336 www.techselectproducts.com

Emergency Telephone Number

Company Phone Number 1-800-428-9284
Emergency Telephone (24 hr) CHEMTREC 1-800-424-9300 (North America) 1-703-527-3887 (International)

2. HAZARDS IDENTIFICATION

Appearance Light amber, liquid **Physical State** Liquid **Odor** Typical petroleum

Classification

This chemical does not meet the hazardous criteria set forth by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200). However, this Safety Data Sheet (SDS) contains valuable information critical to the safe handling and proper use of this product. This SDS should be retained and available for employees and other users of this product.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Name	CAS No	Weight-%
Petroleum distillates, hydrotreated heavy paraffinic	64742-54-7	90-100
Severely Hydrotreated Heavy Naphthenic Petroleum Oil	64742-52-5	90-100

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 Flush eyes with large amounts of water, for at least 15 minutes, until irritation subsides. If irritation persists get medical attention.

Skin Contact No treatment is necessary under ordinary circumstances. Remove contaminated clothing and shoes. Wash contaminated area thoroughly with soap and water. If redness or irritation occurs and persists, seek medical attention. 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 seek immediate medical attention.

Inhalation Remove to fresh air. If not breathing give artificial respiration, preferably mouth-to-mouth. If breathing is difficult, give oxygen. Get medical attention.

Ingestion If swallowed, do not induce vomiting. If victim exhibits signs of lung aspiration such as coughing or choking, seek immediate medical attention.

Most important symptoms and effects

Symptoms Expected to be a minor eye irritant. Repeated or prolonged skin contact may cause dermatitis.

Indication of any immediate medical attention and special treatment needed

Notes to Physician Treat symptomatically.

5. FIRE-FIGHTING MEASURES

Suitable Extinguishing Media
Use dry chemical, foam, carbon dioxide or water fog.

Unsuitable Extinguishing Media While carbon dioxide and inert will extinguish the fire, they can also displace oxygen. Use caution when applying carbon dioxide or inert gas in confined spaces.

Specific Hazards Arising from the Chemical
This material can burn but will not readily ignite. This material will release vapors when heated above the flashpoint temperature that can ignite when exposed to a source of ignition. In enclosed spaces, heated vapor can ignite with explosive force. Mists or sprays may burn at temperatures below the flashpoint. Dense smoke may be generated while burning.

Hazardous Combustion Products Carbon monoxide. Carbon dioxide (CO2). Aldehydes. Ketones. Combustion products of sulfur and nitrogen.

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. Avoid breathing smoke and vapor. Water may be used to cool containers exposed to heat or flame.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

Personal Precautions Use personal protective equipment as required.

Methods and material for containment and cleaning up

Methods for Containment Remove sources of ignition. Contain any spills with dikes or absorbents to prevent migration and entry into sewers or streams.

Methods for Clean-Up Take up small spills with absorbent pads. Large spills may be taken up with pump or vacuum.

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 Store at ambient conditions. Store at atmospheric pressure. Keep container tightly closed. Store in a cool, well-ventilated place. Keep away from heat, sparks, and flame. Empty containers retain product residues.

Incompatible Materials This product may react with strong oxidizing agents.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Exposure Guidelines

Chemical Name	ACGIH TLV	OSHA PEL	NIOSH IDLH
Severely Hydrotreated Heavy Naphthenic Petroleum Oil 64742-52-5	TWA: 5 mg/m^3 (oil mist) STEL: 10 mg/m^3 (oil mist)	TWA: 5mg/m^3 (oil mist) STEL: none estab.	TWA: none estab. STEL: none estab.
Severely Hydrotreated Heavy Naphthenic Petroleum Oil 64742-52-5	TWA: 5 mg/m^3 (oil mist) STEL: 10 mg/m^3 (oil mist)	TWA: 5mg/m^3 (oil mist) STEL: none estab.	TWA: none estab. STEL: none estab.

Appropriate engineering controls

Engineering Controls Use general ventilation and use local exhaust, where possible, in confined or enclosed spaces. If product is heated above 70 C (155 F) in the presence of water, hydrogen sulfide vapors may be released. Ventilation should be sufficient to keep hydrogen sulfide levels below recommended exposure limits. Eye wash fountains are recommended.

Individual protection measures, such as personal protective equipment

Eye/Face Protection Wear safety glasses. Wear chemical goggles or face shield if splash or mist occurs.

Skin and Body Protection Use impervious gloves for prolonged contact. Wear oil-impervious garments if contact is unavoidable.

Respiratory Protection If mist is generated (heating, spraying) and engineering controls are not sufficient, wear approved organic vapor respirator suitable for oil mist.

General Hygiene Considerations Use good hygiene when handling petroleum product. Launder contaminated clothing before reuse. Excessive misting may cause slippery floors - wear appropriate footwear.

9. PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

Physical State	Viscous liquid		
Appearance	Light amber, viscous liquid	**Odor**	Typical petroleum
Color	Light amber	**Odor Threshold**	Not determined

Property	**Values**	**Remarks • Method**
pH	Not available	
Melting Point/Freezing Point	Not available	
Boiling Point/Boiling Range	Not available	
Flash Point	202 °C / 396 °F	ASTM D-92
Evaporation Rate	Not available	
Flammability (Solid, Gas)	Liquid-Not applicable	
Upper Flammability Limits	Not determined	
Lower Flammability Limit	Not determined	
Vapor Pressure	Not available	
Vapor Density	>1	(Air=1)
Specific Gravity	0.87	
Water Solubility	insoluble	
Solubility in other solvents	Not determined	
Partition Coefficient	Not available	

Property	**Values**	**Remarks • Method**
Auto-ignition Temperature	No data available	
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.

Hazardous Polymerization Under normal conditions of storage and use, hazardous polymerization will not occur.

Conditions to Avoid
Avoid formation of mists. Extreme heat, open flames or sparks. Keep separated from incompatible substances.

Incompatible Materials
This product may react with strong oxidizing agents.

Hazardous Decomposition Products
Decomposition of this product may yield oxides of boron, calcium, magnesium, nitrogen, phosphorus, sulfur including hydrogen sulfide and zinc as well as carbon monoxide, carbon dioxide and/or low molecular weight hydrocarbons.

11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure

Product Information

Eye Contact Avoid contact with eyes.

Skin Contact Avoid contact with skin.

Inhalation Do not inhale.

Ingestion Do not ingest.

Component Information

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

Carcinogenicity This product does not contain any carcinogens or potential carcinogens as listed by OSHA, IARC or NTP.

Numerical measures of toxicity
Not determined

12. ECOLOGICAL INFORMATION

Ecotoxicity
The product is not classified as environmentally hazardous. However, this does not exclude the possibility that large or frequent spills can have a harmful or damaging effect on the environment.

Component Information

Chemical Name	Algae/aquatic plants	Fish	Toxicity to microorganisms	Crustacea
Petroleum distillates, hydrotreated heavy paraffinic 64742-54-7		5000: 96 h Oncorhynchus mykiss mg/L LC50		1000: 48 h Daphnia magna mg/L EC50
Severely Hydrotreated Heavy Naphthenic Petroleum Oil 64742-52-5		5000: 96 h Oncorhynchus mykiss mg/L LC50		1000: 48 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.

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 Not regulated

15. REGULATORY INFORMATION

International Inventories

Chemical Name	TSCA	DSL	NDSL	EINECS	ELINCS	ENCS	IECSC	KECL	PICCS	AICS
Petroleum distillates, hydrotreated heavy paraffinic	Present	X		Present		Present	X	Present	X	X
Chemical Name	**TSCA**	**DSL**	**NDSL**	**EINECS**	**ELINCS**	**ENCS**	**IECSC**	**KECL**	**PICCS**	**AICS**
Severely Hydrotreated Heavy Naphthenic Petroleum Oil	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, 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).

SARA 311/312 Hazard Categories

Acute Health Hazard	No
Chronic Health Hazard	No
Fire Hazard	No
Sudden Release of Pressure Hazard	No
Reactive Hazard	No

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

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)

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 regulated under applicable state right-to-know regulations

16. OTHER INFORMATION

NFPA	**Health Hazards**	**Flammability**	**Instability**	**Special Hazards**
	0	1	0	Not determined
HMIS	**Health Hazards**	**Flammability**	**Physical Hazards**	**Personal Protection**
	1	1	0	Not determined

Issue Date: 22-Oct-2012
Revision Date: 18-May-2015
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

Farrell Equipment & Supply Co., Inc.
1510 N. Hastings Way Eau Claire, WI 54703
715-835-4334 www.farrellequipment.com

Date Revised: 3/4/14 Date Printed: 2/16/16

========== SECTION 1 - IDENTIFICATION ==========

MANUFACTURER: SIERRA CORP/TK PRODUCTS EMERGENCY PHONE: 1-800-424-9300
ADDRESS : 11400 WEST 47TH STREET INFORMATION PHONE: (952)938-7223
MINNETONKA, MN 55343 NAME OF PREPARER : Safety Director

PRODUCT NAME: FARREL FORM RELEASE AGENT
PRODUCT CODE: TK-FFRA

========== SECTION 2 - HAZARDS IDENTIFICATION ==========

HAZARD RISK CLASSIFICATION
SIGNAL WORD: DANGER
PICTOGRAM:
GHS08 - HEALTH HAZARD

HAZARD CLASS	HAZARD CATEGORY
ASPIRATION HAZARD	CATEGORY 1

HAZARD STATEMENTS:
H304 May be fatal if swallowed or enters airways
PRECAUTIONARY STATEMENTS:
PREVENTION:
P101 If medical advice is needed, have product container or label at hand. Keep out of reach of children.
P102 Keep out of reach of children.

RESPONSE:
P301+P310 If swallowed: Immediately call a Poison Center / doctor.
STORAGE:
P405 Store locked up.
DISPOSAL:
P501 Store separately. Dispose of contents/ container in accordance with local/ regional/national /international regulations.

========== SECTION 3 - COMPOSITION/INFORMATION ON INGREDIENTS ==========

COMPONENT	CAS NUMBER	WEIGHT PERCENT	EXPOSURE LIMITS OSHA PEL	ACGIH TLV	OTHER
Hydrotreated Petroleum Distillates	64742-53-6	90-100	5 MG/M3		

PRIMARY ROUTES OF EXPOSURE:
Skin contact.
EFFECTS OF ACUTE EXPOSURE:
EYES: Direct contact with eyes may cause irritation.
SKIN: Prolonged or repeated contact may cause irritation.INHALATION: Inhalation of vapor or mist can cause irritation of nose, throat and lungs and lead to headaches and nausea.
INGESTION: Not an anticipated route of exposure. Small amounts are not expected to be harmful.
CHRONIC HEALTH EFFECTS:
No anticipated chronic effects.MEDICAL CONDITIONS GENERALLY AGGRAVATED BY EXPOSURE:
No known effects on other illnesses.

========== SECTION 4 - FIRST AID MEASURES ==========

EYES: Flush with large amounts of water for 15 minutes, lifting upper and lower eyelids. If irritation persists seek

medical attention.
SKIN CONTACT: Wash contaminated area with soap and water. Remove and launder contaminated clothing.
INGESTION: If a large amount is ingested, give water or milk and induce vomitting. Seek medical attention.
INHALATION: Remove victim to fresh air and provide oxygen if breathing is difficult. If breathing has stopped administer artificial respiration. Seek medical attention if condition persists.

========== SECTION 5 - FIRE AND EXPLOSION HAZARD DATA ==========

FLASH POINT: Greater than 200 F **METHOD USED: SETA**

FLAMMABLE LIMITS IN AIR BY VOLUME- LOWER: 0.8 **UPPER: 7**

EXTINGUISHING MEDIA:

This material will not burn in its liquid state unless heated above its flash point. Dried films may burn and can be extinguished by water spray, foam, dry chemical or carbon dioxide.

SPECIAL FIREFIGHTING PROCEDURES:

Persons exposed to products of combustion should wear self-contained breathing apparatus and full protective equipment. Isolate danger area, keep unauthorized personnel out.

UNUSUAL FIRE AND EXPLOSION HAZARDS:

There is the possibility of pressure buildup in closed containers when heated. Water spray may be used to cool these containers.

========== SECTION 6 - ACCIDENTAL RELEASE MEASURES ==========

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED:

Do not let uncured spilled or leaking material enter watercourse. May be toxic to aquatic life. Absorb with oil-dri or similar inert material. Sweep or scrape up and containerize. Rinse affected area thoroughly with water. Wear appropriate protective equipment.

========== SECTION 7 - HANDLING AND STORAGE ==========

HANDLING INFORMATION:

Employees who come in contact with this material must be trained in accordance to 1910.1200 of the Hazard Communicatin Standard. Wear chemical resistant gloves and protective clothing to minimize contact. The use of respiratory protection is advised when spraying because of mist and dust overspray.

STORAGE INFORMATION:

Keep containers tightly closed. Use and store material in cool, dry, well-ventilated areas away from heat, direct sunlight, hot metal surfaces, and all sources of ignition. Post "No smoking or open flame" sign. Store only in approved containers. Keep away from incompatible materials (see section 10). Protect containers against physical damage. Indoor storage should meet OSHA standards and appropriate fire codes.

OTHER PRECAUTIONS:

All empty containers should be disposed of in an environmentally safe manner in accordance with all governmental regulations.

========== SECTION 8 - EXPOSURE CONTROLS/PERSONAL PROTECTION ==========

RESPIRATORY PROTECTION:

No special requirements under normal use conditions. In confined areas, or areas with poor ventilation, engineering controls should be used to minimize exposure. Use NIOSH/MSHA approved respirator if conditions warrant.

VENTILATION:

General room ventilation is adequate.

PROTECTIVE GLOVES:

Prevent prolonged or repeated contact by wearing chemical resistant gloves and other appropriate protective clothing. Launder contaminated clothing before reuse.

EYE PROTECTION:

Wear safety glasses to reduce eye contact potential. Chemical safety goggles (ANSI Z87.1 or approved equivalent) are appropriate if splashing is likely. Eye washes must be available where eye contact can occur.

OTHER PROTECTIVE CLOTHING OR EQUIPMENT:

A source of clean water should be available for flushing eyes and skin. Showers should be available if larger spills are possible.

WORK/HYGIENIC PRACTICES:

Efforts should be made to minimize contact and spills. Always wash hands before eating, drinking, or smoking. Clean up

spills promptly. Follow OSHA and company guidelines.

========== SECTION 9 - PHYSICAL AND CHEMICAL PROPERTIES ==========

PHYSICAL STATE: Liquid
COLOR: Clear(Water white)
ODOR: Amine or ammonia odor
SOLUBILITY IN WATER: Dilutable
SPECIFIC GRAVITY (H2O=1): .88
VAPOR DENSITY: Heavier than air.
BOILING RANGE:
EVAPORATION RATE: Slower than nBuAc

COATING V.O.C.: 0 g/l (0.0 lb/gl)

========== SECTION 10 - STABILITY AND REACTIVITY DATA ==========

STABILITY:

Stable under normal conditions and handling.

CONDITIONS TO AVOID:

None known

INCOMPATIBILITY (MATERIALS TO AVOID):

None known. Materials which are not compatible with water or ordinary organics will not be compatible with this material.

HAZARDOUS DECOMPOSITION OR BYPRODUCTS:

Combustion may liberate toxic byproducts such as carbon dioxide, and carbon monoxide, various oxides of carbon and nitrogen. Thermal decomposition may liberate acrylic monomers and ammonia.

HAZARDOUS POLYMERIZATION:

Will not occur.

========== SECTION 11 - TOXICOLOGICAL INFORMATION ==========

SENSITIZATION:

None known.

CARCINOGENICITY:

There is no data available to indicate any components present at greater than 0.1% may present a carcinogenic hazard.

REPRODUCTIVE TOXICITY:

There is no data available to indicate any components present at greater than 0.1% may present reproductive toxicity.

TERATOGENICITY (BIRTH DEFECTS):

There is no data available to indicate any components present at greater than 0.1% may cause birth defects.

MUTAGENICITY:

There is no data to indicate that any component present at greater than 0.1% will alter DNA.

========== SECTION 12 - ECOLOGICAL INFORMATION ==========

ENVIRONMENTAL DATA:

Contains ammonia or amines which may be toxic to aquatic life.

========== SECTION 13 - DISPOSAL CONSIDERATIONS ==========

This product does not meet the definition of hazardous waste under the U.S. EPA Hazardous Waste Regulations 40 CFR 261, however, state and local regulations may be more restrictive. Coagulate the emulsion by the stepwise addition of ferric chloride and lime. Remove the clear supernatant and flush to a chemical sewer. Incinerate liquid and contaminated solids in accordance with local, state, and federal regulations.

========== SECTION 14 - TRANSPORT INFORMATION ==========

SHIPPING NAME:

Not regulated. Not regulated for containers less than 450 liters (119 gallons). For containers greater than 450 liters and air: NA1993, Combustible liquid, N.O.S., (Petroleum Distillates), 3, III

==========SECTION 15 - REGULATORY INFORMATION ==========

All ingredients of this product are listed, or are excluded from listing, on the US Toxic Substances Control Act (TSCA) chemical substance inventory.

This product does not contain a chemical subject to the reporting requirements of SARA Title III, Section 313 (40CFR 372) above de minimis concentrations.

STATE SPECIFIC REQUIREMENTS:

This product does not contain a chemical known to the state of California to cause cancer, birth defects or reproductive

Date Revised: 3/4/14 **Date Printed:** 2/16/16

harm, subject to the requirements of California Proposition 65.

STATE LISTED COMPONENTS **CAS NUMBER** **STATE CODE** .

==========SECTION 16 - OTHER INFORMATION ==========

REVISION DATE: 03/04/14

HMIS CODES:	**H**		**F**	**R**	**P**
	1	*****	**1**	**0**	**F**

Safety Data Sheet

Issue Date: 28-Aug-2014 **Revision Date:** 09-Sep-2014 **Version** 1

1. IDENTIFICATION

Product Identifier

Product Name **FMT HD CUTTING LUBE**

Other means of identification

SDS#

Item# 3276231

Recommended use of the chemical and restrictions on use

Recommended Use Tapping and drilling metal.

Details of the supplier of the safety data sheet

Supplier Address

Manufactured for FMT-Fastenal by

FASTENAL COMPANY
2001 Theurer Blvd.
Winona, MN 55987

Emergency Telephone Number

Company Phone Number 507-454-5374

Emergency Telephone (24 hr) INFOTRAC 1-352-323-3500 (International)
1-800-535-5053 (North America)

2. HAZARDS IDENTIFICATION

Appearance Amber liquid **Physical State** Liquid **Odor** Wintergreen

Classification

This chemical does not meet the hazardous criteria set forth by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200). However, this Safety Data Sheet (SDS) contains valuable information critical to the safe handling and proper use of this product. This SDS should be retained and available for employees and other users of this product.

3. COMPOSITION/INFORMATION ON INGREDIENTS

This product is not hazardous according to OSHA 29 CFR 1910.1200. Components not listed are not hazardous or are below reportable limits.

4. 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 contact areas with soap and water. Remove contaminated clothing. Launder contaminated clothing before reuse. Get medical attention if irritation occurs.

Inhalation Remove from further exposure. For those providing assistance, avoid exposure to yourself or others. Use adequate respiratory protection. Seek immediate medical assistance. If breathing has stopped, assist ventilation with a mechanical device or use mouth-to-mouth resuscitation.

Ingestion Do not induce vomiting without medical advice. Seek immediate medical attention/advice.

Most important symptoms and effects

Symptoms May cause skin and eye irritation.

Indication of any immediate medical attention and special treatment needed

Notes to Physician Treat symptomatically.

5. FIRE-FIGHTING MEASURES

Suitable Extinguishing Media Use water fog, foam, dry chemical or carbon dioxide (CO2) to extinguish flames.

Unsuitable Extinguishing Media Not determined.

Specific Hazards Arising from the Chemical

Not determined.

Hazardous Combustion Products Smoke, Fume, Incomplete combustion products, Oxides of carbon.

Protective equipment and precautions for firefighters

Evacuate area. Prevent runoff from fire control or dilution from entering streams, sewers, or drinking water supply. Firefighters should use standard protective equipment and in enclosed spaces, self-contained breathing apparatus(SCBA). Use water spray to cool fire exposed surfaces and to protect personnel.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

Personal Precautions Wear protective clothing as described in Section 8 of this safety data sheet.

Environmental Precautions Dike far ahead of liquid spill for later recovery and disposal. Prevent entry into waterways, sewers, basements or confined areas. 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. Absorb or cover with dry earth, sand or other non-combustible material.

Methods for Clean-Up Sweep up absorbed material and shovel into suitable containers for disposal. Discard any product, residue, disposable container or liner in full compliance with federal, state, and local regulations. Contain large spills and pump into a suitable tank for disposal. In the event of a spill or accidental release, notify relevant authorities in accordance with all applicable regulations. For waste disposal, see section 13 of the SDS.

7. HANDLING AND STORAGE

Precautions for safe handling

Advice on Safe Handling Handle in accordance with good industrial hygiene and safety practice. Avoid breathing fumes, vapors, mists, spray. Wash face, hands, and any exposed skin thoroughly after handling.

Conditions for safe storage, including any incompatibilities

Storage Conditions Keep container tightly closed and store in a cool, dry and well-ventilated place. Do not store in open or unlabeled containers. Store away from heat and open flame. Storage temperature > 40° F.

Incompatible Materials Oxidizing agents. Strong acids. Strong bases.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Exposure Guidelines No exposure limits noted for ingredient(s)

Appropriate engineering controls

Engineering Controls Maintain eye wash fountain and quick-drench facilities in work area.

Individual protection measures, such as personal protective equipment

Eye/Face Protection If contact is likely, safety glasses with side shields are recommended.

Skin and Body Protection If prolonged or repeated contact is likely, chemical, and oil resistant clothing is recommended.

Respiratory Protection Ensure adequate ventilation, especially in confined areas.

General Hygiene Considerations Avoid contact with skin, eyes and clothing. After handling this product, wash hands before eating, drinking, or smoking. If contact occurs, remove contaminated clothing. If needed, take first aid action shown on section 4 of this SDS. Launder contaminated clothing before reuse.

9. PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

Physical State	Liquid		
Appearance	Amber liquid	**Odor**	Wintergreen
Color	Amber	**Odor Threshold**	Not determined

Property	**Values**	**Remarks • Method**
pH	Not determined	
Melting Point/Freezing Point	Not determined	
Boiling Point/Boiling Range	> 232.22 °C / > 450 °F	(at 760 mm Hg)
Flash Point	> 212.77 °C / > 415 °F	Pensky-Martens Closed Cup (PMCC)
Evaporation Rate	< 1	
Flammability (Solid, Gas)	Not determined	
Upper Flammability Limits	Not determined	
Lower Flammability Limit	Not determined	
Vapor Pressure	Not determined	
Vapor Density	< 1.0	(Air=1)
Specific Gravity	1.108	
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	0.36% (3.9/L)

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 Incompatible Materials.

Incompatible Materials Oxidizing agents. Strong acids. Strong bases.

Hazardous Decomposition Products

Thermal decomposition and combustion are not expected to occur except under extreme conditions.

11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure

Product Information

Eye Contact May cause temporary irritation on eye contact.

Skin Contact Prolonged contact may cause redness and irritation.

Inhalation May cause irritation to the mucous membranes and upper respiratory tract.

Ingestion May cause gastrointestinal irritation or diarrhea.

Component Information

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 Carcinogenic potential is unknown.

Numerical measures of toxicity Not determined

12. ECOLOGICAL INFORMATION

Ecotoxicity

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.

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 Not regulated

15. REGULATORY INFORMATION

International Inventories

TSCA 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

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).

SARA 311/312 Hazard Categories

This material, as supplied, does not contain any substances subject to the requirements of SARA Sections 311/312 (40 CFR 370)

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

California Proposition 65	This product does not intentionally contain any chemicals known by the State of California to cause cancer and/or birth defects. Moreover, we do not routinely analyze its products for Impurities which may be such chemicals.

U.S. State Right-to-Know Regulations
This product does not contain any substances regulated under applicable state right-to-know regulations

16. OTHER INFORMATION

NFPA	**Health Hazards**	**Flammability**	**Instability**	**Special Hazards**
	1	0	0	Not determined
HMIS	**Health Hazards**	**Flammability**	**Physical Hazards**	**Personal Protection**
	1	0	0	Not determined

Issue Date: 28-Aug-2014
Revision Date: 09-Sep-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

SECTION 1 PRODUCT AND COMPANY IDENTIFICATION

Havoline Universal Antifreeze/Coolant - Premixed 50/50

Product Use: Antifreeze/Coolant
Product Number(s): 227063
Synonyms: Havoline Universal Coolant Prediluted 50/50 - B
Company Identification
Chevron Products Company
a division of Chevron U.S.A. Inc.
6001 Bollinger Canyon Rd.
San Ramon, CA 94583
United States of America
www.chevronlubricants.com

Transportation Emergency Response
CHEMTREC: (800) 424-9300 or (703) 527-3887
Health Emergency
Chevron Emergency Information Center: Located in the USA. International collect calls accepted. (800) 231-0623 or (510) 231-0623
Product Information
email : lubemsds@chevron.com
Product Information: 1 (800) 582-3835, LUBETEK@chevron.com

SECTION 2 HAZARDS IDENTIFICATION

CLASSIFICATION: Target organ toxicant (repeated exposure): Category 2. Reproductive toxicant (developmental): Category 2.

Signal Word: Warning

Health Hazards: Suspected of damaging the unborn child.

Target Organs: May cause damage to organs (Kidney) through prolonged or repeated exposure.

PRECAUTIONARY STATEMENTS:
Prevention: Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Do not breathe dust/fume/gas/mist/vapours/spray. Use personal protective equipment as required.
Response: Get medical advice/attention if you feel unwell. IF exposed or concerned: Get medical advice/attention.
Storage: Store locked up.
Disposal: Dispose of contents/container in accordance with applicable local/regional/national/international regulations.

HAZARDS NOT OTHERWISE CLASSIFIED: Not Applicable

SECTION 3 COMPOSITION/ INFORMATION ON INGREDIENTS

COMPONENTS	CAS NUMBER	AMOUNT
Ethylene Glycol	107-21-1	30 - 60 %weight
Potassium 2-ethylhexanoate	3164-85-0	0.1 - < 3 %weight

SECTION 4 FIRST AID MEASURES

Description of first aid measures
Eye: No specific first aid measures are required. As a precaution, remove contact lenses, if worn, and flush eyes with water.
Skin: No specific first aid measures are required. As a precaution, remove clothing and shoes if contaminated. To remove the material from skin, use soap and water. Discard contaminated clothing and shoes or thoroughly clean before reuse.
Ingestion: If swallowed, get immediate medical attention. Do not induce vomiting. Never give anything by mouth to an unconscious person.
Inhalation: No specific first aid measures are required. If exposed to excessive levels of material in the air, move the exposed person to fresh air. Get medical attention if coughing or respiratory discomfort occurs.

Most important symptoms and effects, both acute and delayed

IMMEDIATE HEALTH EFFECTS

Eye: Not expected to cause prolonged or significant eye irritation.

Skin: Contact with the skin is not expected to cause prolonged or significant irritation. Contact with the skin is not expected to cause an allergic skin response. Not expected to be harmful to internal organs if absorbed through the skin.

Ingestion: Toxic; may be harmful or fatal if swallowed.

Inhalation: Breathing this material at concentrations above the recommended exposure limits may cause central nervous system effects. Central nervous system effects may include headache, dizziness, nausea, vomiting, weakness, loss of coordination, blurred vision, drowsiness, confusion, or disorientation. At extreme exposures, central nervous system effects may include respiratory depression, tremors or convulsions, loss of consciousness, coma or death.

DELAYED OR OTHER HEALTH EFFECTS:

Reproduction and Birth Defects: Contains material that may cause harm to the unborn child if swallowed based on animal data.

Target Organs: Contains material that may cause damage to the following organ(s) following repeated inhalation at concentrations above the recommended exposure limit:Kidney Risk depends on duration and level of exposure. See Section 11 for additional information.

Indication of any immediate medical attention and special treatment needed Not Applicable

SECTION 5 FIRE FIGHTING MEASURES

EXTINGUISHING MEDIA: Use water fog, foam, dry chemical or carbon dioxide (CO2) to extinguish flames. Dry Chemical, CO2, AFFF Foam or alcohol resistant foam.

PROTECTION OF FIRE FIGHTERS:

Fire Fighting Instructions: This material will burn although it is not easily ignited. See Section 7 for proper handling and storage. For fires involving this material, do not enter any enclosed or confined fire space without proper protective equipment, including self-contained breathing apparatus.

Combustion Products: Highly dependent on combustion conditions. A complex mixture of airborne solids, liquids, and gases including carbon monoxide, carbon dioxide, and unidentified organic compounds will be evolved when this material undergoes combustion.

SECTION 6 ACCIDENTAL RELEASE MEASURES

Protective Measures: Eliminate all sources of ignition in vicinity of spilled material.

Spill Management: Stop the source of the release if you can do it without risk. Contain release to prevent further contamination of soil, surface water or groundwater. Clean up spill as soon as possible, observing precautions in Exposure Controls/Personal Protection. Use appropriate techniques such as applying non-combustible absorbent materials or pumping. Where feasible and appropriate, remove contaminated soil. Place contaminated materials in disposable containers and dispose of in a manner consistent with applicable regulations.

Reporting: Report spills to local authorities and/or the U.S. Coast Guard's National Response Center at

(800) 424-8802 as appropriate or required.

SECTION 7 HANDLING AND STORAGE

General Handling Information: Do not taste or swallow antifreeze or solution. Keep out of the reach of children and animals.
Precautionary Measures: Do not get in eyes, on skin, or on clothing. Do not breathe vapor or fumes. Wash thoroughly after handling. Keep out of the reach of children.
Static Hazard: Electrostatic charge may accumulate and create a hazardous condition when handling this material. To minimize this hazard, bonding and grounding may be necessary but may not, by themselves, be sufficient. Review all operations which have the potential of generating and accumulating an electrostatic charge and/or a flammable atmosphere (including tank and container filling, splash filling, tank cleaning, sampling, gauging, switch loading, filtering, mixing, agitation, and vacuum truck operations) and use appropriate mitigating procedures.
Container Warnings: Container is not designed to contain pressure. Do not use pressure to empty container or it may rupture with explosive force. Empty containers retain product residue (solid, 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. Empty containers should be completely drained, properly closed, and promptly returned to a drum reconditioner or disposed of properly.

General Storage Information: Do not store in open or unlabeled containers.

SECTION 8 EXPOSURE CONTROLS/PERSONAL PROTECTION

GENERAL CONSIDERATIONS:
Consider the potential hazards of this material (see Section 2), applicable exposure limits, job activities, and other substances in the work place when designing engineering controls and selecting personal protective equipment. If engineering controls or work practices are not adequate to prevent exposure to harmful levels of this material, the personal protective equipment listed below is recommended. The user should read and understand all instructions and limitations supplied with the equipment since protection is usually provided for a limited time or under certain circumstances.

ENGINEERING CONTROLS:
Use process enclosures, local exhaust ventilation, or other engineering controls to control airborne levels below the recommended exposure limits.

PERSONAL PROTECTIVE EQUIPMENT
Eye/Face Protection: No special eye protection is normally required. Where splashing is possible, wear safety glasses with side shields as a good safety practice.
Skin Protection: No special protective clothing is normally required. Where splashing is possible, select protective clothing depending on operations conducted, physical requirements and other substances in the workplace. Suggested materials for protective gloves include: Natural rubber, Neoprene, Nitrile Rubber, Polyvinyl Chloride (PVC or Vinyl).

Respiratory Protection: Determine if airborne concentrations are below the recommended occupational exposure limits for jurisdiction of use. If airborne concentrations are above the acceptable limits, wear an approved respirator that provides adequate protection from this material, such as: Air-Purifying Respirator for Organic Vapors, Dusts and Mists.

Use a positive pressure air-supplying respirator in circumstances where air-purifying respirators may not provide adequate protection.

Occupational Exposure Limits:

Component	Agency	TWA	STEL	Ceiling	Notation
Ethylene Glycol	ACGIH	--	--	100 mg/m3	--
Potassium 2-ethylhexanoate	Not Applicable	--	--	--	--

Consult local authorities for appropriate values.

SECTION 9 PHYSICAL AND CHEMICAL PROPERTIES

Attention: the data below are typical values and do not constitute a specification.

Color: Yellow
Physical State: Liquid
Odor: Faint or Mild
Odor Threshold: No data available
pH: 8 - 8.60
Vapor Pressure: No data available
Vapor Density (Air = 1): 2.10
Initial Boiling Point: 109°C (228.2°F) (Estimated)
Solubility: Soluble in water.
Freezing Point: -18°C (-0.4°F) (Min)
Melting Point: Not Applicable
Specific Gravity: 1.12 @ 15.6°C (60.1°F)
Viscosity: No data available
Decomposition temperature: No data available
Octanol/Water Partition Coefficient: No data available

FLAMMABLE PROPERTIES:
Flammability (solid, gas): No Data Available

Flashpoint: Not Applicable
Autoignition: No data available
Flammability (Explosive) Limits (% by volume in air): Lower: Not Applicable Upper: Not Applicable

SECTION 10 STABILITY AND REACTIVITY

Reactivity: May react with strong acids or strong oxidizing agents, such as chlorates, nitrates, peroxides, etc.
Chemical Stability: This material is considered stable under normal ambient and anticipated storage and handling conditions of temperature and pressure.
Incompatibility With Other Materials: Not applicable
Hazardous Decomposition Products: Aldehydes (Elevated temperatures), Ketones (Elevated temperatures)
Hazardous Polymerization: Hazardous polymerization will not occur.

SECTION 11 TOXICOLOGICAL INFORMATION

Information on toxicological effects
Serious Eye Damage/Irritation: The eye irritation hazard is based on evaluation of data for product components.

Skin Corrosion/Irritation: The skin irritation hazard is based on evaluation of data for product components.

Skin Sensitization: The skin sensitization hazard is based on evaluation of data for similar materials.

Acute Dermal Toxicity: The acute dermal toxicity hazard is based on evaluation of data for product components.

Acute Oral Toxicity: The acute oral toxicity hazard is based on evaluation of data for product components.

Acute Inhalation Toxicity: The acute inhalation toxicity hazard is based on evaluation of data for product components.
Acute Toxicity Estimate: Not Determined

Germ Cell Mutagenicity: The hazard evaluation is based on data for components or a similar material.

Carcinogenicity: The hazard evaluation is based on data for components or a similar material.

Reproductive Toxicity: The hazard evaluation is based on data for components or a similar material.

Specific Target Organ Toxicity - Single Exposure: The hazard evaluation is based on data for components or a similar material.

Specific Target Organ Toxicity - Repeated Exposure: The hazard evaluation is based on data for components or a similar material.

ADDITIONAL TOXICOLOGY INFORMATION:
This product contains ethylene glycol (EG). The toxicity of EG via inhalation or skin contact is expected to be slight at room temperature. The estimated oral lethal dose is about 100 cc (3.3 oz.) for an adult human. Ethylene glycol is oxidized to oxalic acid which results in the deposition of calcium oxalate crystals mainly

in the brain and kidneys. Early signs and symptoms of EG poisoning may resemble those of alcohol intoxication. Later, the victim may experience nausea, vomiting, weakness, abdominal and muscle pain, difficulty in breathing and decreased urine output. When EG was heated above the boiling point of water, vapors formed which reportedly caused unconsciousness, increased lymphocyte count, and a rapid, jerky movement of the eyes in persons chronically exposed. When EG was administered orally to pregnant rats and mice, there was an increase in fetal deaths and birth defects. Some of these effects occurred at doses that had no toxic effects on the mothers. We are not aware of any reports that EG causes reproductive toxicity in human beings.

2-Ethylhexanoic acid (2-EXA) caused an increase in liver size and enzyme levels when repeatedly administered to rats via the diet. When administered to pregnant rats by gavage or in drinking water, 2-EXA caused teratogenicity (birth defects) and delayed postnatal development of the pups. Additionally, 2-EXA impaired female fertility in rats. Birth defects were seen in the offspring of mice who were administered sodium 2-ethylhexanoate via intraperitoneal injection during pregnancy.

SECTION 12 ECOLOGICAL INFORMATION

ECOTOXICITY
This material is not expected to be harmful to aquatic organisms.
The product has not been tested. The statement has been derived from products of a similar structure and composition.

MOBILITY
No data available.

PERSISTENCE AND DEGRADABILITY
This material is expected to be readily biodegradable. The biodegradability of this material is based on an evaluation of data for the components or a similar material.
The product has not been tested. The statement has been derived from the properties of the individual components.

POTENTIAL TO BIOACCUMULATE
Bioconcentration Factor: No data available.
Octanol/Water Partition Coefficient: No data available

SECTION 13 DISPOSAL CONSIDERATIONS

Use material for its intended purpose or recycle if possible. This material, if it must be discarded, may meet the criteria of a hazardous waste as defined by international, country, or local laws and regulations.

SECTION 14 TRANSPORT INFORMATION

The description shown may not apply to all shipping situations. Consult 49CFR, or appropriate Dangerous Goods Regulations, for additional description requirements (e.g., technical name) and mode-specific or quantity-specific shipping requirements.

DOT Shipping Description: PROPRIETARY ANTIFREEZE PREPARATION IN NON-BULK PACKAGING; NOT REGULATED FOR TRANSPORT UNDER 49 CFR
Additional Information: Bulk shipments containing a reportable quantity (RQ, 5000 pounds or more) of ethylene glycol in a single packaging are transported as hazardous material. The shipping description is: UN3082, ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (ETHYLENE GLYCOL CONTAINS BITTERANT), 9, III, RQ (ETHYLENE GLYCOL)

IMO/IMDG Shipping Description: NOT REGULATED AS DANGEROUS GOODS FOR TRANSPORTATION UNDER THE IMDG CODE

ICAO/IATA Shipping Description: NOT REGULATED AS DANGEROUS GOODS FOR TRANSPORTATION UNDER ICAO TI OR IATA DGR

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC code:
Not applicable

SECTION 15 REGULATORY INFORMATION

EPCRA 311/312 CATEGORIES:

1.	Immediate (Acute) Health Effects:	YES
2.	Delayed (Chronic) Health Effects:	YES
3.	Fire Hazard:	NO
4.	Sudden Release of Pressure Hazard:	NO
5.	Reactivity Hazard:	NO

REGULATORY LISTS SEARCHED:

01-1=IARC Group 1	03=EPCRA 313
01-2A=IARC Group 2A	04=CA Proposition 65
01-2B=IARC Group 2B	05=MA RTK
02=NTP Carcinogen	06=NJ RTK
	07=PA RTK

The following components of this material are found on the regulatory lists indicated.

Ethylene Glycol	04, 05, 07

CHEMICAL INVENTORIES:
All components comply with the following chemical inventory requirements: AICS (Australia), DSL (Canada), EINECS (European Union), IECSC (China), PICCS (Philippines), TSCA (United States).

One or more components does not comply with the following chemical inventory requirements: ENCS (Japan), KECI (Korea).

NEW JERSEY RTK CLASSIFICATION:
Under the New Jersey Right-to-Know Act L. 1983 Chapter 315 N.J.S.A. 34:5A-1 et. seq., the product is to be identified as follows: Refer to components listed in Section 3.

SECTION 16 OTHER INFORMATION

NFPA RATINGS: Health: 2 Flammability: 1 Reactivity: 0

HMIS RATINGS: Health: 2* Flammability: 1 Reactivity: 0
(0-Least, 1-Slight, 2-Moderate, 3-High, 4-Extreme, PPE:- Personal Protection Equipment Index recommendation, *- Chronic Effect Indicator). These values are obtained using the guidelines or published evaluations prepared by the National Fire Protection Association (NFPA) or the National Paint and Coating Association (for HMIS ratings).

LABEL RECOMMENDATION:
Label Category : ANTIFREEZE/COOLANT 3 - AFC3

REVISION STATEMENT: This revision updates the following sections of this Safety Data Sheet: 15, 16

Revision Date: June 08, 2016

ABBREVIATIONS THAT MAY HAVE BEEN USED IN THIS DOCUMENT:

TLV - Threshold Limit Value	TWA - Time Weighted Average
STEL - Short-term Exposure Limit	PEL - Permissible Exposure Limit
GHS - Globally Harmonized System	CAS - Chemical Abstract Service Number
ACGIH - American Conference of Governmental Industrial Hygienists	IMO/IMDG - International Maritime Dangerous Goods Code
API - American Petroleum Institute	SDS - Safety Data Sheet
HMIS - Hazardous Materials Information System	NFPA - National Fire Protection Association (USA)
DOT - Department of Transportation (USA)	NTP - National Toxicology Program (USA)
IARC - International Agency for Research on Cancer	OSHA - Occupational Safety and Health Administration
NCEL - New Chemical Exposure Limit	EPA - Environmental Protection Agency
SCBA - Self-Contained Breathing Apparatus	

Prepared according to the 29 CFR 1910.1200 (2012) by Chevron Energy Technology Company, 6001 Bollinger Canyon Road San Ramon, CA 94583.

The above information is based on the data of which we are aware and is believed to be correct as of the date hereof. Since this information may be applied under conditions beyond our control and with which we may be unfamiliar and since data made available subsequent to the date hereof may suggest modifications of the information, we do not assume any responsibility for the results of its use. This information is furnished upon condition that the person receiving it shall make his own determination of the suitability of the material for his particular purpose.

Revision Number: 005.0

Issue date: 07/31/2014

1. PRODUCT AND COMPANY IDENTIFICATION

Product name: **LOCTITE LB 8008 C5-A known as C5-A® Copper Based Anti-Seize**

IDH number: 234263

Product type: Lubricant

Item number: 51147

Restriction of Use: None identified

Region: United States

Company address:
Henkel Corporation
One Henkel Way
Rocky Hill, Connecticut 06067

Contact information:
Telephone: (860) 571-5100
MEDICAL EMERGENCY Phone: Poison Control Center
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.henkelna.com

2. HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW	
DANGER:	CAUSES SKIN IRRITATION. MAY CAUSE AN ALLERGIC SKIN REACTION. CAUSES SERIOUS EYE DAMAGE.

HAZARD CLASS	HAZARD CATEGORY
SKIN IRRITATION	2
SERIOUS EYE DAMAGE	1
SKIN SENSITIZATION	1

PICTOGRAM(S)

Precautionary Statements

Prevention: Avoid breathing vapors, mist, or spray. Wash thoroughly after handling. Contaminated work clothing should not be allowed out of the workplace. Wear eye and face protection. Wear protective gloves.

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 remove. Continue rinsing. Immediately call a poison control center or physician. If skin irritation or rash occurs: Get medical attention. Take off contaminated clothing.

Storage: Not prescribed

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*
Distillates (petroleum), hydrotreated heavy naphthenic	64742-52-5	30 - 60
Calcium dihydroxide	1305-62-0	10 - 30
Mineral oil light naphthenic hydrotreat. <3% DMSO	64742-53-6	10 - 30
Copper	7440-50-8	10 - 30
Graphite	7782-42-5	5 - 10
Quartz (SiO2)	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 breathing is difficult, give oxygen. If not breathing, give artificial respiration. If symptoms develop and persist, get medical attention.

Skin contact: Wash with soap and water. If symptoms develop and persist, get medical attention.

Eye contact: Immediately flush eyes with plenty of water for at least 15 minutes. Get medical attention.

Ingestion: Do not induce vomiting. Get medical attention.

Symptoms: See Section 11.

5. FIRE FIGHTING MEASURES

Extinguishing media: Carbon dioxide. Dry chemical. foam Water spray or fog.

Special firefighting procedures: None

Unusual fire or explosion hazards: None

Hazardous combustion products: Oxides of carbon.

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 material to contaminate ground water system.

Clean-up methods: Scrape up as much material as possible. Clean residue with soap and water.

7. HANDLING AND STORAGE

Handling: Use only with adequate ventilation. Avoid contact with eyes, skin and clothing. Keep container closed. Wash thoroughly after handling.

Storage: Keep in a cool, well ventilated area.

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
Distillates (petroleum), hydrotreated heavy naphthenic	5 mg/m3 TWA mist 10 mg/m3 STEL mist	5 mg/m3 TWA mist 500 ppm (2,000 mg/m3) PEL 5 mg/m3 PEL Mist.	None	None
Calcium dihydroxide	5 mg/m3 TWA	5 mg/m3 PEL Respirable fraction. 15 mg/m3 PEL Total dust.	None	None
Mineral oil light naphthenic hydrotreat. <3% DMSO	None	500 ppm (2,000 mg/m3) PEL 5 mg/m3 PEL Mist.	None	None
Copper	1 mg/m3 TWA (as Cu) Dust and mist. 0.2 mg/m3 TWA (as Cu) Fume.	1 mg/m3 PEL (as Cu) Dust and mist. 0.1 mg/m3 PEL (as Cu) Fume.	None	None
Graphite	2 mg/m3 TWA Respirable fraction.	5 mg/m3 PEL Respirable fraction. 15 mg/m3 PEL Total dust. 15 MPPCF TWA	None	None
Quartz (SiO2)	0.025 mg/m3 TWA Respirable fraction.	2.4 MPPCF TWA Respirable. 0.1 mg/m3 TWA Respirable. 0.3 mg/m3 TWA Total dust.	None	None

Engineering controls: Use local ventilation if general ventilation is insufficient to maintain vapor concentration below established exposure limits.

Respiratory protection: Use NIOSH approved respirator if there is potential to exceed exposure limit(s). Observe OSHA regulations for respirator use (29 CFR 1910.134).

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.

Skin protection: Use impermeable gloves and protective clothing as necessary to prevent skin contact. Use of Butyl or Nitrile Rubber gloves is recommended.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical state: Paste
Color: Copper
Odor: Mild
Odor threshold: Not available.
pH: Not applicable
Vapor pressure: < 5.0 mm hg
Boiling point/range: > 260 °C (> 500°F)
Melting point/ range: Not available.
Specific gravity: 1.30
Vapor density: Heavier than air.
Flash point: > 93 °C (> 199.4 °F)
Flammable/Explosive limits - lower: Not determined
Flammable/Explosive limits - upper: Not determined
Autoignition temperature: Not determined
Evaporation rate: Slower than ether.
Solubility in water: Insoluble
Partition coefficient (n-octanol/water): Not determined
VOC content: < 3 % Essentially Zero

Viscosity: Not available.
Decomposition temperature: Not available.

10. STABILITY AND REACTIVITY

Stability: Stable at normal conditions.

Hazardous reactions: Will not occur.

Hazardous decomposition products: Hydrocarbons. Oxides of carbon.

Incompatible materials: Strong acids and strong bases. Oxidizing agents.

Reactivity: Not available.

Conditions to avoid: Prolonged exposure to heat.

11. TOXICOLOGICAL INFORMATION

Relevant routes of exposure: Skin, Inhalation, Eyes

Potential Health Effects/Symptoms

Inhalation: Inhalation of copper fumes may result in metal fume fever. Symptoms include metallic taste, discoloration of skin or hair.
Skin contact: Causes skin irritation. May cause allergic skin reaction.
Eye contact: Causes serious eye damage.
Ingestion: Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea.

Hazardous Component(s)	LD50s and LC50s	Immediate and Delayed Health Effects
Distillates (petroleum), hydrotreated heavy naphthenic	None	Irritant
Calcium dihydroxide	Oral LD50 (RAT) = 7,340 mg/kg	Irritant, Corrosive
Mineral oil light naphthenic hydrotreat. <3% DMSO	None	Irritant
Copper	None	Allergen, Blood, Central nervous system, Developmental, Gastrointestinal, Immune system, Irritant, Kidney, Liver, Mutagen, Sensory, Skin
Graphite	None	Lung
Quartz (SiO2)	None	Immune system, Lung, Some evidence of carcinogenicity

Hazardous Component(s)	NTP Carcinogen	IARC Carcinogen	OSHA Carcinogen (Specifically Regulated)
Distillates (petroleum), hydrotreated heavy naphthenic	No	No	No
Calcium dihydroxide	No	No	No
Mineral oil light naphthenic hydrotreat. <3% DMSO	No	No	No
Copper	No	No	No
Graphite	No	No	No
Quartz (SiO2)	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: Not a RCRA hazardous waste.

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 substances, liquid, n.o.s. (Copper)
Hazard class or division: 9
Identification number: UN 3082
Packing group: III
Marine pollutant: Copper
DOT Hazardous Substance(s): Copper

International Air Transportation (ICAO/IATA)

Proper shipping name: Environmentally hazardous substance, liquid, n.o.s.
Hazard class or division: 9
Identification number: UN 3082
Packing group: III

Water Transportation (IMO/IMDG)

Proper shipping name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Copper)
Hazard class or division: 9
Identification number: UN 3082
Packing group: III
Marine pollutant: Copper

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: 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). Copper (CAS# 7440-50-8).
CERCLA Reportable quantity: Copper (CAS# 7440-50-8) 5,000 lbs. (2,270 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: Catherine Bimler, Regulatory Affairs Specialist

Issue date: 07/31/2014

DISCLAIMER: The data contained herein are furnished for information only and are believed to be reliable. However, Henkel Corporation and its affiliates ("Henkel") does not assume responsibility for any results obtained by persons over whose methods Henkel has no control. It is the user's responsibility to determine the suitability of Henkel's products or any production methods mentioned herein for a particular purpose, and to adopt such precautions as may be advisable for the protection of property and persons against any hazards that may be involved in the handling and use of any Henkel's products. In light of the foregoing, Henkel specifically disclaims all warranties, express or implied, including warranties of merchantability and fitness for a particular purpose, arising from sale or use of Henkel's products. Henkel further disclaims any liability for consequential or incidental damages of any kind, including lost profits.

Safety Data Sheet

Original LUBE-MATIC Liquid

SECTION 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND THE COMPANY/UNDERTAKING

1.1 Product Identifier

Trade Name Original LUBE-MATIC Liquid
Product Number 007040, 007050

1.2 Relevant Identified Uses of the Substance or Mixture and Uses Advised Against

Product Use: Welding Process Aid

1.3 Details of the Supplier of the Safety Data Sheet

Manufacturer: Weld-Aid Products
14650 Dequindre
Detroit , Michigan
Information Phone Number: +1 (313) 883-6977
+1 (313) 883-4930
E-mail info@weldaid.com

1.4 Emergency Telephone Number

Emergency Spill Information +1 (800) 255-3924

SDS Date of Preparation: August 29, 2017

SECTION 2: HAZARDS IDENTIFICATION

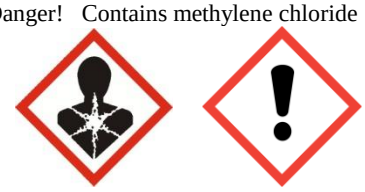
2.1 Classification of the Substance or Mixture

CLP/GHS Classification (1272/2008):

Physical:	**Health:**	**Environmental**
None	Eye Irritation Category 2A (H319) Skin Irritation Category 2 (H315) Specific Target Organ Toxicity – Single Exposure Category 3 (H335, H336) Carcinogen Category 1B (H350)	None

2.2 Label Elements

Danger! Contains methylene chloride



Hazard Phrases

H315	Causes skin irritation.
H319	Causes serious eye irritation.
H335	May cause respiratory irritation.
H336	May cause drowsiness or dizziness.
H350	May cause cancer.

Precautionary Phrases

P201	Obtain special instructions before use.
P202	Do not handle until all safety precautions have been read and understood.
P261	Avoid breathing mist, vapors and spray.
P264	Wash thoroughly after handling.
P271	Use only outdoors or in a well-ventilated area.
P280	Wear protective gloves and eye protection.
P305 + P351 + P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P337 + P313	If eye irritation persists: Get medical attention.

P302 + P352	IF ON SKIN: Wash with plenty of soap and water.
P332 + P313	If skin irritation occurs: Get medical attention.
P362	Take off contaminated clothing and wash before reuse.
P304 + P340	IF INHALED: Remove to fresh air and keep at rest in a position comfortable for breathing.
P312	Call a POISON CENTER or doctor if you feel unwell.
P308 + P313	IF exposed or concerned: Get medical attention.
P403 + P233	Store in a well-ventilated place. Keep container tightly closed.
P405	Store locked up.
P501	Dispose of contents and container in accordance with local and national regulations.

2.3 Other Hazards: None

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

3.1 Substances:

Chemical Name	CAS# /	EINECS#	GHS Classification Regulation (EC) No 1272/2008	%
Methylene Chloride (Dichloromethane)	75-09-2	200-838-9	Eye Irritation Category 2A (H319), Skin Irritation Category 2 (H315), Specific Target Organ Toxicity Single Exposure Category 3 (H335, H336), Carcinogen Category 1B (H350)	>90
Alkyl-Aryl Siloxane Copolymer	Mixture	Mixture	Not classified as hazardous	<10

See Section 16 for further information on EU and GHS Classification.

SECTION 4: FIRST AID MEASURES

4.1 Description of First Aid Measures

Eyes: Flush eyes immediately with water for at several minutes, holding the eyelids apart. If irritation persists, call a physician.

Skin: Remove contaminated clothing and shoes. Wash exposed area thoroughly with soap and water. Wash contaminated clothing before reuse. Get medical attention if irritation persists. Risk of exposure may occur from contaminated clothing or unwashed skin by skin absorption or off-gassing vapors.

Inhalation: Remove to fresh air. If breathing is difficult have qualified personnel administer oxygen. If breathing has stopped, administer artificial respiration. If symptom persists, seek prompt medical attention**.**

Ingestion: If conscious, rinse mouth with water. Never give anything by mouth to an unconscious or convulsing person. Get medical attention.

Notes to Physicians: Adrenaline should never be given to a person overexposed to methylene chloride. The finding of chronic toxic effects in laboratory animals may indicate toxicity to humans.

4.2 Most Important symptoms and effects, both acute and delayed: Causes eye and skin irritation. Inhalation of vapors or mist may cause respiratory irritation and central nervous system effects such as headache, dizziness, drowsiness, nausea and unconsciousness. Ingestion may cause mucous membrane and gastrointestinal irritation, nausea, vomiting or diarrhea. Overexposure may cause heart, liver, kidney, blood system and nervous system damage. Methylene chloride is converted to carbon monoxide in the body which may worsen heart disease. May cause cancer based on animal data.

4.3 Indication of any immediate medical attention and special treatment needed: Immediate medical treatment is not required. If symptoms occur, get prompt medical attention.

SECTION 5: FIRE FIGHTING MEASURES

5.1 Extinguishing Media:

Use carbon dioxide, foam or dry chemical. Do not use water to extinguish fire. Water spray can be used to cool exposed containers and structures.

5.2 Special Hazards Arising from the Substance or Mixture

Unusual Fire and Explosion Hazards: Concentrated vapors can be ignited by an ignition source. Vapors are heavier than air and may and accumulate in low lying areas.

Hazardous Decomposition Products: Combustion may produce hydrogen chloride, phosgene and silicone dioxide.

5.3 Advice for Fire-Fighters:

Firefighters should always wear self-contained breathing apparatus and full protective clothing for fires involving chemicals or in confined spaces. Do not allow run-off from fire fighting to enter drains or water courses. Stay upwind to avoid hazardous vapors and toxic decomposition products.

SECTION 6: ACCIDENTAL RELEASE MEASURES

6.1 Personal Precautions, Protective Equipment and Emergency Procedures:

Evacuate spill area and keep unprotected personnel away. Eliminate all ignition sources. Ventilate area. Wear appropriate protective clothing as described in Section 8.

6.2 Environmental Precautions:

Avoid contamination of soil, surface water and ground water. Do not flush to sewer! Report releases as required by local, state and federal authorities.

6.3 Methods and Material for Containment and Cleaning Up:

Contain and collect using an absorbent material and place in an appropriate container for disposal.

6.4 Reference to Other Sections:

Refer to Section 8 for protective equipment and Section 15 for disposal considerations.

SECTION 7: HANDLING AND STORAGE

7.1 Precautions for Safe Handling:

Avoid contact with the eyes, skin and clothing. Avoid breathing vapors. Do not swallow. Wear protective clothing and equipment as described in Section 8. Use only with adequate ventilation. Do not use in poorly ventilated or confined spaces. Vapors are heavier than air and will collect in low areas. Wash thoroughly with soap and water after handling and before eating, drinking or using restroom. Keep containers closed when not in use. Keep away from excessive heat, open flames and all other high energy sources. Do not eat, drink or smoke in work areas.

Do not cut, drill, grind or weld on or near containers, even empty containers. Do not reuse empty containers. Empty containers retain product residues can be hazardous. Follow all SDS precautions when handling empty containers.

In the United States, refer to OSHA 1910.1052 for requirements for handling and use of methylene chloride.

7.2 Conditions for Safe Storage, Including any Incompatibilities

Store in a cool, dry, well ventilated area away from ignition sources. Keep containers tightly closed when not in use. Prevent moisture from entering containers. Store away from oxidizers and other incompatible materials.

Do not store product in aluminum, zinc, aluminum alloys and plastics containers. Contact with aluminum parts in a pressurized system may cause violent reactions.

7.3 Specific end use(s):

Welding product

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 Control Parameters:

Chemical Name	Exposure Limits
Methylene Chloride (Dichloromethane)	25 ppm TWA OSHA PEL, 125 ppm STEL 50 ppm TWA ACGIH TLV 100 ppm TWA UK OEL, 300 ppm STEL 75 ppm TWA Germany AGS, 300 ppm STEL

Alkyl-Aryl Siloxane Copolymer	None Established

In the United States, 29 CFR 1910.1052 is the OSHA regulation on Occupational Exposure to Methylene Chloride. Assure compliance with these regulations.

8.2 Exposure Controls:

Engineering Controls: Use with adequate local exhaust ventilation to maintain exposures below the occupational exposure limits. Use explosion proof equipment where required.

Respiratory Protection: If the exposure limits are exceeded an approved full facepiece supplied air respirator or self-contained breathing apparatus should be used. Selection and use of respiratory equipment must be in accordance with applicable regulations and good industrial hygiene practice.

Skin Protection: Wear impervious gloves such as viton, poly vinyl alcohol (PVA).

Eye Protection: Chemical safety goggles and/or faceshield should be worn to where splashing is possible.

Other: Solvent resistant boots apron and headgear should be used to prevent contact. A safety shower and eye wash should be available in the immediate work area.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic Physical and Chemical Properties:

Appearance Clear, colorless liquid	**Vapor Density:** 2.9 (air =1)
Odor: Mild, sweet odor.	**Specific Gravity:** 1.31
Odor Threshold: 160 ppm (methylene chloride)	**Water Solubility:** 1.32 gm/100 gm @ 25°C
pH: Not available	**Octanol/Water Partition Coefficient:** Not available
Melting Point/Freezing Point: Not applicable	**Autoignition Temperature:** Not applicable
Boiling Point: 103.1°F (39.5°C)	**Decomposition Temperature:** Not applicable
Flash Point: None	**Viscosity:** Not applicable
Evaporation Rate: 0.7 (ether = 1)	**Explosion Properties:** Vapors may explode in confined areas.
Flammable Limits: LEL: 13% UEL: 23%	**Oxidizing Properties:** Not an oxidizer
Vapor Pressure: 352 mmHg @ 20°C	

9.2 Other Information:

None

SECTION 10: STABILITY AND REACTIVITY

10.1 Reactivity:

Not reactive under normal conditions of use.

10.2 Chemical Stability:

Stable under normal storage and handling conditions.

10.3 Possibility of Hazardous Reactions:

Contact with moisture may yield trichloroacetic acid and hydrochloric acid.

10.4 Conditions to Avoid:

Avoid contact with open flames, electric arc and other hot surfaces which can cause thermal decomposition.

10.5 Incompatible Materials:

Avoid alkalies, acids, oxidizing agents and reactive metals such as aluminum and its alloys, zinc, magnesium, potassium and sodium.

10.6 Hazardous Decomposition Products:

Carbon monoxide, hydrogen chloride, phosgene and chlorine.

SECTION 11: TOXICOLOGICAL INFORMATION

11.1 Information on Toxicological Effects:

Eyes: Vapors or mists may cause irritation, redness and tearing. Direct contact may cause temporary eye damage.

Skin: Liquid methylene chloride is painful and irritating if confined to skin by gloves, clothing, etc. Prolonged or repeated contact may cause irritation, defatting of skin, and dermatitis. Absorption through intact skin is possible if contact with liquid is prolonged.
Ingestion: Ingestion may cause mucous membrane and gastrointestinal irritation, nausea, vomiting or diarrhea and other symptoms listed under inhalation. Alcohol consumed before or after exposure may increase adverse effects.
Inhalation: Inhalation of vapors or mists may cause mucous membrane and respiratory irritation and central nervous system depression with symptoms of headache, dizziness, nausea, incoordination, drunkenness, stupor, irregular heartbeat, cardiac arrest, unconsciousness and death. Overexposure may cause cardiac sensitization and increased risk of cardiac arrest, adverse effects on the lungs, liver, kidney, nervous system and other internal organs. Carboxyhemoglobin levels can be elevated in persons exposed to methylene chloride causing stress on the cardiovascular system. Alcohol consumption may increase adverse effects.

Acute Toxicity Values:
Methylene Chloride: Oral rat LD50 >2000 mg/kg, Inhalation rat LC50 49 mg/L/7 hr, Skin rat LD50 >2000 mg/kg.
Alkyl-Aryl Siloxane Copolymer: No toxicity data available

Irritation: Methylene chloride has been shown to be irritating in humans on repeated contact particularly when sealed to the skin by shoes or tight clothing.

Corrosivity: This is not a corrosive product.

Sensitization: This product is not expected to cause sensitization.

Repeat Dose Toxicity: Epidemiology studies of 751 humans chronically exposed to methylene chloride in the workplace, of which 252 were exposed for a minimum of 20 years, did not demonstrate any increase in deaths caused by cancer or cardiac problems. A second study of 2,227 workers confirmed these results.

Carcinogen Status: Methylene chloride has been evaluated for possible cancer causing effects in laboratory animals. Inhalation studies at concentrations of 2,000 and 4,000 ppm increased the incidence of malignant liver and kidney tumors in mice. Three inhalation studies of rats have shown increased incidence of benign mammary gland tumors in female rats at concentrations of 500 ppm and above and increases in benign mammary gland tumors in males at concentrations of 1,500 ppm and above. Rats exposed to 50 and 200 ppm via inhalation showed no increased incidence of tumors. Mice and rats exposed by ingestion at levels up to 250-ppm/kg/day lifetime and hamsters exposed via inhalation to concentrations up to 3,500-ppm lifetime did not show an increased incidence of tumors.

Methylene Chloride is listed by IARC as “Possibly Carcinogenic to Humans (Group 2B) by IARC, as “Reasonably Anticipated to Be a Human Carcinogen” by NTP, as a “Confirmed Animal Carcinogen with Unknown Relevance to Humans (A3) by ACGIH, and a Carcinogen Category 2 by the European Union. It is regulated by OSHA as a carcinogen. None of the other ingredients are classified as carcinogens by IARC, NTP, ACGIH, OSHA, or the CLP Regulation (EC) No 1272/2008.

Germ Cell Mutagenicity: Methylene chloride tested positive in AMES test but negative in CHO assay and in vivo micronucleus assay.

Toxicity for Reproduction: Methylene chloride has been shown to cause reproductive toxicity and/or birth defects only at doses that produce significant toxicity in the parent animal.

SECTION 12: ECOLOGICAL INFORMATION

12.1 Toxicity:
Methylene Chloride: LC50/96-hour Fathead Minnow - >190 mg/l, 48 hr LC50 daphnia magna 27 mg/L

12.2 Persistence and Degradability:
Methylene is reported to completely biodegrade under aerobic conditions with sewage seed or activated sludge between 6 hours to 7 days. 86-92 % conversion to CO2 will occur after a varying acclimation period using anaerobic digestion in wastewater.

12.3 Bioaccumulative Potential::
Methyene chloride as an estimated BCF of <2 which suggests the potential for bioaccumilation is low.

12.4 Mobility in Soil:

Methylene chloride is expected to be highly mobile in soil.

12.5 Results of PBT and vPvB Assessment:
Not required.

12.6 Other Adverse Effects:
None known.

SECTION 13: DISPOSAL INFORMATION

13.1 Waste Treatment Methods
Dispose in accordance with local and national environmental regulations.

SECTION 14: TRANSPORT INFORMATION

	41.1 UN Number	41.2 UN Proper Shipping Name	14.3 Transport Hazard Class(s)	14.4 Packing Group	14.5 Environmental Hazards
US DOT	UN1593	Dichloromethane	6.1	III	Not applicable
EU ADR/RID	UN1593	Dichloromethane	6.1	III	Not applicable
IMDG	UN1593	Dichloromethane	6.1	III	Not applicable

14.6 Special Precautions for User:
None

14.7 Transport in Bulk According to Annex II of MARPOL 73/78 and the IBC Code:
Not applicable

SECTION 15: REGULATORY INFORMATION

15.1 Safety, Health and Environmental Regulations/Legislation Specific for the Substance or Mixture:

International Inventories:

US EPA TSCA Inventory: All of the components are listed on the TSCA inventory.
Canadian Environmental Protection Act: All of the ingredients are listed on the Canadian Domestic Substances List.
European Union: All of the components of this product are listed on the European Inventory of New and Existing Chemical Substances (EINECS) inventory.
Australia: All of the ingredients of this product are listed on the Australian Inventory of Chemical Substances (AICS).
China: All of the ingredients of this product are listed on the Inventory of Existing Chemical Substance in China (IECSC).
Korea: All of the components of this product are listed on the Korean Existing Chemical List (KECL).
Japan: All of the components of this product are listed on the Japanese Existing and New Chemical Substances List (ENCS).
New Zealand: All of the components of this product are listed on the New Zealand Inventory of Chemicals (NZIoC).
Philippines: All of the components of this product are listed on the Philippine Inventory of Chemicals and Chemical Substances (PICCS).

U.S. REGULATIONS

CERCLA: This product has a Reportable Quantity (RQ) of 1,000 lbs. based on the RQ for methylene chloride 1,000 lbs. Releases above the RQ must be reported to the National Response Center. Many states have more stringent release reporting requirements. Report spills required under federal, state and local regulations.
EPA SARA 302: This product does not contain chemicals regulated under SARA Section 302.
EPA SARA 311 Hazard Classification: Acute Health, Chronic Health
EPA SARA 313: This product contains the following chemicals that are regulated under SARA Title III, section 313:

Methylene Chloride	75-09-2	>90

California Proposition 65: This product contains the following chemicals which are known to the State of California to cause cancer, reproductive toxicity or birth defects: Methylene Chloride >90% (cancer).

15.2 Chemical Safety Assessment:
Not required

SECTION 16: OTHER INFORMATION

SDS Revision History:
09/26/14: Converted US SDS to EU REACH SDS
10/6/14: Section 2 GHS Classification, Hazard Phrases, Precautionary Phrases, Section 3, GHS Classification, Section 4 First Aid Measurers, Most Important symptoms and effects, Indication of any immediate medical attention and special treatment, Section 9, Flammable Limits, Vapor Density, Section 11 Information on Toxicological Effects – Ingestion, Carcinogen Status, Section 12 – Toxicity, Section 15 WHMIS Classification, Section 16 GHS Phrases for Reference
8/29/17: Section 2: Signal Word

GHS Phrases for Reference (See Section 2 and 3):
H315 Causes skin irritation.
H319 Causes serious eye irritation.
H335 May cause respiratory irritation.
H336 May cause drowsiness or dizziness.
H350 May cause cancer.

SAFETY DATA SHEET

SECTION 1 PRODUCT AND COMPANY IDENTIFICATION

PRODUCT

Product Name: **MOBIL 1 SYNTHETIC GREASE**
Product Description: Synthetic Base Stocks and Additives
Product Code: 2015A5101010, 532010-00, 971882
Intended Use: Grease

COMPANY IDENTIFICATION

Supplier: **EXXON MOBIL CORPORATION**
22777 Springwoods Village Parkway
Spring, TX 77253 USA

24 Hour Health Emergency	609-737-4411
Transportation Emergency Phone	800-424-9300 or 703-527-3887 CHEMTREC
Product Technical Information	800-662-4525
MSDS Internet Address	www.exxon.com, www.mobil.com

SECTION 2 HAZARDS IDENTIFICATION

This material is not hazardous according to regulatory guidelines (see (M)SDS Section 15).

Other hazard information:

HAZARD NOT OTHERWISE CLASSIFIED (HNOC): None as defined under 29 CFR 1910.1200.

PHYSICAL / CHEMICAL HAZARDS

No significant hazards.

HEALTH HAZARDS

High-pressure injection under skin may cause serious damage. Excessive exposure may result in eye, skin, or respiratory irritation.

ENVIRONMENTAL HAZARDS

No significant hazards.

NFPA Hazard ID:	Health:	0	Flammability:	1	Reactivity:	0
HMIS Hazard ID:	Health:	0	Flammability:	1	Reactivity:	0

NOTE: This material should not be used for any other purpose than the intended use in Section 1 without expert advice. Health studies have shown that chemical exposure may cause potential human health risks which may vary

from person to person.

SECTION 3 COMPOSITION / INFORMATION ON INGREDIENTS

This material is defined as a mixture.

Hazardous Substance(s) or Complex Substance(s) required for disclosure

Name	CAS#	Concentration*	GHS Hazard Codes
OLEFIN SULFIDE	68937-96-2	0.1 - < 1%	H227, H317, H413
PHOSPHORIC ACID ESTERS, AMINE SALT	CONFIDENTIAL	0.1 - < 1%	H227, H302, H317, H318, H401, H411
ZINC DIALKYL DITHIOPHOSPHATE	68457-79-4	1 - < 2.5%	H315, H318, H401, H411

* All concentrations are percent by weight unless material is a gas. Gas concentrations are in percent by volume.

As per paragraph (i) of 29 CFR 1910.1200, formulation is considered a trade secret and specific chemical identity and exact percentage (concentration) of composition may have been withheld. Specific chemical identity and exact percentage composition will be provided to health professionals, employees, or designated representatives in accordance with applicable provisions of paragraph (i).

SECTION 4 FIRST AID MEASURES

INHALATION

Under normal conditions of intended use, this material is not expected to be an inhalation hazard.

SKIN CONTACT

Wash contact areas with soap and water. 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.

EYE CONTACT

Flush thoroughly with water. If irritation occurs, get medical assistance.

INGESTION

First aid is normally not required. Seek medical attention if discomfort occurs.

SECTION 5 FIRE FIGHTING MEASURES

EXTINGUISHING MEDIA

Appropriate Extinguishing Media: Use water fog, foam, dry chemical or carbon dioxide (CO2) to extinguish flames.

Inappropriate Extinguishing Media: Straight Streams of Water

FIRE FIGHTING

Fire Fighting Instructions: Evacuate area. Prevent runoff from fire control or dilution from entering streams, sewers, or drinking water supply. Firefighters should use standard protective equipment and in enclosed spaces, self-contained breathing apparatus (SCBA). Use water spray to cool fire exposed surfaces and to protect personnel.

Hazardous Combustion Products: Aldehydes, Incomplete combustion products, Oxides of carbon, Smoke, Fume, Sulfur oxides

FLAMMABILITY PROPERTIES

Flash Point [Method]: >204°C (399°F) [EST. FOR OIL, ASTM D-92 (COC)]
Flammable Limits (Approximate volume % in air): LEL: N/D UEL: N/D
Autoignition Temperature: N/D

SECTION 6 ACCIDENTAL RELEASE MEASURES

NOTIFICATION PROCEDURES

In the event of a spill or accidental release, notify relevant authorities in accordance with all applicable regulations. US regulations require reporting releases of this material to the environment which exceed the applicable reportable quantity or oil spills which could reach any waterway including intermittent dry creeks. The National Response Center can be reached at (800)424-8802.

PROTECTIVE MEASURES

Avoid contact with spilled material. See Section 5 for fire fighting information. See the Hazard Identification Section for Significant Hazards. See Section 4 for First Aid Advice. See Section 8 for advice on the minimum requirements for personal protective equipment. Additional protective measures may be necessary, depending on the specific circumstances and/or the expert judgment of the emergency responders.

SPILL MANAGEMENT

Land Spill: Scrape up spilled material with shovels into a suitable container for recycle or disposal.

Water Spill: Stop leak if you can do it without risk. Confine the spill immediately with booms. Warn other shipping. Skim from surface.

Water spill and land spill recommendations are based on the most likely spill scenario for this material; however, geographic conditions, wind, temperature, (and in the case of a water spill) wave and current direction and speed may greatly influence the appropriate action to be taken. For this reason, local experts should be consulted. Note: Local regulations may prescribe or limit action to be taken.

ENVIRONMENTAL PRECAUTIONS

Prevent entry into waterways, sewers, basements or confined areas.

SECTION 7 HANDLING AND STORAGE

HANDLING

Prevent small spills and leakage to avoid slip hazard.

Static Accumulator: This material is not a static accumulator.

STORAGE

Do not store in open or unlabelled containers. Keep away from incompatible materials.

SECTION 8 EXPOSURE CONTROLS / PERSONAL PROTECTION

NOTE: Limits/standards shown for guidance only. Follow applicable regulations.

No biological limits allocated.

ENGINEERING CONTROLS

The level of protection and types of controls necessary will vary depending upon potential exposure conditions. Control measures to consider:

No special requirements under ordinary conditions of use and with adequate ventilation.

PERSONAL PROTECTION

Personal protective equipment selections vary based on potential exposure conditions such as applications, handling practices, concentration and ventilation. Information on the selection of protective equipment for use with this material, as provided below, is based upon intended, normal usage.

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:

No protection is ordinarily required under normal conditions of use and with adequate ventilation.

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.

Hand Protection: Any specific glove information provided is based on published literature and glove manufacturer data. Glove suitability and breakthrough time will differ depending on the specific use conditions. Contact the glove manufacturer for specific advice on glove selection and breakthrough times for your use conditions. Inspect and replace worn or damaged gloves. The types of gloves to be considered for this material include:

No protection is ordinarily required under normal conditions of use.

Eye Protection: If contact is likely, safety glasses with side shields are recommended.

Skin and Body Protection: Any specific clothing information provided is based on published literature or manufacturer data. The types of clothing to be considered for this material include:

No skin protection is ordinarily required under normal conditions of use. In accordance with good industrial hygiene practices, precautions should be taken to avoid skin contact.

Specific 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 and protective equipment to remove contaminants. Discard contaminated clothing and footwear that cannot be cleaned. Practice good housekeeping.

ENVIRONMENTAL CONTROLS

Comply with applicable environmental regulations limiting discharge to air, water and soil. Protect the environment by applying appropriate control measures to prevent or limit emissions.

SECTION 9 PHYSICAL AND CHEMICAL PROPERTIES

Note: Physical and chemical properties are provided for safety, health and environmental considerations only and may not fully represent product specifications. Contact the Supplier for additional information.

GENERAL INFORMATION

Physical State: Solid
Form: Semi-fluid
Color: Red
Odor: Characteristic
Odor Threshold: N/D

IMPORTANT HEALTH, SAFETY, AND ENVIRONMENTAL INFORMATION

Relative Density (at 15 °C): 0.9
Flammability (Solid, Gas):
Flash Point [Method]: >204°C (399°F) [EST. FOR OIL, ASTM D-92 (COC)]
Flammable Limits (Approximate volume % in air): LEL: N/D UEL: N/D
Autoignition Temperature: N/D
Boiling Point / Range: > 299°C (570°F)
Decomposition Temperature: N/D
Vapor Density (Air = 1): N/D
Vapor Pressure: < 0.013 kPa (0.1 mm Hg) at 20 °C
Evaporation Rate (n-butyl acetate = 1): N/D
pH: N/A
Log Pow (n-Octanol/Water Partition Coefficient): > 3.5
Solubility in Water: Negligible
Viscosity: 220 cSt (220 mm2/sec) at 40 °C | 25.5 cSt (25.5 mm2/sec) at 100°C
Oxidizing Properties: See Hazards Identification Section.

OTHER INFORMATION

Freezing Point: N/D
Melting Point: >260°C (500°F)

NOTE: Most physical properties above are for the oil component in the material.

SECTION 10 STABILITY AND REACTIVITY

REACTIVITY: See sub-sections below.

STABILITY: Material is stable under normal conditions.

CONDITIONS TO AVOID: Excessive heat. High energy sources of ignition.

MATERIALS TO AVOID: Strong oxidizers

HAZARDOUS DECOMPOSITION PRODUCTS: Material does not decompose at ambient temperatures.

POSSIBILITY OF HAZARDOUS REACTIONS: Hazardous polymerization will not occur.

SECTION 11 TOXICOLOGICAL INFORMATION

INFORMATION ON TOXICOLOGICAL EFFECTS

Hazard Class	Conclusion / Remarks
Inhalation	
Acute Toxicity: No end point data for material.	Minimally Toxic. Based on assessment of the components.
Irritation: No end point data for material.	Negligible hazard at ambient/normal handling temperatures.
Ingestion	
Acute Toxicity: No end point data for material.	Minimally Toxic. Based on assessment of the components.
Skin	
Acute Toxicity: No end point data for material.	Minimally Toxic. Based on assessment of the components.
Skin Corrosion/Irritation: No end point data for material.	Negligible irritation to skin at ambient temperatures. Based on assessment of the components.
Eye	
Serious Eye Damage/Irritation: No end point data for material.	May cause mild, short-lasting discomfort to eyes. Based on assessment of the components.
Sensitization	
Respiratory Sensitization: No end point data for material.	Not expected to be a respiratory sensitizer.
Skin Sensitization: No end point data for material.	Not expected to be a skin sensitizer. Based on assessment of the components.
Aspiration: Data available.	Not expected to be an aspiration hazard. Based on physico-chemical properties of the material.
Germ Cell Mutagenicity: No end point data for material.	Not expected to be a germ cell mutagen. Based on assessment of the components.
Carcinogenicity: No end point data for material.	Not expected to cause cancer. Based on assessment of the components.
Reproductive Toxicity: No end point data for material.	Not expected to be a reproductive toxicant. Based on assessment of the components.
Lactation: No end point data for material.	Not expected to cause harm to breast-fed children.
Specific Target Organ Toxicity (STOT)	
Single Exposure: No end point data for material.	Not expected to cause organ damage from a single exposure.
Repeated Exposure: No end point data for material.	Not expected to cause organ damage from prolonged or repeated exposure. Based on assessment of the components.

OTHER INFORMATION

For the product itself:

Component concentrations in this formulation would not be expected to cause skin sensitization, based on tests of the components or similar formulations.

Contains:

Base oil severely refined: Not carcinogenic in animal studies. Representative material passes IP-346, Modified Ames test, and/or other screening tests. Dermal and inhalation studies showed minimal effects; lung non-specific infiltration of immune cells, oil deposition and minimal granuloma formation. Not sensitizing in test animals.

Synthetic base oils: Not expected to cause significant health effects under conditions of normal use, based on laboratory studies with the same or similar materials. Not mutagenic or genotoxic. Not sensitizing in test animals and humans.

The following ingredients are cited on the lists below: None.

--REGULATORY LISTS SEARCHED--

1 = NTP CARC	3 = IARC 1	5 = IARC 2B
2 = NTP SUS	4 = IARC 2A	6 = OSHA CARC

SECTION 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.

MOBILITY

Base oil component -- Low solubility and floats and is expected to migrate from water to the land. Expected to partition to sediment and wastewater solids.

SECTION 13 DISPOSAL CONSIDERATIONS

Disposal recommendations based on material as supplied. Disposal must be in accordance with current applicable laws and regulations, and material characteristics at time of disposal.

DISPOSAL RECOMMENDATIONS

Product is suitable for burning in an enclosed controlled burner for fuel value or disposal by supervised incineration at very high temperatures to prevent formation of undesirable combustion products.

REGULATORY DISPOSAL INFORMATION

RCRA Information: The unused product, 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 as hazardous wastes. It does not exhibit the hazardous characteristics of ignitability, corrositivity or reactivity and is not formulated with contaminants as determined by the Toxicity Characteristic Leaching Procedure (TCLP). However, used product may be regulated.

Empty Container Warning Empty Container Warning (where applicable): Empty containers may contain residue and can be dangerous. Do not attempt to refill or clean containers without proper instructions. Empty drums should be completely drained and safely stored until appropriately reconditioned or disposed. Empty containers should be taken for recycling, recovery, or disposal through suitably qualified or licensed contractor and in accordance with governmental regulations. DO NOT PRESSURISE, 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.

SECTION 14 TRANSPORT INFORMATION

LAND (DOT): Not Regulated for Land Transport

LAND (TDG): Not Regulated for Land Transport

SEA (IMDG): Not Regulated for Sea Transport according to IMDG-Code

Marine Pollutant: No

AIR (IATA): Not Regulated for Air Transport

SECTION 15 REGULATORY INFORMATION

OSHA HAZARD COMMUNICATION STANDARD: This material is not considered hazardous in accordance with OSHA HazCom 2012, 29 CFR 1910.1200.

Listed or exempt from listing/notification on the following chemical inventories: AICS, DSL, IECSC, KECI, PICCS, TSCA

Special Cases:

Inventory	Status
ENCS	Restrictions Apply

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

SARA (311/312) REPORTABLE HAZARD CATEGORIES: None.

SARA (313) TOXIC RELEASE INVENTORY:

Chemical Name	CAS Number	Typical Value
ZINC DIALKYL DITHIOPHOSPHATE	68457-79-4	1 - < 2.5%

The following ingredients are cited on the lists below:

Chemical Name	CAS Number	List Citations
DIPHENYLAMINE	122-39-4	18
ZINC DIALKYL DITHIOPHOSPHATE	68457-79-4	13, 15, 17, 18, 19

--REGULATORY LISTS SEARCHED--

1 = ACGIH ALL	6 = TSCA 5a2	11 = CA P65 REPRO	16 = MN RTK
2 = ACGIH A1	7 = TSCA 5e	12 = CA RTK	17 = NJ RTK
3 = ACGIH A2	8 = TSCA 6	13 = IL RTK	18 = PA RTK
4 = OSHA Z	9 = TSCA 12b	14 = LA RTK	19 = RI RTK
5 = TSCA 4	10 = CA P65 CARC	15 = MI 293	

Code key: CARC=Carcinogen; REPRO=Reproductive

SECTION 16 OTHER INFORMATION

N/D = Not determined, N/A = Not applicable

KEY TO THE H-CODES CONTAINED IN SECTION 3 OF THIS DOCUMENT (for information only):
H227: Combustible liquid; Flammable Liquid, Cat 4
H302: Harmful if swallowed; Acute Tox Oral, Cat 4
H315: Causes skin irritation; Skin Corr/Irritation, Cat 2
H317: May cause allergic skin reaction; Skin Sensitization, Cat 1
H318: Causes serious eye damage; Serious Eye Damage/Irr, Cat 1
H401: Toxic to aquatic life; Acute Env Tox, Cat 2
H411: Toxic to aquatic life with long lasting effects; Chronic Env Tox, Cat 2
H413: May cause long lasting harmful effects to aquatic life; Chronic Env Tox, Cat 4

THIS SAFETY DATA SHEET CONTAINS THE FOLLOWING REVISIONS:

Composition: Component Table information was modified.
Section 01: Company Contact Methods information was modified.
Section 01: Company Mailing Address information was modified.
Section 05: Hazardous Combustion Products information was modified.
Section 09: Boiling Point C(F) information was modified.
Section 09: n-Octanol/Water Partition Coefficient information was modified.
Section 09: Vapor Pressure information was deleted.
Section 11: Chronic Tox - Component information was modified.
Section 11: Other Health Effects Header information was modified.
Section 11: Other Health Effects information was added.
Section 14: Marine Pollutant information was modified.

Section 15: Community RTK - Header information was modified.
Section 15: Inventory - Header information was added.
Section 15: List Citations Table information was modified.
Section 15: SARA (313) TOXIC RELEASE INVENTORY - Table information was modified.
Section 15: Special Cases - Header information was added.
Section 15: Special Cases Table information was added.
Section 15: Status - Header information was added.
Section 16: HCode Key information was modified.
Section 16: Revision Information - Implementation of GHS requirements phrase. information was deleted.

Internal Use Only

MHC: 0B, 0B, 0, 0, 0, 0 PPEC: A

DGN: 2006186XUS (553345)

SAFETY DATA SHEET

1. Identification

Product identifier **Oatey Clear Cutting Oil**

Other means of identification

Product code

Synonyms Part Numbers: 30200, 30201, 30202

Recommended use Cutting oil for hand threaded or high speed thread cutting machines.

Recommended restrictions None known.

Manufacturer/Importer/Supplier/Distributor information

Company Name Oatey Inc.

Address 4700 West 160th Street
Cleveland, OH 44135

Telephone 216-267-7100

E-mail info@oatey.com

Transport Emergency Chemtrec 1-800-424-9300 (Outside the US 1-703-527-3887)

Emergency First Aid 1-877-740-5015

Contact person MSDS Coordinator

2. Hazard(s) identification

Physical hazards Not Classified.

Health hazards Not Classified

OSHA defined hazards Not Classified.

Label elements

Hazard symbol None.

Signal word None

Hazard statement This product does not require any hazard statements.

Precautionary statement

Prevention This product does not require any precautionary statements.

Response This product does not require any precautionary statements.

Storage Not applicable.

Disposal Not applicable.

Hazard(s) not otherwise classified (HNOC) Used Oil may contain harmful impurities.

3. Composition/information on ingredients

Mixtures

Chemical name	CAS number	%
Petroleum Hydrocarbon Mixture	Mixture	>95

4. First-aid measures

Inhalation Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if symptoms occur.

Skin contact Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur.

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 if irritation occurs.

Ingestion 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. 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	Ingestion may result in nausea, vomiting, and or diarrhea.
Indication of immediate medical attention and special treatment needed.	Immediate medical attention is not required.
General information	Note to physician, treat symptomatically.

5. Fire-fighting measures

Suitable extinguishing media	Foam, water spray or fog. Dry chemical powder, carbon dioxide, sand or earth may be used for small fires only.
Unsuitable extinguishing media	Do not use water in a jet.
Specific hazards arising from the chemical	Hazardous combustion products may include: A complex mixture of airborne solid and liquid particulates and gases, oxides of sulfur and phosphorous (smoke). Carbon monoxide.
Special 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.
Fire fighting equipment/instructions	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. Use water spray to keep fire-exposed containers cool. Fire water contaminated with this material must be contained and prevented from being discharged to any waterway, sewer or drain.
Specific methods	None
General fire hazards	None

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures	Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Put on appropriate personal protective equipment. 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".
Methods and materials for containment and cleaning up	Large Spills: Move containers from spill area. Prevent entry into sewers, water courses, basements or confined areas. Vacuum or sweep up material and place in a designated, labeled waste container. Dispose of via a licensed waste disposal contractor. Note: see section 1 of SDS for emergency contact information and section 13 of SDS for waste disposal. Small Spills: Move containers from spill area. Vacuum or sweep up material and place in a designated, labeled waste container. Dispose of via a licensed waste disposal contractor. Note: see section 1 of SDS for emergency contact information and section 13 of SDS for waste disposal.
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).

7. Handling and storage

Precautions for safe handling	Use local exhaust ventilation if there is risk of inhalation of vapors, mists or aerosols. Properly dispose of any contaminated rags or cleaning materials to prevent fires. Put on appropriate personal protective equipment (see section 8 of SDS). 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 original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see section 10 of SDS) and food and drink. 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.

8. Exposure controls/personal protection

Occupational exposure limits

US. ACGIH Threshold Limit Values

Components	Type	Value
Oil Mist, Mineral	TLV or PEL	5 mg/m3

US OSHA Permissible Exposure Limits

Components	Type	Value

Biological limit values Data Not available.

Appropriate engineering controls No special ventilation requirements. Good general ventilation should be sufficient to control worker exposure to airborne contaminants. If this product contains ingredients with exposure limits, use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure below any recommended or statutory limits.

Individual protection measures, such as personal protective equipment

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.

Skin protection

Hand 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.

Other 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, particulate filter 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.

Thermal hazards None.

General hygiene considerations 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.

9. Physical and chemical properties

Appearance

Physical state Liquid

Form Liquid

Color Amber

Odor Slight hydrocarbon

Odor threshold Not available.

pH Not applicable

Melting point/freezing point No data available.

Initial boiling point and boiling range Not determined

Flash point > 340 °F (> 171°C)

Upper/lower flammability or explosive limits

Flammability limit – lower (%) Not available

Flammability limit – upper (%) Not available

Explosive limit - lower (%) Not available

Explosive limit - upper (%) Not available

Vapor pressure Not applicable

Vapor density Not applicable

Relative density 0.91

Solubility(ies)

Solubility (water) Negligible

Partition coefficient (n-octanol/water) >6 based on similar products

Auto-ignition temperature Not applicable

Decomposition temperature	Not available
Viscosity, kinematic	160 SUS at 100 F (typical)
Other information	
VOC (Weight %)	<1% by weight, < 10 g/L

10. Stability and reactivity

Reactivity	The product does not pose any further reactivity hazards in addition to those listed in the following sub-paragraph..
Chemical stability	The product is stable.
Possibility of hazardous reaction	Under normal conditions of storage and use, hazardous reactions will not occur.
Conditions to avoid	Extreme temperature and direct sunlight.
Incompatible materials	Strong Oxidizing Agents.
Hazardous decomposition products	Under normal conditions of storage and use, hazardous decomposition products should not be produced.

11. Toxicological information

Information on likely routes of exposure

Inhalation	Mist from processing.
Skin contact	Skin contact.
Eye contact	Eye contact.
Ingestion	No known significant effects or critical hazards.
Symptoms related to the physical, chemical and toxicological characteristics	No specific data.

Information on likely routes of exposure
Acute Toxicity

Components	Species	Results

Skin corrosion/irritation	May cause skin irritation after prolonged exposure. Prolonged exposure or repeated exposure without proper cleaning can clog pores of the skin.
Serious eye damage/eye irritation	Expected to be slightly irritating.
Respiratory or skin sensitization	
Respiratory sensitization	Inhalation of vapors or mists may cause irritation to the respiratory system.
Skin sensitization	This product is not expected to cause skin irritation.
Germ cell mutagenicity	Not considered a mutagenic hazard
Carcinogenicity	No component of this product is identified as a probable, possible, or confirmed carcinogen by IARC, NTP, Monographs, or OSHA.
Reproductive toxicity	No known significant effects or critical hazards.
Specific target organ toxicity	
Single exposure	Not expected to be a hazard.
Repeated exposure	Not expected to be a hazard.
Aspiration Hazard	Contains Distillates (petroleum), hydrotreated – Which is a category 1 Aspiration Hazard. The likely hood of aspirating the product in this form is very low due to the high viscosity.
Chronic effects	Not Classified.
Further information	Used oils may contain harmful impurities that have accumulated during use. The concentration of such impurities will depend on use and may present risks to health and the environment on disposal. Used oil should be handled with caution and skin contact should be avoided when possible.

12. Ecological information

Ecotoxicity

Product/ingredient name	Results	Species	Exposure
Petroleum Distillates			
	Acute LC50 2,900 µg/l Fresh water	Fish - Rainbow trout,Donaldson trout	96 h

	Acute LC50 2,200 µg/l Fresh water	Fish - Bluegill	96 h

Persistence and degradability	Not Available.
Bio accumulative potential	Not Available.
Mobility in soil	Liquid under most conditions. Floats on water. If it enters soil, it will adsorb to soil particles and will not be mobile.
Other adverse effects	No known significant effects of critical hazards.

13. Disposal considerations

Disposal instructions	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. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.
Local disposal regulations	Not Applicable
Hazardous waste code	Not Applicable

14. Transportation information

DOT	Not Regulated
UN number	
UN Proper Shipping Name	
Transportation Hazard classes	
Packing group	
IATA	Not Regulated
UN number	
UN Proper Shipping Name	
Transportation Hazard classes	
Packing group	
IMDG	Not Regulated
UN number	
UN Proper Shipping Name	
Transportation Hazard classes	
Packing group	
Environmental hazards	
Marine polluntant	

15. Regulatory information

U.S. Federal regulations	**TSCA 12(b) - Chemical export notification:** None required. **TSCA 5(a)2 - Final significant new use rules:** Not listed **TSCA 5(a)2 - Proposed significant new use rules:** Not listed **TSCA 5(e) - Substances consent order:** Not listed
SARA 311/312	
Classification	Not applicable
US state regulations	
California Prop 65	This product does not contain a chemical known to the State of California to cause cancer, birth defects, or other reproductive harm.

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

Issue Date	12-May-2015
Revision Date	-
Version #	01
HMIS Rating	Health: 1 Flammability: 1 Physical Hazards: 0
Disclaimer	Oatey 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.

SECTION 1: Product and Company Identification

Product Name: NEW RAPID TAP
Recommended Use: Multi-purpose metal cutting oil

Manufacturer Information:

Relton Corporation-Chemical Division
317 Rolyn Place
Arcadia, CA 91007-2838

Phone: (800)-423-1505
Emergency Number (24 hours):
CHEMTREC 800-424-9300

SECTION 2: Hazards Identification

GHS Classification:

Reproductive toxicity: Effects on or via lactation, H362
Hazardous to the aquatic environment, acute hazard: Category 1, H400
Hazardous to the aquatic environment, long term hazard: Category 1, H410

GHS Label Elements:

Signal Word: Warning

Hazard Statements:

H362	May cause harm to breast-fed children
H400	Very toxic to aquatic life
H410	Very toxic to aquatic life with long lasting effects

Precautionary Statements

P201	Obtain special instructions before use.
P260	Do not breathe dust/fume/gas/mist/vapors/spray.
P263	Avoid contact during pregnancy and while nursing.
P264	Wash thoroughly after handling.
P270	Do not eat, drink or smoke when using this product.
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 appropriate waste treatment facility.

SECTION 3: Composition/Information on Ingredients

Chemical Name	CAS#	%
Mineral oil	64742-54-7	70-90
C14-C16 chlorinated paraffin	85535-85-9	<40
Calcium sulfonate	confidential	2-3

SECTION 4: First Aid Measures

General
Contaminated individuals of chemical exposure must be taken for medical attention if any adverse effects occur. When possible bring along copy of label and SDS to health professional.

Inhalation: May cause mild respiratory tract irritation. Remove individual to fresh air. If breathing is difficult give oxygen.

Skin Contact:	Flush the affected area with water for 15 minutes minimum. Remove exposed or contaminated clothing and shoes. Wash contaminated clothing before reuse. Seek medical attention if irritation develops.
Eye Contact:	Remove contact lenses if present. Rinse eyes thoroughly with water for 15 minutes minimum. Seek medical attention if eye irritation develops or persists.
Ingestion:	If conscious give one cup of water or milk if available and transport to a medical facility. Do not give anything by mouth to an unconscious person.
Most important symptoms acute or delayed:	Not available
Recommendations for immediate medical care and special treatment:	Not available

SECTION 5: Fire Fighting Measures

Suitable extinguishing media:	Slightly combustible. Use carbon dioxide, extinguishing powder or foam. Avoid water spray.
Unsuitable extinguishing media:	Not available
Specific hazards arising during fire:	Combustion may generate carbon monoxide, carbon dioxide, hydrogen chloride and oxides of sulfur and calcium
Firefighting equipment:	Firefighters should wear suitable protective equipment
Firefighting instructions:	Evacuate personnel to a safe area. Firefighters should use self contained breathing equipment and protective clothing. Keep containers cool with water spray.

SECTION 6: Accidental Release Measures

Personal Precautions:	Wear appropriate protective equipment and clothing during clean up. Keep unprotected persons away.
Environmental Precautions	Do not allow product to enter sewers, surface or ground waters.
Methods and materials for containment and cleanup:	Contain and recover liquid when possible. Absorb with suitable absorbent and place in a chemical waste container for proper disposal (see Section 13, Disposal Considerations).

SECTION 7: Handling and Storage

Precautions for safe handling:	As with all chemical products, avoid contact and wash thoroughly after handling. Do not eat, drink or smoke while using this product. Use only in well-ventilated areas. Remove contaminated clothing and protective equipment before entering eating areas. Pregnant or breast-feeding women must not handle this product.
Conditions for safe storage including incompatibilites:	All personnel who handle this product should be trained in its safe handling. Store tightly closed in cool, dry, ventilated area. Keep out of direct sunlight and away from heat and incompatible materials. Avoid contact with acids, oxidizing agents, and caustics.

SECTION 8: Exposure Controls/Personal Protection

Exposure limit values

Material	CAS#	List	Type	Value
C14-C17 chlorinated paraffins	85535-85-9		No data available	
oil mists		OSHA	PEL	5 mg/m3
		ACGIH	TLV	5 mg/m3

Appropriate Engineering Controls: Provide sufficient mechanical (general/and or local exhaust) ventilation to maintain exposure below exposure guidelines, if applicable, or below levels that cause known, suspected, or adverse effects.

Personal Protective Measures

Eye/face protection: Use chemical goggles or full face shield.

Hand protection: Use chemically-resistant gloves.

Respiratory protection: Not required under normal conditions of use. If airborne concentrations exceed applicable exposure limits, use NIOSH approved respiratory protection.

Thermal hazards: Not available

General hygiene considerations: Handle in accordance with good industrial hygiene and safety practice. Eyewash station and safety shower should be in vicinity of work area.

SECTION 9: Physical and Chemical Properties

Appearance: Amber colored oily liquid
Odor: Mild petroleum
Odor threshold: Not available
pH: Not applicable
Solubility in water: Insoluble
Viscosity: Not available
Specific Gravity: 1.02
Melting point: Not available
Freezing point: Not available
Initial boiling point and boiling range: Not available
Flash point: 350F, COC
Evaporation rate: Not available
Flammability (solid, gas): Not available
Upper/Lower flammability or explosive limits (%)
Flammability limit-lower: Not available
Flammability limit-upper: Not available
Explosive limit-lower: Not available
Explosive limit-upper: Not available
Vapor pressure <0.01 mmHg @ 20 C
Vapor density Heavier than air
Partition coefficient (octanol:water) Not available
Auto-ignition temperature Not available
Decomposition temperature Not available
Decomposition temperature Not available

SECTION 10: Stability and Reactivity

Reactivity: No reactivity hazards are known.

Chemical Stability: Material is stable under normal conditions of storage and handling.

Possibility of hazardous reactions: No hazardous reactions are known under normal conditions of use.

Conditions to avoid: Keep away from heat, sparks, open flames. Protect from freezing.

Materials to avoid: Do not store with strong oxidizing agents. Keep away from heat, sparks, open flames, or all sources of ignition.

Hazardous decomposition products: May include carbon monoxide, carbon dioxide, hydrogen chloride, oxides of calcium and sulfur.

SECTION 11: Toxicological Information

Acute Toxicity:
C14-C17 chlorinated paraffins: data not available

Petroleum distillates, hydrotreated heavy paraffinic
Ingestion LD50, rat, >5000 mg/kg
Dermal LD50, rabbit, 5000 mg/kg (Category 5)
Inhalation LD50, mg/L/4hr, not available

Skin: Not expected to be a primary skin irritant. Prolonged or repeated contact may cause irritation.

Eyes: Not expected to cause eye irritation.

Inhalation: May cause mild irritation of the respiratory tract with prolonged exposure.

Ingestion: Ingestion may cause irritation of the gastrointestinal lining, nausea, vomiting, diarrhea, and abdominal pain.

Delayed and immediate effects of exposure: Not available.

Carcinogenicity:

IARC: No ingredient is considered to be carcinogenic.

NTP: No ingredient is considered to be carcinogenic.

SECTION 12: Ecological Information

Ecotoxicity: Contains a substance which causes risk of hazardous effects to the environment. Chloroalkanes C14-C17: LC 50 (Onchorhynchus mykiss): >0.1 mg/L, 96h.

Bioaccumulation potential: Not available.

Mobility: Not available.

Other adverse effects: This material is expected to have adverse effects on marine and plant life. Spills may contaminate drinking water.

SECTION 13: Disposal Considerations

Disposal instructions: Waste disposal must be in accordance with appropriate US Federal, State and Local regulations.

Disposal of contaminated containers or packaging: Dispose of as unused product.

SECTION 14: Transportation Information

UN Number: 3082
UN proper shipping name: Environmentally hazardous substances, liquid, N.O.S, (Alkanes, C14-C17, chloro)
Transport hazard class: 9
Packing group: III
Marine pollutant: Yes

SECTION 15: Regulatory Information

Toxic Substances Control Act (TSCA): All components of this product are on the TSCA Inventory or are exempt from reporting requirements.

SARA 302 Extremely Hazardous Substances: No

SARA 311/312 Classification:

Immediate hazard Yes
Delayed hazard Yes
Fire hazard No
Reactive hazard No
Pressure hazard No

SARA 313 Components: No

California Proposition 65 (Safe Drinking Water and Toxic Enforcement Act of 1986):
This product contains no listed substances known to the State of California to cause cancer, birth defects or other reproductive harm

HMIS Information:

Health	1
Flammability	1
Reactivity	0
Personal Protection	C

SECTION 16: Other Information

Issue date: March 30, 2015
Revision date: New issue
Version: 1.0

Prepared by: Dr. William M. Fruscella, Consulting Chemist

Disclaimer: Relton Corporation products are manufactured for professional and industrial use only. Relton Corporation believes the information contained herein is valid and accurate and makes no representation or warranty, express or implied, including the warranties of merchantablility and fitness, for a particular purpose with respect to the information contained herein.

SAFETY DATA SHEET

701 Supreme 7000 Synthetic Plus™ 5W-30
703 Supreme 7000Synthetic Plus™ 10W-30

Section 1. Identification

GHS product identifier : 701 Supreme 7000 Synthetic Plus™ 5W-30
703 Supreme 7000Synthetic Plus™ 10W-30

Other means of identification : Not available.

Product type : Liquid.

Identified uses

Engine oil for gasoline powered vehicles.

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 : 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 the product. This SDS should be retained and available for employees and other users of this product.

Classification of the substance or mixture : Not classified.

GHS label elements

Signal word : No signal word.

Hazard statements : No known significant effects or critical hazards.

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 : Not applicable.

Response : Not applicable.

Storage : Not applicable.

Disposal : Not applicable.

Hazards not otherwise classified : None known.

Section 3. Composition/information on ingredients

Substance/mixture : Mixture

Ingredient name	%	CAS number
Base Oil(s)(*)	10 - 30	See below.

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.

Base oil(s) contained in this material may be described by one or more of the following CAS Nos.: 8042-47-5, 64742-46-7, 64742-47-8, 64742-53-6, 64742-54-7, 64742-55-8, 64742-56-9, 64742-65-0, 72623-84-8, 72623-85-9, 72623-86-0, 72623-87-1, 178603-64-0, 178603-65-1, 178603-66-2, 445411-73-4.

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 if irritation occurs.

Inhalation : Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if symptoms occur.

Skin contact : Flush contaminated skin with plenty of water. Get medical attention if symptoms occur.

Ingestion : 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. 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

Potential acute health effects

Eye contact : No known significant effects or critical hazards.

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 : No known significant effects or critical hazards.

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.

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.

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 : No specific fire or explosion hazard.

Hazardous thermal decomposition products : No specific data.

Special protective actions for fire-fighters : No special measures are required.

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. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. 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. 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. 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. 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. 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). 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.

Section 7. Handling and storage

Conditions for safe storage, including any incompatibilities : Store in accordance with local regulations. 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. 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
Base Oil(s)(*)	**NIOSH REL (United States, 10/2013).** TWA: 5 mg/m³ 10 hours. Form: Mist STEL: 10 mg/m³ 15 minutes. Form: Mist **ACGIH TLV (United States).** TWA: 5 mg/m³ Form: Oil mist. STEL: 10 mg/m³ Form: Oil mist. **OSHA PEL (United States).** TWA: 5 mg/m³ Form: Oil mist.

Appropriate engineering controls : Good general ventilation should be sufficient to control worker exposure to airborne contaminants.

Environmental exposure controls : Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation.

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 : 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 : Green.

Odor : Petroleum.

Odor threshold : Not available.

pH : Not available.

Melting point/ Dropping Point : Not available.

Boiling point : >315°C (>599°F)

Flash point : Closed cup: >224°C (>435.2°F)

Evaporation rate : Not available.

Flammability (solid, gas) : Not available.

Lower and upper explosive (flammable) limits : Not available.

Vapor pressure : Not available.

Vapor density : >1 [Air = 1]

Relative density : 0.87

Solubility : Negligible in water.

Partition coefficient: n-octanol/water : Not available.

Auto-ignition temperature : Not available.

Decomposition temperature : Not available.

Viscosity : Kinematic (100°C): 9.3 to 12.5 cSt

Volatility : Not available.

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 : May react with oxygen and strong oxidizing agents, such as chlorates, peroxides, etc.

Conditions to avoid : No specific data.

Incompatible materials : Reactive or incompatible with the following materials: Strong acids, bases and oxidizers.

Hazardous decomposition products : Smoke, a complex mixture of airborne solids, liquids, and gases including carbon monoxide, carbon dioxide, and unidentified organic compounds will be evolved when this material undergoes combustion.

Section 11. Toxicological information

Information on toxicological effects

Acute toxicity

There is no data available.

Irritation/Corrosion

There is no data available.

Sensitization

There is no data available.

Carcinogenicity

There is no data available.

Specific target organ toxicity (single exposure)

There is no data available.

Specific target organ toxicity (repeated exposure)

There is no data available.

Aspiration hazard

Name	Result
1-Decene, homopolymer, hydrogenated	ASPIRATION HAZARD - Category 1

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

Potential acute health effects

Eye contact : No known significant effects or critical hazards.

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 : No known significant effects or critical hazards.

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.

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 : No known significant effects or critical hazards.

Carcinogenicity : No known significant effects or critical hazards.

Mutagenicity : No known significant effects or critical hazards.

Section 11. Toxicological information

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

There is no data available.

Section 12. Ecological information

Toxicity

There is no data available.

Persistence and degradability

There is no data available.

Bioaccumulative potential

Product/ingredient name	$LogP_{ow}$	BCF	Potential
1-Decene, homopolymer, hydrogenated	>6.5	-	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 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. Empty containers or liners may retain some product residues. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

Section 14. Transport information

	DOT Classification	IMDG	IATA
UN number	Not regulated.	Not regulated.	Not regulated.
UN proper shipping name	-	-	-
Transport hazard class(es)	-	-	-
Packing group	-	-	-
Environmental hazards	No.	No.	No.
Additional information	-	-	-

AERG : Not applicable

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.

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code : Not available.

Section 15. Regulatory information

U.S. Federal regulations : **TSCA 8(a) PAIR**: Diphenylamine; Naphthalene

TSCA 8(a) CDR Exempt/Partial exemption: Not determined

United States inventory (TSCA 8b): Not determined.

Clean Water Act (CWA) 307: Phosphorodithioic acid, mixed O,O-bis(1,3-dimethylbutyl and iso-Pr) esters, zinc salts; Toluene; Antimony, dialkyl dithiocarbamate; Naphthalene

Clean Water Act (CWA) 311: Toluene; Naphthalene

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

Section 15. Regulatory information

SARA 302/304

Composition/information on ingredients

No products were found.

SARA 304 RQ : Not applicable.

SARA 311/312

Classification : Not applicable.

State regulations

Massachusetts : None of the components are listed.

New York : None of the components are listed.

New Jersey : None of the components are listed.

Pennsylvania : None of the components are listed.

California Prop. 65

WARNING: This product contains less than 0.1% of a chemical known to the State of California to cause cancer.
WARNING: This product contains less than 1% of a chemical known to the State of California to cause 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)
Naphthalene	Yes.	No.	Yes.	No.

Section 16. Other information

Hazardous Material Information System (U.S.A.)

Health : 1 **Flammability :** 1 **Physical hazards :** 0

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 SDSs 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.

The customer is responsible for determining the PPE code for this material.

National Fire Protection Association (U.S.A.)

Health : 1 **Flammability :** 1 **Instability :** 0

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US Tariff Heading Number : 3403.19.0000

Schedule B Code : 3403.19.0000

History

Date of issue mm/dd/yyyy : 10/15/2014

Version : 1

Revised Section(s) : Not applicable.

Prepared by : KMK Regulatory Services Inc.

Section 16. Other information

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.

SAFETY DATA SHEET

700 SynShield® Durability Advantage 15W-40

Section 1. Identification

GHS product identifier : 700 SynShield® Durability Advantage 15W-40

Code : 183

Other means of identification : Not available.

Product type : Liquid.

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

Identified uses : Heavy Duty Diesel Engine Oil.

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 : 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 the product. This SDS should be retained and available for employees and other users of this product.

Classification of the substance or mixture : Not classified.

GHS label elements

Signal word : No signal word.

Hazard statements : No known significant effects or critical hazards.

Precautionary statements

Prevention : Not applicable.

Response : Not applicable.

Storage : Not applicable.

Disposal : Not applicable.

Other hazards which do not result in classification/ HHNOC/PHNOC : None known.

Section 3. Composition/information on ingredients

Substance/mixture : Mixture

Other means of identification : Not available.

CAS number/other identifiers

CAS number : Not applicable.

Ingredient name	%	CAS number
Base Oil(s)(*) Dec-1-ene, homopolymer, hydrogenated Dec-1-ene, oligomers, hydrogenated Phosphorodithioic acid, O,O-di-C1-14-alkyl esters, zinc salts	30 - 60 ≥10 - ≤21 ≥1 - <2.5	See below. 68037-01-4 68649-42-3

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.

Base Oil(s): 64742-54-7.

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 if irritation occurs.

Inhalation : Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if symptoms occur.

Skin contact : Flush contaminated skin with plenty of water. Get medical attention if symptoms occur.

Ingestion : 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. 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

Potential acute health effects

Eye contact : No known significant effects or critical hazards.

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 : No known significant effects or critical hazards.

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.

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.

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 : No specific fire or explosion hazard.

Hazardous thermal decomposition products : No specific data.

Special protective actions for fire-fighters : No special measures are required.

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. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. 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. 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. 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. 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. 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). 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. Remove contaminated clothing and protective equipment before entering eating areas.

Section 7. Handling and storage

Conditions for safe storage, including any incompatibilities : Store in accordance with local regulations. 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. 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

Ingredient name	Exposure limits
Base Oil(s)(*)	**NIOSH REL (United States, 10/2013).** TWA: 5 mg/m³ 10 hours. Form: Mist STEL: 10 mg/m³ 15 minutes. Form: Mist **ACGIH TLV (United States).** TWA: 5 mg/m³ Form: Oil mist. STEL: 10 mg/m³ Form: Oil mist. **OSHA PEL (United States).** TWA: 5 mg/m³ Form: Oil mist.

Canada

Occupational exposure limits

Ingredient name	Exposure limits
Base Oil(s)(*)	**CA Quebec Provincial (Canada, 1/2014).** TWAEV: 5 mg/m³ 8 hours. Form: Mist STEV: 10 mg/m³ 15 minutes. Form: Mist **CA Ontario Provincial (Canada, 7/2015).** TWA: 5 mg/m³ 8 hours. Form: Mist STEL: 10 mg/m³ 15 minutes. Form: Mist **CA Alberta Provincial (Canada, 4/2009).** 8 hrs OEL: 5 mg/m³ 8 hours. Form: Mist 15 min OEL: 10 mg/m³ 15 minutes. Form: Mist

Appropriate engineering controls : Good general ventilation should be sufficient to control worker exposure to airborne contaminants.

Environmental exposure controls : Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation.

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 : 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.

Section 8. Exposure controls/personal protection

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 : Green.

Odor : Mild petroleum.

Odor threshold : Not available.

pH : Not applicable.

Melting point : Not available.

Boiling point : Not available.

Flash point : Open cup: 243°C (469.4°F)

Evaporation rate : Not available.

Flammability (solid, gas) : Not available.

Lower and upper explosive (flammable) limits : Not available.

Vapor pressure : Not available.

Vapor density : >1 [Air = 1]

Relative density : 0.8666

Solubility : Not available.

Partition coefficient: n-octanol/water : Not available.

Auto-ignition temperature : Not available.

Decomposition temperature : Not available.

Volatility : Not available.

Viscosity : Kinematic @ 100ºC: 12.5 to 16.29 cSt

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 : Under normal conditions of storage and use, hazardous reactions will not occur.

Conditions to avoid : No specific data.

Section 10. Stability and reactivity

Incompatible materials : Strong acids, bases and oxidizers.

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

There is no data available.

Irritation/Corrosion

There is no data available.

Sensitization

There is no data available.

Mutagenicity

There is no data available.

Carcinogenicity

There is no data available.

Reproductive toxicity

There is no data available.

Teratogenicity

There is no data available.

Specific target organ toxicity (single exposure)

There is no data available.

Specific target organ toxicity (repeated exposure)

There is no data available.

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 : No known significant effects or critical hazards.

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 : No known significant effects or critical hazards.

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.

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.

Section 11. Toxicological information

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 : 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.

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

There is no data available.

Section 12. Ecological information

Toxicity

There is no data available.

Persistence and degradability

There is no data available.

Bioaccumulative potential

Product/ingredient name	$LogP_{ow}$	BCF	Potential
Dec-1-ene, homopolymer, hydrogenated Dec-1-ene, oligomers, hydrogenated	>6.5	-	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 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. Empty containers or liners may retain some product residues. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

Section 14. Transport information

	DOT	TDG	IMDG	IATA
UN number	Not regulated.	Not regulated.	Not regulated.	Not regulated.
UN proper shipping name	-	-	-	-
Transport hazard class(es)	-	-	-	-
Packing group	-	-	-	-
Environmental hazards	No.	No.	No.	No.
Additional information	-	-	-	-

AERG : Not applicable

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 : **TSCA 8(a) PAIR**: Phosphorodithioic acid, O,O-di-C1-14-alkyl esters, zinc salts; p-Dodecylphenol; Naphthalene

TSCA 8(a) CDR Exempt/Partial exemption: Not determined

United States inventory (TSCA 8b): Not determined.

Clean Water Act (CWA) 307: Phosphorodithioic acid, O,O-di-C1-14-alkyl esters, zinc salts; Naphthalene

Clean Water Act (CWA) 311: Naphthalene

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

Composition/information on ingredients

No products were found.

SARA 304 RQ : Not applicable.

Section 15. Regulatory information

SARA 311/312

Classification : Not applicable.

Composition/information on ingredients

Name	%	Fire hazard	Sudden release of pressure	Reactive	Immediate (acute) health hazard	Delayed (chronic) health hazard
Phosphorodithioic acid, O,O-di-C1-14-alkyl esters, zinc salts	≥1 - <2.5	No.	No.	No.	Yes.	No.

SARA 313

	Product name	CAS number	%
Form R - Reporting requirements	Phosphorodithioic acid, O,O-di-C1-14-alkyl esters, zinc salts	68649-42-3	≥1 - <2.5
Supplier notification	Phosphorodithioic acid, O,O-di-C1-14-alkyl esters, zinc salts	68649-42-3	≥1 - <2.5

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: Distillates (petroleum), hydrotreated heavy paraffinic; Distillates (petroleum), solvent-dewaxed heavy paraffinic

New York : None of the components are listed.

New Jersey : The following components are listed: Distillates (petroleum), hydrotreated heavy paraffinic; Phosphorodithioic acid, O,O-di-C1-14-alkyl esters, zinc salts; Distillates (petroleum), solvent-dewaxed heavy paraffinic

Pennsylvania : The following components are listed: Phosphorodithioic acid, O,O-di-C1-14-alkyl esters, zinc salts

California Prop. 65

WARNING: This product contains less than 0.1% of a chemical known to the State of California to cause cancer.

Ingredient name	Cancer	Reproductive	No significant risk level	Maximum acceptable dosage level
Naphthalene	Yes.	No.	Yes.	No.

Canada

Canadian lists

Canadian NPRI : The following components are listed: Phosphorodithioic acid, O,O-di-C1-14-alkyl esters, zinc salts

CEPA Toxic substances : None of the components are listed.

Canada inventory : All components are listed or exempted.

Section 16. Other information

Hazardous Material Information System (U.S.A.)

Health : 0 **Flammability :** 1 **Physical hazards :** 0

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 SDSs 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.)

Section 16. Other information

Health : 0 **Flammability :** 1 **Instability :** 0

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Procedure used to derive the classification

Classification	Justification
Not classified.	

US Tariff Heading Number : 3403.19.0000

Schedule B Code : 3403.19.0000

History

Date of issue mm/dd/yyyy : 01/15/2017

Date of previous issue : 10/15/2016

Version : 2

Prepared by : KMK Regulatory Services Inc.

Safety Data Sheet

Section 1: Identification

Product Identifier

Antifreeze

Product Name

Trade Name: SPLASH RV & Marine Antifreeze -100°F GRAS

PN (Part number): 919626, 55 Gal.-901155

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

-Material for industrial applications

-Industrial and professional use

-Consumer end use

Details of the supplier of the safety data sheet

Manufacturer

SPLASH Products

51 E. Maryland Ave.

St. Paul, MN 55117

Phone: (651) 489-8211

Emergency telephone number

1-800-535-5053

Section 2: Hazard(s) Identification

OSHA/HCS status

This material is not considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).

Classification of the substance or mixture

Not a hazardous substance or mixture

GHS label elements

Hazard pictograms-No Pictogram

Signal word-No Signal Word

Hazard statements-Not a hazardous substance or mixture

Precautionary statements

Prevention

Not a hazardous substance or mixture

Response

IF SWALLOWED: Relatively non-toxic. Ingestion of sizable amount (over 100ml) may cause some gastrointestinal upset and temporary central nervous system depression. Effects appear more severe in individuals with kidney problems.

IF ON SKIN (or hair): Mild irritant and defatting agent, especially on prolonged contact.

IF IN EYES: May cause transitory stinging and tearing.

IF EXPOSED or CONCERNED:

Immediately call a POISON CENTER or a doctor/physician.

Storage

Store in a well-ventilated place.

Disposal

Dispose of contents and container in accordance with all local, regional, national and international regulations.

Hazards not otherwise classified

Product is stable.

Section 3: Composition/Information on Ingredients

Substance/mixture:Mixture

Chemical name: Propylene Glycol or Glycerin

Other means of identification: No

CAS number/other identifiers

Ingredient name	%	CAS number

Does not contain hazardous substances

Section 4: First Aid Measurements

Description of necessary first aid measures

Eye contact: Check for and remove any contact lenses. In case of contact, immediately flush eyes with plenty of water for at least 30 minutes. Cold water may be used. Get medical attention immediately.

Inhalation: Bring accident victims out into the fresh air. Call a physician immediately in severe cases or if recovery is not rapid.

Skin contact: After contact with skin, wash immediately with plenty of water. Remove contaminated clothing and wash before reuse.

Ingestion: Rinse mouth with water. If swallowed, give a glass of water to drink. If vomiting occurs give further water. Do NOT induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. If large quantities of this material are swallowed, call a physician immediately. Loosen tight clothing such as a collar, tie, belt or waistband.

Most important symptoms/effects, acute and delayed

Potential acute health effects

Eye contact

Contact with eyes cause slight temporary irritation.

Inhalation

Not expected to be acute effects from inhalation.

Skin contact

Skin contact with the product is not likely to result in a significant irritation.

Ingestion

High doses may cause CNS depression (fatigue, dizziness and possibly loss of concentration, with collapse, coma and death in cases of severe over-exposure).

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

Notes to physician

In case of ingestion, monitor for acidosis and central nervous system changes. Exposed persons with previous kidney dysfunction may require special treatment

Specific treatments

Treat symptomatically.

Protection of first-aiders

N/A

See toxicological information (Section 11)

Section 5: Fire Fighting Measures

Extinguishing media

Suitable extinguishing media

SMALL FIRE: Use DRY chemical powder, CO_2 or appropriate foam.

LARGE FIRE: Use water spray, fog or foam. Do not use water jet.

Unsuitable extinguishing media

Do not use water jet.

Specific hazards arising from the chemical

No data available

Hazardous thermal decomposition products/Products of combustion

Products of combustion are carbon oxides (CO, CO_2).

Special protective actions for fire fighters

Do not release runoff from fire control methods to sewers or waterways.

Special protective equipment for fire-fighters

In the event of a fire, wear full protective clothing and NIOSH-approved self-contained breathing apparatus with full face piece operated in the pressure demand or other positive pressure mode.

Section 6: Accidental Release Measures

Personal precautions, protective equipment and emergency procedures

For non-emergency personnel

Do not touch or walk through spilt material. Ventilate area of leak or spill. Wear appropriate personal protective equipment as specified in Section 8. Isolate hazard area. Keep unnecessary and unprotected personnel from entering. Shut off all ignition sources.

Environmental precautions

Methods and materials for containment and cleaning up:

Exposure to the spilled material may be severely irritating or toxic. Follow personal protective equipment recommendations found in Section 8 of this SDS. Personal protective equipment needs must be evaluated based on information provided on this sheet and the special circumstances created by the spill including: the material spilled, the quantity of the spill, the area in which the spill occurred, and the expertise of employees in the area responding to the spill. Never exceed any occupational exposure limits.

Prevent the spread of any spill to minimize harm to human health and the environment if safe to do so. Wear complete and proper personal protective equipment following the recommendation of Section 8 at a minimum. Dike with suitable absorbent material like granulated clay. Gather and store in a sealed container pending a waste disposal evaluation. Shut off ignition sources; including electrical equipment and flames.

Section 7: Handling and Storage

Precautions for safe handling

Protective measures, advice on general occupational hygiene and conditions for safe storage, including any incompatibilities:

No special measures required. It is not considered a hazardous material in most industrial operations. Protect containers from physical damage. Sources of ignition such as smoking and open flames prohibited where this product is handled.

Store in a tightly closed containers in a cool, dry, well ventilated area away from sources of heat, moisture and incompatible substances. The suitable storage temperature is between 15-30^{o}C temperatures. It is generally recommended that temperatures not exceeding 40^{o}C.

Containers of this material may be hazardous when empty since they retain product residues (vapors, liquid).

Section 8: Exposure Controls/Personal Protection

Control parameters

Occupational exposure limits

Ingredient name	Exposure limits			
Propylene Glycol	ACGIH		OSHA	
	(TWA)	(STEL)	(TWA)	(STEL)
	10 mg/m3	N/A	474 mg/m3	N/A

Appropriate engineering controls and Environmental exposure controls

A system of local and/or general exhaust is recommended to keep employee exposures below the Airborne Exposure Limits. 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. Please refer to the ACGIH document, Industrial Ventilation, A Manual of Recommended Practices, most recent edition, for details.

Individual protection measures

Hygiene measures

No special protective clothing is normally required. Select protective clothing depending on industrial operations. Use mechanical ventilation equipment that is explosion-proof.

Eye/face protection: Use chemical safety goggles.

Skin protection

Hand protection and Body protection: Wear impervious protective clothing, including boots, gloves, lab coat, apron or coveralls, as appropriate, to prevent skin contact.

Other skin protection

Wash hands and other exposed areas with mild soap and water before eating or drinking.

Respiratory protection: No respiratory protection required under normal circumstances. Approved organic vapor chemical cartridge or supplied air respirators should be worn when significant vapors are generated. Observe respirator assigned protection factors (APFs) criteria cited in federal OSHA 1910.134. Self-contained breathing apparatus should be used for firefighting.

Respirator Type(s) (NIOSH Approved): If the exposure limit is exceeded and engineering controls are not feasible, a half face piece particulate respirator (NIOSH type N95 or better filters) may be worn for up to ten times the exposure limit or the maximum use concentration specified by the appropriate regulatory agency or respirator supplier, whichever is lowest. A full face piece particulate respirator (NIOSH type N100 filter) may be worn up to 50 times the exposure limit, or the maximum use concentration specified by the appropriate regulatory agency, or respirator supplier, whichever is lowest. If oil particles (e.g. lubricants, cutting fluids, Glycerin, etc.) are present, use a NIOSH type R or P filter. For emergencies or instances where the exposure levels are not known, use a full face piece positive-pressure, air-supplied respirator. WARNING: Air-purifying respirators do not protect workers in Oxygen-deficient atmospheres.

Section 9: Physical and Chemical Properties

Appearance

Physical state: Purple liquid

Odor: None

Odor threshold: No Data Available

pH: ~7

Specific Gravity: 1.01

Melting point: -14^{o}C

Boiling point: 185^{o}C

Flash point: No Data Available

Evaporation rate (BuAc=1): No Data Available

Flammability (solid, gas): Not flammable

Lower and upper explosive (flammable) limits: LEL 2.4%, UEL 17.4% (propylene glycol)

Vapor pressure: 0.2 hPa at 20^{o}C (propylene glycol)

Vapor density (Air=1): 2.62 (propylene glycol)

Solubility: Soluble in water

Partition coefficient: n-octanol/water: ~ -0.92 (propylene glycol)

Auto-ignition temperature: ~371^{o}C (propylene glycol)

Decomposition temperature: No Data Available

Viscosity: No Data Available

VOC%: 0

Section 10: Stability and Reactivity

Reactivity

Stable under recommended storage conditions.

Chemical stability

Stable under recommended storage conditions.

Possibility of hazardous reactions

Under normal conditions of storage and use, hazardous reactions will not occur.

Conditions to avoid

Temperatures above the flash point and avoid excessive heat, open flame or other sources of ignition.

Incompatible materials

Can react with strong oxidizing agents and strong acids.

Hazardous decomposition products

Ignition and burning can release carbon monoxide, carbon dioxide and non-combusted hydrocarbons (smoke).

Section 11: Toxicological Information

Information on toxicological effects

Acute toxicity

Product/ingredient name	Test	Results
Propylene glycol	Acute toxicity, oral (male rat)	LD50 = 22,000 mg/kg
	Acute toxicity, dermal	LD50 = 20,800 mg/kg

Summary Comments:

Sensitization

Product/ingredient name	Test	Results	Basis
Propylene glycol		No evidence of sensitization effect	

Summary Comments:

Carcinogenicity

Product/ingredient name	Test	Results	Basis
Propylene glycol		No known carcinogenic effects	

Summary Comments:

Specific target organ toxicity (single exposure)

Product/ingredient name	Test	Results	Basis
Propylene glycol		No information available	

Summary Comments:

Specific target organ toxicity (repeated exposure)

Product/ingredient name	Test	Results	Basis
Propylene glycol		No information available	

Summary Comments:.

Aspiration hazard

Product/ingredient name	Test	Results	Basis
Propylene glycol		No information available	

Summary Comments:

Information on the likely routes of exposure

Inhalation may blur vision. Ingesting may irritate the gastrointestinal tract.

Potential acute health effects

Eye contact: May cause transient eye irritation and discomfort.

Inhalation: Harmful concentrations of vapor do not normally arise except under high temperature or high atomization. High concentrations of mist may give rise to respiratory irritation.

Skin contact: Nonirritant on incidental contact.

Ingestion: No adverse effects expected, however, large amounts may cause nausea and vomiting.

Symptoms related to the physical, chemical and toxicological characteristics

Eye contact: Eye irritation.

Inhalation: Nausea.

Skin contact: Skin irritation.

Ingestion: Irritation of the gastrointestinal tract, nausea and vomiting.

Potential chronic health effects (Propylene glycol)

Carcinogenicity: Not Classifiable as a Human Carcinogen.

Mutagenicity: Negative for genotoxicity using both in vitro and in vivo tests.

Teratogenicity: Results from studies in pregnant rats, mice, hamsters and rabbits demonstrate that propylene glycol is not teratogenic or fetotoxic.

Developmental effects: Results from studies in pregnant rats, mice, hamsters and rabbits demonstrate that propylene glycol is not teratogenic or fetotoxic

Fertility effects: No data available.

Numerical measures of toxicity

Acute toxicity estimates

Section 12: Ecological Information

Toxicity

Acute Fish toxicity: (Propylene glycol)

LC50 - Oncorhynchus mykiss (rainbow trout) – 40,613 mg/L - 96 h

LC50 – Pimephales promelas (fathead minnow) - 52,930 mg/l - 96 h

Acute toxicity for daphnia: (Propylene glycol)

EC50 - Daphnia magna (Water flea) – 10,000 mg/L - 48 h

Acute toxicity for algae: (Propylene glycol)

EC50 - Scenedesmus capricornutum (fresh water algae) - 19,000 mg/L - 96 h

Acute bacterial toxicity: (Propylene glycol)

No data available.

Ecotoxicology Assessment: (Propylene glycol)

Material is not expected to be toxic to aquatic life.

Persistence and degradability

Biodegradability: (Propylene glycol)

Readily biodegradable in aerobic conditions. There is evidence that it is degraded under anaerobic conditions.

Stability in water: (Propylene glycol)

Environmental releases of propylene glycol will tend to partition to water and soil, with little potential for evaporation.

Photodegradation: (Propylene glycol)

No data available

Volatility (Henry's Law constant): (Propylene glycol)

Partition coefficient n-octanol/water (log K_{ow}) = No data available

Bioaccumulative potential

Bioaccumulation: (Propylene glycol)

Bioconcentration factor (BCF): 0.09

Mobility in soil: (Propylene glycol)

Distribution among environmental compartments:

Environmental releases of propylene glycol will tend to partition to water and soil, with little potential for evaporation.

Other adverse effects:

This material is expected to be non-hazardous to aquatic species, and not considered to be persistent, bioaccumulating nor toxic.

Section 13: Disposal Considerations

Disposal methods

Dispose in accordance with applicable international, national and local laws, ordinances and statutes.

Section 14: Transport Information

UN Number: N/A
UN Proper Shipping Name: Not Regulated
Exemptions: N/A
Transport hazard Class(es): N/A
Packing Group: N/A

Land Transport ADR/RID and GGVS/GGVE (Cross Border / Domestic)
Transport Hazard Class(es): Not Regulated

Maritime Transport IMDG/GGVSea
Transport Hazard Class(es): Not Regulated
Marine Pollutant: No

Air Transport ICAO-TI and IATA-DGR
Transport Hazard Class(es): Not Regulated

Section 15: Regulatory Information

Chemical Inventory Status-Part 1

Ingredient (CAS#)	TSCA	EC	Japan	Australia
Propylene glycol (57-55-6)	Yes	Yes	Yes	Yes

Chemical Inventory Status-Part 2

Ingredient (CAS#)	Korea	Canada	Canada	Philippines
		DSL	NDSL	
Propylene glycol (57-55-6)	Yes	Yes	No	Yes

Federal, State & International Regulations-Part 1

	SARA 302		SARA 313	
Ingredient (CAS#)	RQ	TPQ	List Chemical	Category
Propylene glycol (57-55-6)	No	No	No	No

Federal, State & International Regulations-Part 2

	RCRA		TSCA
Ingredient (CAS#)	CERCLA	261.33	8(d)
Propylene glycol (57-55-6)	No	No	No

Chemical Weapons Convention: No

TSCA 12b: No

CDTA: No

SARA 311/312:

Acute: Yes, Chronic: No, Fire: No, Pressure: No, Reactivity: No

Mixture/Liquid

Australian Hazchem Code: None allocated

Poison Schedule: None allocated

Section 16: Other Information

History

Date of issue: 07/16/15

Version: 2a

Revised Sections(s): Name change

Prepared by: Andrew Gioino, SPLASH PRODUCTS

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 the 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

Issue Date: 06-Oct-2014 **Revision Date:** 24-Feb-2015 **Version** 1

1. IDENTIFICATION

Product Identifier

Product Name **TD FOAMY TAPPING (AEROSOL)**

Other means of identification

SDS #

Item# D-1502-06
D-1502-20

UN/ID No UN1950

Recommended use of the chemical and restrictions on use

Recommended Use Tapping and drilling metal.

Details of the supplier of the safety data sheet

Supplier Address

Ashburn Chemical Technologies
7403 Wright Rd
Houston, TX 77041

Emergency Telephone Number

Company Phone Number 832-399-1015
Emergency Telephone (24 hr) INFOTRAC 1-352-323-3500 (International)
1-800-535-5053 (North America)

2. HAZARDS IDENTIFICATION

Appearance Clear liquid in an aerosol **Physical State** Aerosol **Odor** Slight; Petroleum

Classification

Acute toxicity - Inhalation (Dusts/Mists)	Category 4
Flammable Aerosol	Category 1

Hazards Not Otherwise Classified (HNOC)

Pressurized container: May burst if heated

Signal Word **DANGER**

Hazard Statements

Extremely flammable aerosol
Contains gas under pressure: May explode if heated
Harmful if inhaled

Precautionary Statements - Prevention
Avoid breathing dust/fume/gas/mist/vapors/spray
Use only outdoors or in a well-ventilated area
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

Precautionary Statements - Response
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 SWALLOWED: Immediately call a POISON CENTER or doctor/physician
Do not induce vomiting

Precautionary Statements - Storage
Store locked up
Protect form sunlight. Do not store at temperatures above 120°F. Store in a well-ventilated place

Precautionary Statements - Disposal
Dispose of contents/container to an approved waste disposal plant

Unknown Acute Toxicity
50-60% of the mixture consists of ingredient(s) of unknown toxicity

3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Name	CAS No	Weight-%
Chlorinated paraffin (C14-17)	61788-76-9	20-30
Petroleum distillates, hydrotreated heavy naphthenic	64742-52-5	20-30
Propane	74-98-6	10-20

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

General Advice Provide this SDS to medical personnel for treatment.

Eye Contact Flush immediately with copious amounts of water for 15 minutes. If irritation persists, see physician.

Skin Contact Wash contact areas with soap and water. Remove contaminated clothing. Launder contaminated clothing before reuse. If skin irritation persists, call a physician.

Inhalation Remove from further exposure. For those providing assistance, avoid exposure to yourself or others. Use adequate respiratory protection. Seek immediate medical assistance. If breathing has stopped, assist ventilation with a mechanical device or use mouth-to-mouth resuscitation.

Ingestion Do not induce vomiting. If vomiting occurs naturally, have victim lean forward to reduce risk of aspiration. Seek immediate medical attention/advice.

Most important symptoms and effects

Symptoms May cause eye, skin and respiratory tract irritation. May include redness, drying and cracking of skin.

Indication of any immediate medical attention and special treatment needed

Notes to Physician Treat symptomatically.

5. FIRE-FIGHTING MEASURES

Suitable Extinguishing Media Use water fog, foam, dry chemical or carbon dioxide (CO2) to extinguish flames.

Unsuitable Extinguishing Media Not determined.

Specific Hazards Arising from the Chemical

Pressurized container: May burst if heated.

Hazardous Combustion Products Smoke, Fume, Incomplete combustion products, Oxides of carbon.

Protective equipment and precautions for firefighters

Evacuate area. Prevent runoff from fire control or dilution from entering streams, sewers, or drinking water supply. Firefighters should use standard protective equipment and in enclosed spaces, self-contained breathing apparatus(SCBA). Use water spray to cool fire exposed surfaces and to protect personnel.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

Personal Precautions Wear protective clothing as described in Section 8 of this safety data sheet.

Environmental Precautions Dike far ahead of liquid spill for later recovery and disposal. Prevent entry into waterways, sewers, basements or confined areas. 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. Absorb or cover with dry earth, sand or other non-combustible material.

Methods for Clean-Up Use clean non-sparking tools to collect absorbed material. Sweep up absorbed material and shovel into suitable containers for disposal. Discard any product, residue, disposable container or liner in full compliance with federal, state, and local regulations. For waste disposal, see section 13 of the SDS. Contain large spills and pump into a suitable tank for disposal. In the event of a spill or accidental release, notify relevant authorities in accordance with all applicable regulations. US regulations require reporting releases of this material to the environment which exceed the applicable reportable quantity or oil spills which could reach any waterway including intermittent dry creeks. The National Response Center can be reached at (800) 424-8802.

7. HANDLING AND STORAGE

Precautions for safe handling

Advice on Safe Handling Handle in accordance with good industrial hygiene and safety practice. Wash face, hands, and any exposed skin thoroughly after handling. Use only with adequate ventilation. Avoid breathing dust/fume/gas/mist/vapors/spray. Keep away from heat/sparks/open flames/hot surfaces. — No smoking. Do not puncture or incinerate cans. Do not spray on an open flame or other ignition source. Pressurized container: Do not pierce or burn, even after use.

Conditions for safe storage, including any incompatibilities

Storage Conditions Keep container tightly closed and store in a cool, dry and well-ventilated place. Do not store at temperatures above 120°F.

Incompatible Materials Oxidizing agents. Strong acids. Strong alkalis.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Exposure Guidelines Petroleum oil has an ACGIH TLV-TWA of 5 mg/m^3 8 hours (mist). NIOSH STEL 10 mg/m^3 15 minutes.

Chemical Name	ACGIH TLV	OSHA PEL	NIOSH IDLH
Propane 74-98-6	TWA: 1000 ppm	TWA: 1000 ppm TWA: 1800 mg/m^3 (vacated) TWA: 1000 ppm (vacated) TWA: 1800 mg/m^3	IDLH: 2100 ppm TWA: 1000 ppm TWA: 1800 mg/m^3

Appropriate engineering controls

Engineering Controls Ventilation must be adequate to maintain the ambient workplace atmosphere below the exposure limit(s) outlined in the SDS. Maintain eye wash fountain and quick-drench facilities in work area.

Individual protection measures, such as personal protective equipment

Eye/Face Protection If contact is likely, safety glasses with side shields are recommended.

Skin and Body Protection Impervious gloves such as neoprene or solvex can be used.

Respiratory Protection Ensure adequate ventilation, especially in confined areas.

General Hygiene Considerations Avoid contact with skin, eyes and clothing. After handling this product, wash hands before eating, drinking, or smoking. If contact occurs, remove contaminated clothing. If needed, take first aid action shown on section 4 of this SDS. Launder contaminated clothing before reuse.

9. PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

Physical State	Aerosol		
Appearance	Clear liquid in an aerosol	**Odor**	Slight; Petroleum
Color	Clear	**Odor Threshold**	Not determined

Property	Values	Remarks • Method
pH	Not determined	
Melting Point/Freezing Point	Not determined	
Boiling Point/Boiling Range	> 100 °C / > 212 °F	
Flash Point	> 235 °C / > 455 °F	Bulk Fluid-Non-Aerosol (PMCC)
Evaporation Rate	> 1.0	(butyl acetate = 1)
Flammability (Solid, Gas)	Not determined	
Upper Flammability Limits	Not determined	
Lower Flammability Limit	Not determined	
Vapor Pressure	Not determined	
Vapor Density	< 5.0	(Air=1)
Specific Gravity	0.894 Aerosol / 1.04 Bulk	
Water Solubility	Nil	
Solubility in other solvents	Not determined	
Partition Coefficient	Not determined	
Auto-ignition Temperature	Not determined	
Decomposition Temperature	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 Incompatible Materials.

Incompatible Materials Oxidizing agents. Strong acids. Strong alkalis.

Hazardous Decomposition Products

Thermal decomposition and combustion are not expected to occur except under extreme conditions.

11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure

Product Information

Eye Contact May cause temporary irritation on eye contact.

Skin Contact Prolonged contact may cause redness and irritation.

Inhalation Harmful if inhaled. May cause irritation to the mucous membranes and upper respiratory tract.

Ingestion May be fatal if swallowed and enters airways. May cause gastrointestinal irritation, nausea, diarrhea, and vomiting.

Component Information

Chemical Name	Oral LD50	Dermal LD50	Inhalation LC50
Petroleum distillates, hydrotreated heavy naphthenic 64742-52-5	> 5000 mg/kg (Rat)	> 5000 mg/kg (Rabbit)	> 5 mg/L (Rat) 4 h
Propane 74-98-6	-	-	= 658 mg/L (Rat) 4 h

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

Carcinogenicity 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.

Aspiration hazard May be fatal if swallowed and enters airways.

Numerical measures of toxicity Not determined

Unknown Acute Toxicity 50-60% of the mixture consists of ingredient(s) of unknown toxicity.

12. ECOLOGICAL INFORMATION

Ecotoxicity An environmental hazard cannot be excluded in the event of unprofessional handling or disposal.

Component Information

Chemical Name	Algae/aquatic plants	Fish	Toxicity to microorganisms	Crustacea
Petrolium distillates, hydrotreated heavy naphthenic , CAS# 64742-52-5		5000: 96 h Oncorhynchus mykiss mg/L LC50		1000: 48 h Daphnia magna mg/L EC50

Persistence/Degradability Not determined.

Bioaccumulation Not determined.

Mobility

Chemical Name	Partition Coefficient
Propane 74-98-6	2.3

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.

14. TRANSPORT INFORMATION

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

DOT (each not exceeding 1 L capacity)
- **UN/ID No** UN1950
- **Proper Shipping Name** Aerosols, flammable
- **Hazard Class** 2.1

IATA
- **UN/ID No** UN1950
- **Proper Shipping Name** Aerosols, flammable
- **Hazard Class** 2.1

IMDG
- **UN/ID No** UN1950
- **Proper Shipping Name** Aerosols, flammable
- **Hazard Class** 2.1

15. REGULATORY INFORMATION

International Inventories

Chemical Name	TSCA	DSL	NDSL	EINECS	ELINCS	ENCS	IECSC	KECL	PICCS	AICS
Chlorinated paraffin (C14-17)	Present	X		Present	Present	Present	X	Present	X	X
Petroleum distillates, hydrotreated heavy naph	Present	X		Present		Present	X	Present	X	X
Propane	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, 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).

SARA 311/312 Hazard Categories

Acute Health Hazard	Yes

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

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)

US State Regulations

California Proposition 65

This product does not contain any Proposition 65 chemicals.

U.S. State Right-to-Know Regulations

Chemical Name	New Jersey	Massachusetts	Pennsylvania
Propane 74-98-6	X	X	X

16. OTHER INFORMATION

NFPA	**Health Hazards**	**Flammability**	**Instability**	**Special Hazards**
	1	3	0	Not determined
HMIS	**Health Hazards**	**Flammability**	**Physical Hazards**	**Personal Protection**
	1	3	0	Not determined

Issue Date: 06-Oct-2014
Revision Date: 24-Feb-2015
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

Prepared according to Global Harmonized System (GHS) standards

SECTION 1 CHEMICAL PRODUCT IDENTIFICATION

Lubrication Technologies, Inc.
900 Mendelssohn Avenue North
Golden Valley, MN 55427-4309
Tel: 763-545-0707

Product Trade Name: **Viking Drill Ultra S/P™ Super Premium**

CAS Number:	Mixture
Synonyms/Other:	Norseman Drill Ultra S/P™ Super Premium
Part Number(s):	N/A
Recommended Use:	Metal working fluid
Restrictions on Use:	Not determined
Created Date:	9/16/2015
Preparation/Revision Date:	9/28/2015
Emergency Phone Number:	1-800-424-9300 (CHEMTREC)
SDS CODE:	10376

SECTION 2 HAZARD IDENTIFICATION

Appearance:	Yellow Liquid
Odor:	Mild Petroleum
Classification:	This material is not considered to be hazardous according to the Globally Harmonized System of Classification and Labelling Chemicals (GHS), Third Revised Edition.
Target Organs:	Not applicable.
Pictogram(s):	None required.
Signal Word:	None required.
Hazard Statement:	Not required.
Other Hazards:	Not determined.
Prevention:	None required.
Response:	None required.
Storage Procedures:	None required.
Disposal:	None required.
Other:	See section 11 for complete health hazard information.

SECTION 3 COMPOSITION OF INGREDIENTS

Component	CAS Number	Percentage (by weight)
Alkanes, C20-28, Chloro	63449-39-8	90-100%

The balance of components do not contribute to the overall classification of the fluid, according to the GHS Standard.

SECTION 4 FIRST AID MEASURES

Eye Contact:	If irritation occurs, cautiously rinse eyes with lukewarm, gently flowing water for 5 minutes, while holding the eyelids open. If eye irritation persists: Get medical advice/attention.
Skin Contact:	Call a doctor if you feel unwell.
Inhalation:	Get medical advice or attention if you feel unwell or are concerned.
Ingestion:	If you feel unwell or concerned: Get medical advice/attention. Rinse mouth. Do NOT induce vomiting. If vomiting occurs naturally, lie on your side, in the recovery position.
Other:	No additional information

SECTION 5 FIRE FIGHTING MEASURES

Flash Point:	200°C by Cleveland Open Cup Tester.
Flammable limits:	Not determined.
Extinguishing media:	Use dry chemical, alcohol foam, all purpose AFFF or carbon dioxide to extinguish fire.
Special firefighting procedures:	DO NOT direct a solid stream of water or foam into hot, burning pools of liquid since this may cause frothing and increase fire intensity. Frothing can be violent and possibly endanger any firefighter standing too close to the burning liquid. Use water spray to cool fire exposed containers and structures until fire is out if it can be done with minimal risk. Avoid spreading burning material with water used for cooling purposes. Wear full firefighting turn-out gear (full Bunker gear), and respiratory protection (SCBA).
Unusual fire & explosion hazards:	Dense smoke may be generated while burning. Toxic fumes, gases or vapors may evolve on burning. High temperatures may create heavy flammable vapors that may settle along ground level and low spots to create an invisible fire hazard.
Byproducts of combustion:	Fires involving this product may release oxides of carbon, phosphorus, nitrogen and sulfur; reactive hydrocarbons and irritating vapors.
Autoignition temperature:	Not determined.
Explosion data:	Not determined. Care should always be exercised in dust/mist areas.
Other:	Dispose of fire debris and contaminated extinguishing water in accordance with official regulations.

SECTION 6 ACCIDENTAL RELEASE MEASURES

Spill control procedures (land):	Immediately turn off or isolate any source of ignition (pilot lights, electrical equipment, flames, heaters, etc.). Evacuate area and ventilate. Personnel wearing proper protective equipment should contain spill immediately with inert materials (sand, earth, chemical spill pads of cotton) by forming dikes. Dikes should be placed to contain spill in a manner that will prevent material from entering sewers and waterways. Large spill, once contained, may be picked up using explosion proof, non-sparking vacuum pumps, shovels, or buckets, and disposed of in suitable containers for disposal. If a large spill occurs notify appropriate authorities. In case of road spill or accident contact Chem-Trec (800-424-9300).
Spill control procedures (water):	Try to contain large spills with floating booms to prevent spill from spreading. Remove from surface by skimming or with suitable adsorbents. If a large spill occurs notify appropriate authorities (normally the National Response Center or Coast Guard at 800-424-8802).
Waste disposal method:	Do not empty into drains. All disposals must comply with federal, state, and local regulations. The material, if spilled or discarded may be a regulated waste. Refer to state and local regulations. Department of Transportation (DOT) regulations may apply for transporting this material when spilled. See Section 14.
Other:	CAUTION - If spilled material is cleaned up using a regulated solvent, the resulting waste mixture will be regulated.

SECTION 7 HANDLING AND STORAGE

Handling procedures: Keep containers closed when not in use. Do not transfer to unmarked containers. Empty containers retain product residue which may exhibit hazards of material, therefore do not pressurize, cut, glaze, weld, or use for any other purposes. Return drums to reclamation centers for proper cleaning and reuse.
Handling temperatures should not exceed 60°C (140°F) to minimize danger of burns. Open containers carefully in a well ventilated area or use appropriate respiratory protection. Wash thoroughly after handling.

Storage procedures: Store containers away from heat, sparks, open flame, or oxidizing materials. Extended storage at excessive temperatures may produce odorous and toxic fumes from product decomposition.

Additional information: No additional information.

SECTION 8 EXPOSURE CONTROLS / PERSONAL PROTECTION

Exposure limits/standards for materials that can be formed when handling this product:

	OSHA TWA	OSHA STEL	ACGIH TWA
Alkanes, C20-28, Chloro	n/a	n/a	n/a

TWA – Time Weighted Average is the employee's average airborne exposure in any 8-hour work shift of a 40-hour work week which shall not be exceeded.
STEL – Short Term Exposure Limit is the employee's 15-minute time weighted average exposure which shall not be exceeded at any time during a work day unless another time limit is specified.

All base oils, including additive carriers, contain <3.0% DMSO extractable material.

Personal protection: Applicable mainly to persons in repeated contact situations such as packaging of product, service/maintenance, and cleanup/spill control personnel.

Respiratory protection: None required if ventilation is adequate. Otherwise a respiratory protection program meeting OSHA 1910.134 and ANSI Z88.2 requirements must be followed. Where misting may occur, wear an MSHA/NIOSH approved (or equivalent) half-mask form dust/mist air purifying respirator.

Eye protection: Eye protection is strongly recommended. Wear safety glasses with side shields or vented/splash proof goggles (ANSI Z87.1 or approved equivalent).

Hand protection: Impervious, chemically resistant gloves such as neoprene or nitrile rubber to avoid skin sensitization and absorption.

Other protection: Use of an apron and overboots of chemically impervious materials such as neoprene or nitrile rubber is recommended based on level of activity and exposure. If handling hot material use insulated protective equipment. Launder soiled clothes. Properly dispose of contaminated leather articles and other materials which cannot be decontaminated.

Local control measures: Use adequate ventilation when working with material in an enclosed area. Mechanical methods such as fume hoods or area fans may be used to reduce localized vapor/mist areas. If vapor or mist is generated when the material handled, adequate ventilation in accordance with good engineering practice must be provided to maintain concentrations below the specified exposure. Eyewash stations and showers should be available in areas where this material is used and stored.

Other: Consumption of food and drink should be avoided in work areas where product is present. Always wash hands and face with soap and water before eating, drinking or smoking.

SECTION 9 PHYSICAL AND CHEMICAL PROPERTIES

Appearance:	Yellow Liquid
Odor:	Mild Petroleum
Odor threshold:	Not determined.
pH:	Not applicable.
Melting/Freezing point:	Not determined.
Initial boiling point:	Not determined.
Boiling range:	Not determined.
Flash point:	200°C.
Evaporation rate:	Not determined.
Flammability:	Not determined.
Upper flammable limit:	Not determined.
Lower flammable limit:	Not determined.
Vapor pressure:	Not determined.
Vapor density:	Not determined.
Relative density:	1.1 - 1.3 g/cm3 @ 25 C
Solubility:	Negligible in water, miscible in most petroleum solvents.
Partition Coefficient:	Not determined.
Auto-ignition temperature:	Not determined.
Decomposition temperature:	Not determined.
Viscosity:	960 cSt at 40°C.
Other	Not applicable.

SECTION 10 STABILITY AND REACTIVITY

Reactivity	
Chemical stability:	Material is chemically stable at room temperatures and pressure.
Hazardous polymerization:	Will not occur.
Conditions to avoid:	Avoid high temperatures and product contamination.
Incompatibility with other materials:	Avoid contact with acids and strong oxidizing materials.
Decomposition products:	Smoke, carbon monoxide, carbon dioxide, and other aldehydes of incomplete combustion. Oxides of carbon, nitrogen, and sulfur; reactive hydrocarbons and irritating vapors.
Other:	Not applicable.

SECTION 11 TOXICOLOGICAL INFORMATION

Acute toxicity (LD50) *See note at the bottom of the section

Oral:	>5000 mg/kg
Dermal:	>5000 mg/kg
Inhalation:	>20.0 mg/l
Skin irritation:	Non-irritant
Eye irritation:	Non-irritant
Dermal sensitization:	Not expected to have a sensitizing effect.
Respiratory sensitization:	Not expected to have a sensitizing effect.
Aspiration Hazard:	Not applicable

Chronic Toxicity

Mutagenicity:	Not suspected of causing genetic defects
Carcinogenicity:	Not suspected of causing cancer.
Reproductive toxicity:	Not expected to have adverse effects on reproduction.
STOT-single exposure:	Not expected to have adverse effects.
STOT-repeated exposure:	Not expected to have long term adverse effects.
Other:	*All data in this section is based off calculations from Part 3 of the Globally Harmonized System of Classification and Labelling of Chemicals (GHS) utilizing information from the constituent components.

SECTION 12 ECOLOGICAL INFORMATION

Environmental toxicity

Fish:	> 100 mg/l.
Invertebrates:	> 100 mg/l.
Aquatic plants:	> 100 mg/l.
Microorganism:	> 100 mg/l.
Persistence/Degradability:	This product is not expected to be readily biodegradable.
Bioaccumulation:	Not determined.
Mobility in soil:	Not determined.
Other:	All classifications are based on calculations in Part 4 of the Globally Harmonized System of Classification and Labelling of Chemicals (GHS) utilizing information from the constituent components.

SECTION 13 DISPOSAL CONSIDERATIONS

Waste disposal:	This product unadulterated by other materials can be classified as a non-hazardous waste. Depending on use, used product may be regulated. Dispose of in a licensed facility. Do not discharge product in to sewer system. Dispose of containers by crushing or puncturing, so as to prevent unauthorized use of used containers. Waste management should be in full compliance with federal, state, and local laws.
Other	The transportation, storage, treatment and disposal of RCRA waste material must be conducted in compliance with 40 CFR 262, 263, 264, 268 and 270. Chemical additions, processing or otherwise altering this material may make the waste management information presented in this SDS incomplete, inaccurate or otherwise inappropriate.

SECTION 14 TRANSPORT INFORMATION

Land Transport (DOT):	Not regulated for land transport.
Proper Shipping Name:	Not applicable.
Land Transport (TDG):	Not regulated for land transport.
Proper Shipping Name:	Not applicable.
Sea Transport (IMDG):	Not regulated for sea transport.
Proper Shipping Name:	Not applicable.
Air Transport (IATA):	Not regulated for air transport.
Proper Shipping Name:	Not applicable.
Other:	Not applicable.

SECTION 15 REGULATORY INFORMATION

Federal Regulation

Clean water act/oil: Under Section 311 of the Clean Water Act (40 CFR 110) and the Oil Pollution Control Act of 1990, this material is considered an oil. Any spill or discharges that produce a visible sheen or film on surface of water, or in waterways, ditches, or sewers leading to surface water must be reported. Contact the National Response Center at 800-424-8802.

TSCA: All components of this material are listed in the U.S. TSCA Inventory.

Other TSCA: Not applicable.

SARA title III: Section 302/304 extremely hazardous substances:

None.

Section 311, 312 hazard categorization:

Acute (immediate health effects):	NO
Chronic (delayed health effects):	NO
Fire (hazard):	NO
Reactivity (hazard):	NO
Pressure (sudden release hazard):	NO

Section 313 toxic chemicals:

No components present are at or greater than the de minimis (minimum reportable) concentration requirements for reporting.

CERCLA: For stationary/moving sources – reportable quantity (due to): Not hazardous due to the petroleum exclusion.

State Regulations

Right-to-know Not determined.

Other: A release of this product, as supplied, is exempt from reporting under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA). However, releases may be reportable to the Nation Response Center under the Clean Water Act, 33 U.S.C. 1321(b)(3) and (5) - see head of Section 15. Failure to report may result in substantial civil and criminal penalties.

Recommend contacting the local authorities in the event of any type of spill to determine local reporting requirements and also to aid in the cleanup.

SECTION 16 OTHER INFORMATION

	NFPA 704	NPCA-HMIS	KEY
HEALTH:	0	0	0 = Minimal
FIRE:	0	0	1 = Slight
REACTIVITY:	0	0	2 = Moderate
SPECIFIC HAZARD:	None	N/A	3 = Serious
PROTECTION INDEX:	N/A	B	4 = Severe

Version: II

Revisions / Comments: None. 09/16/2015
Update to Product Trade Name and Synonyms/Other. 9/28/2015

29 CFR 1910.1200 (OSHA HazCom 2012)

SECTION 1. PRODUCT AND COMPANY IDENTIFICATION

Product identifier

Trade name : Valvoline™ CRIMSON #2 GREASE

Details of the supplier of the safety data sheet Valvoline LLC 100 Valvoline Way Lexington, KY 40509 United States of America (USA) 1-800-TEAMVAL	**Emergency telephone number** 1-800-VALVOLINE (1-800-825-8654) **Regulatory Information Number** 1-800-TEAMVAL **Product Information** 1-800-TEAMVAL

SECTION 2. HAZARDS IDENTIFICATION

GHS Classification

Skin sensitization : Category 1

GHS label elements

Hazard pictograms :

Signal Word : Warning

Hazard Statements : May cause an allergic skin reaction.

Precautionary Statements : **Prevention:**
Avoid breathing dust/ fume/ gas/ mist/ vapors/ spray.
Contaminated work clothing must not be allowed out of the workplace.
Wear protective gloves.
Response:
IF ON SKIN: Wash with plenty of soap and water.
If skin irritation or rash occurs: Get medical advice/ attention.
Wash contaminated clothing before reuse.
Disposal:
Dispose of contents/ container to an approved waste disposal plant.

Other hazards

None known.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance / Mixture : Mixture

Hazardous components

Chemical name	CAS-No.	Classification	Concentration (%)
PROPRIETARY CORROSION INHIBITOR		Skin Sens. 1; H317	1.00

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 breathed in, move person into fresh air.
If unconscious, place in recovery position and seek medical advice.
If symptoms persist, call a physician.

In case of skin contact : Remove contaminated clothing. If irritation develops, get medical attention.
If on skin, rinse well with water.
First aid is not normally required. However, it is recommended that exposed areas be cleaned by washing with soap and water.
Wash contaminated clothing before re-use.

In case of eye contact : Flush eyes with water as a precaution.
Remove contact lenses.
Protect unharmed eye.
If eye irritation persists, consult a specialist.

If swallowed : 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 : No symptoms known or expected.
May cause an allergic skin reaction.

Notes to physician : No hazards which require special first aid measures.

SECTION 5. FIREFIGHTING MEASURES

Suitable extinguishing media	:	Use extinguishing measures that are appropriate to local circumstances and the surrounding environment. Water spray Foam Carbon dioxide (CO2) Dry chemical
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	:	No hazardous combustion products are known
Specific extinguishing methods	:	Product is compatible with standard fire-fighting agents.
Further information	:	Standard procedure for chemical fires.
Special protective equipment for firefighters	:	In the event of fire, wear self-contained breathing apparatus.

SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures	:	Use personal protective equipment. Persons not wearing protective equipment should be excluded from area of spill until clean-up has been completed.
Environmental precautions	:	Prevent product from entering drains. Prevent further leakage or spillage if safe to do so.
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.
Other information	:	Comply with all applicable federal, state, and local regulations.

SECTION 7. HANDLING AND STORAGE

Advice on safe handling	:	Do not breathe vapours/dust.

Do not smoke.
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.
Container hazardous when empty.
Avoid exposure - obtain special instructions before use.
Avoid contact with skin and eyes.
Smoking, eating and drinking should be prohibited in the application area.
For personal protection see section 8.
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.

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Components with workplace control parameters
Contains no substances with occupational exposure limit values.

Hazardous components without workplace control parameters

Components	CAS-No.
PROPRIETARY CORROSION INHIBITOR	

Engineering measures : Provide sufficient mechanical (general and/or local exhaust) ventilation to maintain exposure below exposure guidelines (if applicable) or below levels that cause known, suspected or apparent adverse effects.

Personal protective equipment

Respiratory protection : Respiratory protection is not required under normal conditions of use.

Hand protection
Remarks : The suitability for a specific workplace should be discussed with the producers of the protective gloves.

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 : Wear as appropriate:
Impervious clothing
Safety shoes
Choose body protection according to the amount and concentration of the dangerous substance at the work place.

Discard gloves that show tears, pinholes, or signs of wear. Wear resistant gloves (consult your safety equipment supplier).

Hygiene measures : Wash hands before breaks and at the end of workday.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	:	paste
Physical state	:	liquid
Colour	:	red
Odour	:	hydrocarbon-like
Odour Threshold	:	No data available
pH	:	No data available
Melting point/freezing point	:	No data available
Boiling point/boiling range	:	> 700 °F / > 371 °C
Flash point	:	> 399 °F / > 204 °C
Evaporation rate	:	< 0.01
Flammability (solid, gas)	:	No data available
Upper explosion limit	:	No data available
Lower explosion limit	:	No data available
Vapour pressure	:	< 0.1 mmHg (20 °C)
Relative density	:	0.9 (15.6 °C)
Density	:	0.9 g/cm3 (20 °C)
Solubility(ies)		
Water solubility	:	No data available
Solubility in other solvents	:	No data available

Partition coefficient: n-octanol/water	:	No data available
Thermal decomposition	:	No data available
Viscosity		
Viscosity, dynamic	:	No data available
Viscosity, kinematic	:	> 1000 mm2/s (40 °C)
Oxidizing properties	:	No data available

SECTION 10. STABILITY AND REACTIVITY

Reactivity	:	No decomposition if stored and applied as directed.
Chemical stability	:	Stable under recommended storage conditions.
Possibility of hazardous reactions	:	Product will not undergo hazardous polymerization.
Conditions to avoid	:	None known.
Incompatible materials	:	None known.
Hazardous decomposition products		No hazardous decomposition products are known.

SECTION 11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure : Inhalation
Skin contact
Eye Contact
Ingestion

Acute toxicity
Not classified based on available information.
Skin corrosion/irritation
Not classified based on available information.
Product:
Remarks: May cause skin irritation in susceptible persons.

Serious eye damage/eye irritation
Not classified based on available information.
Product:
Remarks: Unlikely to cause eye irritation or injury.

Respiratory or skin sensitisation
Skin sensitisation: May cause an allergic skin reaction.
Respiratory sensitisation: Not classified based on available information.
Components:
PROPRIETARY CORROSION INHIBITOR**:**
Assessment: May cause sensitisation by skin contact.

Germ cell mutagenicity
Not classified based on available information.
Carcinogenicity
Not classified based on available information.
Reproductive toxicity
Not classified based on available information.
STOT - single exposure
Not classified based on available information.
STOT - repeated exposure
Not classified based on available information.
Aspiration toxicity
Not classified based on available information.
Product:
No aspiration toxicity classification

Further information
Product:
Remarks: No data available

SECTION 12. ECOLOGICAL INFORMATION

Ecotoxicity
Product:
Ecotoxicology Assessment

Acute aquatic toxicity	:	Not classified based on available information.
Chronic aquatic toxicity	:	Not classified based on available information.

Persistence and degradability
No data available
Bioaccumulative potential
No data available
Mobility in soil
No data available
Other adverse effects
No data available
Product:

Additional ecological information	:	No data available

SECTION 13. DISPOSAL CONSIDERATIONS

Disposal methods

General advice : Do not dispose of waste into sewer.
Do not contaminate ponds, waterways or ditches with chemical or used container.
Send to a licensed waste management company.

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

Contaminated packaging : Empty remaining contents.
Dispose of as unused product.
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

International transport regulations

REGULATION

ID NUMBER	PROPER SHIPPING NAME	*HAZARD CLASS	SUBSIDIARY HAZARDS	PACKING GROUP	MARINE POLLUTANT / LTD. QTY.

U.S. DOT - ROAD

Not dangerous goods

CFR_RAIL_C

Not dangerous goods

U.S. DOT - INLAND WATERWAYS

Not dangerous goods

TDG_ROAD_C

Not dangerous goods

TDG_RAIL_C

Not dangerous goods

TDG_INWT_C

Not dangerous goods

INTERNATIONAL MARITIME DANGEROUS GOODS

Not dangerous goods

INTERNATIONAL AIR TRANSPORT ASSOCIATION - CARGO

Not dangerous goods

INTERNATIONAL AIR TRANSPORT ASSOCIATION - PASSENGER

Not dangerous goods

MX_DG

Not dangerous goods

***ORM = ORM-D, CBL = COMBUSTIBLE LIQUID**

Marine pollutant		no

Dangerous goods descriptions (if indicated above) may not reflect quantity, end-use or region-specific exceptions that can be applied. Consult shipping documents for descriptions that are specific to the shipment.

SECTION 15. REGULATORY INFORMATION

EPCRA - Emergency Planning and Community Right-to-Know Act
CERCLA Reportable Quantity
This material does not contain any components with a CERCLA RQ.
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 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 Proposition 65 warnings are not required for this product based on the results of a risk assessment.

The components of this product are reported in the following inventories:

DSL : This product contains one or several components that are not on the Canadian DSL and have annual quantity limits.

AICS : Not in compliance with the inventory

ENCS : Not in compliance with the inventory

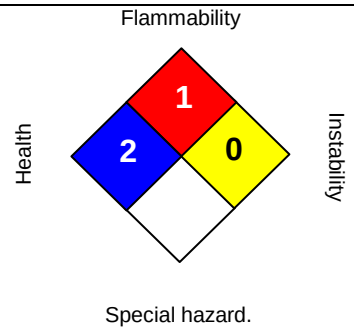
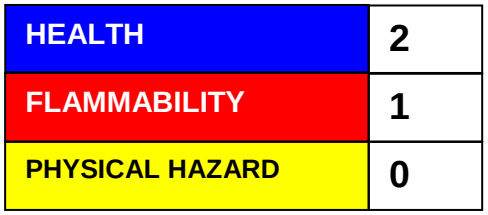
KECI : Not in compliance with the inventory

IECSC	:	On the inventory, or in compliance with the inventory
PICCS	:	Not in compliance with the inventory
TSCA	:	On TSCA Inventory

Inventories
AICS (Australia), DSL (Canada), IECSC (China), REACH (European Union), ENCS (Japan), ISHL (Japan), KECI (Korea), NZIoC (New Zealand), PICCS (Philippines), TCSI (Taiwan), TSCA (USA)

SECTION 16. OTHER INFORMATION

Further information
Revision Date: 05/22/2017

NFPA:	HMIS III:
	 0 = not significant, 1 =Slight, 2 = Moderate, 3 = High 4 = Extreme, * = Chronic

NFPA Flammable and Combustible Liquids Classification
Combustible Liquid Class IIIB

Full text of H-Statements

H317	May cause an allergic skin reaction.

Sources of key data used to compile the Safety Data Sheet
Valvoline internal data including own and sponsored test reports
The UNECE administers regional agreements implementing harmonised classification for labelling (GHS) and transport.

The information accumulated herein is believed to be accurate but is not warranted to be whether originating with the company or not. Recipients are advised to confirm in advance of need that the information is current, applicable, and suitable to their circumstances. This SDS has been prepared by Valvoline's Environmental Health and Safety Department (1-800-VALVOLINE).

List of abbreviations and acronyms that could be, but not necessarily are, used in this safety data sheet :
ACGIH : American Conference of Industrial Hygienists
BEI : Biological Exposure Index
CAS : Chemical Abstracts Service (Division of the American Chemical Society).
CMR : Carcinogenic, Mutagenic or Toxic for Reproduction
FG : Food grade
GHS : Globally Harmonized System of Classification and Labeling of Chemicals.
H-statement : Hazard Statement
IATA : International Air Transport Association.
IATA-DGR : Dangerous Goods Regulation by the “International Air Transport Association” (IATA).

ICAO : International Civil Aviation Organization
ICAO-TI (ICAO) : Technical Instructions by the “International Civil Aviation Organization”
IMDG : International Maritime Code for Dangerous Goods
ISO : International Organization for Standardization
logPow : octanol-water partition coefficient
LCxx : Lethal Concentration, for xx percent of test population
LDxx : Lethal Dose, for xx percent of test population.
ICxx : Inhibitory Concentration for xx of a substance
Ecxx : Effective Concentration of xx
N.O.S.: Not Otherwise Specified
OECD : Organization for Economic Co-operation and Development
OEL : Occupational Exposure Limit
P-Statement : Precautionary Statement
PBT : Persistent , Bioaccumulative and Toxic
PPE : Personal Protective Equipment
STEL : Short-term exposure limit
STOT : Specific Target Organ Toxicity
TLV : Threshold Limit Value
TWA : Time-weighted average
vPvB : Very Persistent and Very Bioaccumulative
WEL : Workplace Exposure Level

CERCLA : Comprehensive Environmental Response, Compensation, and Liability Act
DOT : Department of Transportation
FIFRA : Federal Insecticide, Fungicide, and Rodenticide Act
HMIRC : Hazardous Materials Information Review Commission
HMIS : Hazardous Materials Identification System
NFPA : National Fire Protection Association
NIOSH : National Institute for Occupational Safety and Health
OSHA : Occupational Safety and Health Administration
PMRA : Health Canada Pest Management Regulatory Agency
RTK : Right to Know
WHMIS : Workplace Hazardous Materials Information System

Safety Data Sheet

1 - Identification

Product Name: WD-40 Multi-Use Product Aerosol ***NOT FOR SALE IN CALIFORNIA*** **Product Use: Lubricant, Penetrant, Drives Out Moisture, Removes and Protects Surfaces From Corrosion** **Restrictions on Use: None identified** **SDS Date Of Preparation: 07/20/2014**	**Manufacturer: WD-40 Company** **Address: 1061 Cudahy Place (92110)** **P.O. Box 80607** **San Diego, California, USA** **92138 –0607** **Telephone:** **Emergency only: 1-888-324-7596 (PROSAR)** **Information: 1-888-324-7596** **Chemical Spills: 1-800-424-9300 (Chemtrec)** **1-703-527-3887 (International Calls)**

2 – Hazards Identification

Hazcom 2012/GHS Classification:
Flammable Aerosol Category 1
Gas Under Pressure: Compressed Gas
Aspiration Toxicity Category 1

Note: This product is a consumer product and is labeled in accordance with the US Consumer Product Safety Commission regulations which take precedence over OSHA Hazard Communication labeling. The actual container label will not include the label elements below. The labeling below applies to industrial/professional products.

Label Elements:

DANGER!
Extremely Flammable Aerosol.
Contains gas under pressure; may explode if heated.
May be fatal if swallowed and enters airways.

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.

Response
IF SWALLOWED: Immediately call a POISON CENTER or physician. Do NOT induce vomiting.

Storage
Store locked up.
Protect from sunlight. Do not expose to temperatures exceeding 50°C/122°F. Store in a well-ventilated place.

Disposal
Dispose of contents and container in accordance with local and national regulations.

3 - Composition/Information on Ingredients

Ingredient	CAS #	Weight Percent	US Hazcom 2012/ GHS Classification
Aliphatic Hydrocarbon	64742-47-8	45-50	Flammable Liquid Category 3

			Aspiration Toxicity Category 1
Petroleum Base Oil	64742-56-9 64742-65-0 64742-53-6 64742-54-7 64742-71-8	<25	Not Hazardous
LVP Aliphatic Hydrocarbon	64742-47-8	12-18	Aspiration Toxicity Category 1
Carbon Dioxide	124-38-9	2-3	Simple Asphyxiant Gas Under Pressure, Compressed Gas
Non-Hazardous Ingredients	Mixture	<10	Not Hazardous

Note: The exact percentages are a trade secret.

4 – First Aid Measures

Ingestion (Swallowed): 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.
Inhalation (Breathing): If irritation is experienced, move to fresh air. Get medical attention if irritation or other symptoms develop and persist.
Signs and Symptoms of Exposure: May cause eye and respiratory irritation. Inhalation may cause coughing, headache and dizziness. Skin contact may cause drying of the skin.
Indication of Immediate Medical Attention/Special Treatment Needed: Immediate medical attention is needed for ingestion.

5 – Fire Fighting Measures

Suitable (and unsuitable) Extinguishing Media: 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.
Specific Hazards Arising from the Chemical: 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.
Special Protective Equipment and Precautions for Fire-Fighters: 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 – Accidental Release Measures

Personal Precautions, Protective Equipment and Emergency Procedures: Wear appropriate protective clothing (see Section 8). Eliminate all sources of ignition and ventilate area.
Methods and Materials for Containment/Cleanup: 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 – Handling and Storage

Precautions for Safe Handling: 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.

Conditions for Safe Storage: 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.

8 – Exposure Controls/Personal Protection

Chemical	Occupational Exposure Limits
Aliphatic Hydrocarbon	1200 mg/m3 TWA (manufacturer recommended)
Petroleum Base Oil	5 mg/m3 TWA, 10 mg/m3 STEL ACGIH TLV 5 mg/m3 TWA OSHA PEL
LVP Aliphatic Hydrocarbon	1200 mg/m3 TWA (manufacturer recommended)
Carbon Dioxide	5000 ppm TWA (OSHA/ACGIH), 30,000 ppm STEL (ACGIH)
Non-Hazardous Ingredients	None Established

The Following Controls are Recommended for Normal Consumer Use of this Product
Appropriate Engineering Controls: Use in a well-ventilated area.
Personal Protection:
Eye Protection: Avoid eye contact. Always spray away from your face.
Skin Protection: Avoid prolonged skin contact. Chemical resistant gloves recommended for operations where skin contact is likely.
Respiratory Protection: None needed for normal use with adequate ventilation.

For Bulk Processing or Workplace Use the Following Controls are Recommended
Appropriate Engineering Controls: Use adequate general and local exhaust ventilation to maintain exposure levels below that occupational exposure limits.
Personal Protection:
Eye Protection: Safety goggles recommended where eye contact is possible.
Skin Protection: Wear chemical resistant gloves.
Respiratory Protection: None required if ventilation is adequate. If the occupational exposure limits are exceeded, wear a NIOSH approved respirator. Respirator selection and use should be based on contaminant type, form and concentration. Follow OSHA 1910.134, ANSI Z88.2 and good Industrial Hygiene practice.
Work/Hygiene Practices: Wash with soap and water after handling.

9 – Physical and Chemical Properties

Appearance:	Light 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 Closed Cup (concentrate)	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:	412 grams/liter (49.5%)	Pour Point:	-63°C (-81.4°F) ASTM D-97

10 – Stability and Reactivity

Reactivity: Not reactive under normal conditions
Chemical Stability: Stable

Possibility of Hazardous Reactions: May react with strong oxidizers generating heat.
Conditions to Avoid: Avoid heat, sparks, flames and other sources of ignition. Do not puncture or incinerate containers.
Incompatible Materials: Strong oxidizing agents.
Hazardous Decomposition Products: Carbon monoxide and carbon dioxide.

11 – Toxicological Information

Symptoms of Overexposure:
Inhalation: 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.
Skin Contact: Prolonged and/or repeated contact may produce mild irritation and defatting with possible dermatitis.
Eye Contact: Contact may be irritating to eyes. May cause redness and tearing.
Ingestion: 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.
Chronic Effects: None expected.
Carcinogen Status: None of the components are listed as a carcinogen or suspect carcinogen by IARC, NTP, ACGIH or OSHA.
Reproductive Toxicity: None of the components is considered a reproductive hazard.

Numerical Measures of Toxicity:
The oral toxicity of this product is estimated to be greater than 5,000 mg/kg and the dermal toxicity greater than 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.

12 – Ecological Information

Ecotoxicity: No specific aquatic toxicity data is currently available, however components of this product are not expected to be harmful to aquatic organisms
Persistence and Degradability: Component are readily biodegradable.
Bioaccumulative Potential: Bioaccumulation is not expected based on an assessment of the ingredients.
Mobility in Soil: No data available
Other Adverse Effects: None known

13 - Disposal Considerations

If this product becomes a waste, it would be expected to meet the criteria of a RCRA ignitable hazardous waste (D001). However, it is the responsibility of the generator to determine at the time of disposal the proper classification and method of disposal. Do not puncture or incinerate containers, even empty. Dispose in accordance with federal, state, and local regulations.

14 – Transportation Information_

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)
IMDG Shipping Description: Un1950, Aerosols, 2.1, LTD QTY
ICAO Shipping Description: UN1950, Aerosols, flammable, 2.1 NOTE: WD-40 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.

15 – Regulatory Information

U.S. Federal Regulations:
CERCLA 103 Reportable Quantity: This product is not subject to CERCLA reporting requirements, however, oil spills are reportable to the National Response Center under the Clean Water Act and many

states have more stringent release reporting requirements. Report spills required under federal, state and local regulations.
SARA TITLE III:
Hazard Category For Section 311/312: Acute Health, Fire Hazard, Sudden Release of Pressure
Section 313 Toxic Chemicals: This product contains the following chemicals subject to SARA Title III Section 313 Reporting requirements: None
Section 302 Extremely Hazardous Substances (TPQ): None
EPA Toxic Substances Control Act (TSCA) Status: All of the components of this product are listed on the TSCA inventory.
VOC Regulations: This product complies with the consumer product VOC limits of the US EPA and states adopting the OTC VOC rules but does not comply with CARB.
California Safe Drinking Water and Toxic Enforcement Act (Proposition 65): This product does not contain chemicals regulated under California Proposition 65.
Canadian Environmental Protection Act: One of the components is listed on the NDSL. All of the other ingredients are listed on the Canadian Domestic Substances List or exempt from notification.
Canadian WHMIS Classification: Class A (Compressed gas), Class B-5 (Flammable Aerosol)
This MSDS has been prepared according to the criteria of the Controlled Products Regulation (CPR) and the MSDS contains all of the information required by the CPR.

16 – Other Information:

HMIS Hazard Rating:
Health – 1 (slight hazard), Fire Hazard – 4 (severe hazard), Reactivity – 0 (minimal hazard)

Revision Date: July 20, 2014 Supersedes: May 23, 2014

Revision Summary: Convert to Hazcom 2012. Changes in all sections.

Prepared by: Industrial Health & Safety Consultants, Inc. Shelton, CT, USA

APPROVED By: I. Kowalski Regulatory Affairs Dept.

5049000/No.0015205