Silicone Spray Lubricant

Safety Data Sheet

according to the Hazard Communication Standard (CFR29 1910.1200) HazCom 2012.

Date of issue: 11/26/2013 Revision date: 11/26/2013 Version: 1.0

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

1.1. Product identifier

Product form : Mixture

Product name : Silicone Spray Lubricant

Product code : 8-SL-S, 16-SL, 16-SL-THD

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

Use of the substance/mixture : Multi-Purpose Lubricant.

1.3. Details of the supplier of the safety data sheet

The Blaster Corporation
8500 Sweet Valley Drive
Valley View, Ohio 44125 - USA
T (216) 901-5800 - F (216) 901-5801
www.blasterproducts.com

1.4. Emergency telephone number

Emergency number : Chemtrec (800) 424-9300

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

GHS-US classification

Flammable Aerosol 1
Gases Under Pressure (Dissolved Gas)
Specific target organ toxicity - Single exposure 3
Aspiration Hazard 1

2.2. Label elements

GHS-US labelling

Hazard pictograms (GHS-US) :

GHS02 GHS04 GHS07 GHS08

Signal word (GHS-US) : Danger

Hazard statements (GHS-US) : Extremely flammable aerosol. Contains gas under pressure; may explode if heated. May cause drowsiness or dizziness. May be fatal if swallowed and enters airways.

Precautionary statements (GHS-US) : Keep away from heat/sparks/open flames/hot surfaces. - No smoking. Do not spray on an open flame or other ignition source. Pressurized container: Do not pierce or burn, even after use. Avoid breathing dust/fume/gas/mist/vapours/spray. Use only outdoors or in a well-ventilated area. If swallowed: immediately call a poison center or doctor/physician. Do NOT induce vomiting. If inhaled: Remove person to fresh air and keep comfortable for breathing. Call a poison center or doctor if you feel unwell. Store in a well-ventilated place. Store locked up. Do not expose to temperatures exceeding 50 °C/122 °F. Dispose of contents and container in accordance with all local, regional, national and international regulations.

2.3. Other hazards

No additional information available

SECTION 3: Composition/information on ingredients

3.1. Substance

Not applicable

3.2. Mixture

Name	Product identifier	%	GHS-US classification
Petroleum distillates, hydrotreated light	(CAS No) 64742-47-8	30 - 60	Flam. Liq. 3 Asp. Tox. 1
Alkanes, C9-11-iso-	(CAS No) 68551-16-6	30 - 60	Flam. Liq. 1 STOT SE 3 Asp. Tox. 1

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

SECTION 4: First aid measures

4.1. Description of first aid measures

First-aid measures after inhalation : If breathing is difficult, remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical advice/attention if you feel unwell.

First-aid measures after skin contact : In case of contact, immediately flush skin with plenty of water. Call a physician if irritation develops and persists.

First-aid measures after eye contact : In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. If easy to do, remove contact lenses, if worn. If irritation persists, get medical attention.

First-aid measures after ingestion : If swallowed, do NOT induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Get immediate medical advice/attention.

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

Symptoms/injuries after inhalation : Vapours may cause drowsiness and dizziness. May cause respiratory tract irritation.

Symptoms/injuries after skin contact : May cause skin irritation. Symptoms may include redness, drying, defatting and cracking of the skin.

Symptoms/injuries after eye contact : May cause eye irritation. Symptoms may include discomfort or pain, excess blinking and tear production, with possible redness and swelling.

Symptoms/injuries after ingestion : May be fatal if swallowed and enters airways. May cause stomach distress, nausea or vomiting. This product may be aspirated into the lungs and cause chemical pneumonitis.

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

Symptoms may not appear immediately. In case of accident or if you feel unwell, seek medical advice immediately (show the label or SDS where possible).

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media : Carbon dioxide, dry chemical, halons, foam.

Unsuitable extinguishing media : None known.

5.2. Special hazards arising from the substance or mixture

Fire hazard : Products of combustion may include, and are not limited to: oxides of carbon. Extremely flammable aerosol.

Explosion hazard : Heat may build pressure, rupturing closed containers, spreading fire and increasing risk of burns and injuries.

5.3. Advice for firefighters

Firefighting instructions : Cool closed containers exposed to fire with water.

Protection during firefighting : Keep upwind of fire. Wear full fire fighting turn-out gear (full Bunker gear) and respiratory protection (SCBA).

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

6.1.1. For non-emergency personnel

Protective equipment : Use personal protection recommended in Section 8. Isolate the hazard area and deny entry to unnecessary and unprotected personnel.

6.1.2. For emergency responders

No additional information available

6.2. Methods and material for containment and cleaning up

For containment : Eliminate sources of ignition. Contain and/or absorb spill with inert material (e.g. sand, vermiculite), then place in a suitable container. Do not flush to sewer or allow to enter waterways. Use appropriate Personal Protective Equipment (PPE).

Methods for cleaning up : Scoop up material and place in a disposal container. Vapours may be heavier than air and may travel along the ground to a distant ignition source and flash back. Provide ventilation.

6.3. Reference to other sections

See section 8 for further information on protective clothing and equipment and section 13 for advice on waste disposal.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Precautions for safe handling : Avoid contact with skin and eyes. Do not swallow. Avoid breathing gas, fumes, vapour or spray. When using do not eat, drink or smoke. Do not spray on an open flame or other ignition source. Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Use only outdoors or in a well-ventilated area. Keep away from sources of ignition. - No smoking. Pressurized container: Do not pierce or burn, even after use.

Hygiene measures : Wash hands before eating, drinking, or smoking. Launder contaminated clothing before reuse.

7.2. Conditions for safe storage, including any incompatibilities

Technical measures	: Proper grounding procedures to avoid static electricity should be followed.
Storage conditions	: Keep locked up and out of reach of children. Do not expose to temperatures exceeding 50°C/ 122°F. Store away from direct sunlight or other heat sources. Store in a dry place.
Storage area	: Store in a well-ventilated place.

7.3. Specific end use(s)

Not available.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Petroleum distillates, hydrotreated light (64742-47-8)		
USA ACGIH	ACGIH TWA (mg/m³)	200 mg/m³
USA OSHA	OSHA PEL (TWA) (ppm)	100 ppm

8.2. Exposure controls

Appropriate engineering controls	: Use ventilation adequate to keep exposures (airborne levels of dust, fume, vapor, etc.) below recommended exposure limits.
Hand protection	: Wear chemically resistant protective gloves.
Eye protection	: Safety glasses or goggles are recommended when using product.
Skin and body protection	: Wear suitable protective clothing.
Respiratory protection	: A NIOSH approved respirator is recommended in poorly ventilated areas or when permissible exposure limits may be exceeded. 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.
Environmental exposure controls	: Maintain levels below Community environmental protection thresholds.
Other information	: Do not eat, smoke or drink where material is handled, processed or stored. Wash hands carefully before eating or smoking. Handle according to established industrial hygiene and safety practices.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	: Gas/Pressurized Liquid.
Appearance	: Clear liquid.
Colour	: Clear.
Odour	: Mild aliphatic.
Odour threshold	: No data available.
pH	: No data available.
Relative evaporation rate (butylacetate=1)	: >1(NBA=1)
Melting point	: No data available.
Freezing point	: No data available.
Boiling point	: 182 °C / 360 °F
Flash point	: 54 °C / 130 °F TCC
Self ignition temperature	: No data available.
Decomposition temperature	: No data available.
Flammability (solid, gas)	: Flammable Aerosol.
Vapour pressure	: No data available.
Relative vapour density at 20 °C	: No data available.
Relative density	: 0.81
Solubility	: Negligible.
Log Pow	: No data available.
Log Kow	: No data available.
Viscosity, kinematic	: No data available.
Viscosity, dynamic	: No data available.
Explosive properties	: No data available.
Oxidising properties	: No data available.
Explosive limits	: No data available.

9.2. Other information

Flame Projection = none; Heat of Combustion = 43.5 kJ/g

SECTION 10: Stability and reactivity

10.1. Reactivity

No dangerous reaction known under conditions of normal use.

10.2. Chemical stability

Stable under normal storage conditions. Extremely flammable aerosol. Contents under pressure. Container may explode if heated. Do not puncture. Do not burn.

10.3. Possibility of hazardous reactions

No dangerous reaction known under conditions of normal use.

10.4. Conditions to avoid

Heat. Incompatible materials. Sources of ignition.

10.5. Incompatible materials

Strong oxidizing agents. Strong reducing agents. Water.

10.6. Hazardous decomposition products

May include, and are not limited to: oxides of carbon, hydrocarbons.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity : Based on available data, the classification criteria are not met.

Petroleum distillates, hydrotreated light (64742-47-8)	
LD50 oral rat	> 5000 mg/kg
LD50 dermal rabbit	> 2000 mg/kg
LC50 inhalation rat (mg/l)	> 5.2 mg/l/4h

Alkanes, C9-11-iso- (68551-16-6)	
LD50 oral rat	34600 mg/kg
LD50 dermal rat	15400 mg/kg
LC50 inhalation rat (mg/l)	> 12.4 mg/l/4h

Silicone Spray Lubricant	
ATE (oral)	>2000 mg/kg, rat
ATE (dermal)	>2000 mg/kg, rabbit
ATE (inhalation)	>5 mg/l/4h, rat

Skin corrosion/irritation : Based on available data, the classification criteria are not met.

Serious eye damage/irritation : Based on available data, the classification criteria are not met.

Respiratory or skin sensitisation : Based on available data, the classification criteria are not met.

Germ cell mutagenicity : Based on available data, the classification criteria are not met.

Carcinogenicity : Based on available data, the classification criteria are not met.

Reproductive toxicity : Based on available data, the classification criteria are not met.

Specific target organ toxicity (single exposure) : May cause drowsiness or dizziness.

Specific target organ toxicity (repeated exposure) : Based on available data, the classification criteria are not met.

Aspiration hazard : May be fatal if swallowed and enters airways.

Symptoms/injuries after inhalation : Vapours may cause drowsiness and dizziness. May cause respiratory tract irritation.

Symptoms/injuries after skin contact : May cause skin irritation. Symptoms may include redness, drying, defatting and cracking of the skin.

Symptoms/injuries after eye contact : May cause eye irritation. Symptoms may include discomfort or pain, excess blinking and tear production, with possible redness and swelling.

Symptoms/injuries after ingestion : May be fatal if swallowed and enters airways. May cause stomach distress, nausea or vomiting. This product may be aspirated into the lungs and cause chemical pneumonitis.

SECTION 12: Ecological information

12.1. Toxicity

Ecology - general : May cause long-term adverse effects in the aquatic environment.

12.2. Persistence and degradability

Silicone Spray Lubricant	
Persistence and degradability	Not established.

12.3. Bioaccumulative potential

Silicone Spray Lubricant	
Bioaccumulative potential	Not established.

12.4. Mobility in soil

No additional information available

12.5. Other adverse effects

No additional information available

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Waste disposal recommendations : This material must be disposed of in accordance with all local, state, provincial, and federal regulations. The generation of waste should be avoided or minimized wherever possible.

Additional information : Flammable vapours may accumulate in the container.

SECTION 14: Transport information

In accordance with DOT

14.1. UN number

UN-No.(DOT) : UN1950

14.2. UN proper shipping name

DOT Proper Shipping Name : AEROSOLS, flammable, limited quantities

Hazard class (DOT) 2.1

Packing Group (DOT) Not applicable.

Hazard labels (DOT) :

14.3. Additional information

Other information : No supplementary information available.

Special transport precautions : Do not handle until all safety precautions have been read and understood.

SECTION 15: Regulatory information

15.1. US Federal regulations

Petroleum distillates, hydrotreated light (64742-47-8)
Listed on the United States TSCA (Toxic Substances Control Act) inventory

Alkanes, C9-11-iso- (68551-16-6)
Listed on the United States TSCA (Toxic Substances Control Act) inventory

15.2. US State regulations

Silicone Spray Lubricant()	
State or local regulations	This product does not contain a chemical known to the State of California to cause cancer, birth defects or other reproductive harm.

SECTION 16: Other information

Indication of changes : None.

Other information : None.

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.

SAFETY DATA SHEET

Section 1. Identification

Product name	Castrol GT LMA Brake Fluid
SDS #	461439
Historic SDS #:	461439-US12
Code	461439-US65

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

Product use	Brake fluids. For specific application advice see appropriate Technical Data Sheet or consult our company representative.
Manufacturer	BP Lubricants USA Inc. 1500 Valley Road Wayne, NJ 07470 Telephone: (973) 633-2200 Telecopier: (973) 633-7475
EMERGENCY HEALTH INFORMATION:	1 (800) 447-8735 Outside the US: +1 703-527-3887 (CHEMTREC)
EMERGENCY SPILL INFORMATION:	1 (800) 424-9300 CHEMTREC (USA)
OTHER PRODUCT INFORMATION	1 (866) 4 BP - MSDS (866-427-6737 Toll Free - North America) email: bpcares@bp.com

Section 2. Hazards identification

OSHA/HCS status	This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).
Classification of the substance or mixture	SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) - Category 2

GHS label elements

Hazard pictograms

Signal word	Warning
Hazard statements	May cause damage to organs through prolonged or repeated exposure.

Precautionary statements

General	Read label before use. Keep out of reach of children. If medical advice is needed, have product container or label at hand.
Prevention	Do not breathe vapor.
Response	Get medical attention if you feel unwell.
Storage	Not applicable.
Disposal	Dispose of contents and container in accordance with all local, regional, national and international regulations.

Section 2. Hazards identification

Hazards not otherwise classified None known.

Section 3. Composition/information on ingredients

polyethylene glycol Proprietary performance additives.

Substance/mixture Mixture

Ingredient name	CAS number	%
ethanol, 2-butoxy-, manufacture of, by-products from	161907-77-3	10-15
2,2' -oxybisethanol	111-46-6	5-10
Di-isopropanolamine	110-97-4	1-5

Any concentration shown as a range is to protect confidentiality or is due to batch variation.

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

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

Section 4. First aid measures

Description of necessary first aid measures

Eye contact In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Eyelids should be held away from the eyeball to ensure thorough rinsing. Check for and remove any contact lenses. Get medical attention if symptoms occur.

Skin contact In case of contact, immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Wash clothing before reuse. Clean shoes thoroughly before reuse. Get medical attention if symptoms occur.

Inhalation In case of inhalation of decomposition products in a fire, symptoms may be delayed. If inhaled, remove to fresh air. The exposed person may need to be kept under medical surveillance for 48 hours. Get medical attention if symptoms occur.

Ingestion Do not induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Get medical attention if adverse health effects persist or are severe.

Protection of first-aiders No action shall be taken involving any personal risk or without suitable training. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation.

Most important symptoms/effects, acute and delayed

See Section 11 for more detailed information on health effects and symptoms.

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

Notes to physician In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours. Treatment should in general be symptomatic and directed to relieving any effects.

Specific treatments No specific treatment.

Section 5. Fire-fighting measures

Extinguishing media

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

Unsuitable extinguishing media Do not use water jet.

Specific hazards arising from the chemical In a fire or if heated, a pressure increase will occur and the container may burst.

Section 5. Fire-fighting measures

Hazardous combustion products

Combustion products may include the following:
carbon dioxide
carbon monoxide
nitrogen oxides

Special protective actions for fire-fighters

Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training.

Special protective equipment for fire-fighters

Fire-fighters should wear positive pressure self-contained breathing apparatus (SCBA) and full turnout gear.

Section 6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

For non-emergency personnel

No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Avoid breathing vapor or mist. Provide adequate ventilation. Put on appropriate personal protective equipment. Floors may be slippery; use care to avoid falling. Contact emergency personnel.

For emergency responders

Entry into a confined space or poorly ventilated area contaminated with vapor, mist or fume is extremely hazardous without the correct respiratory protective equipment and a safe system of work. Wear self-contained breathing apparatus. Wear a suitable chemical protective suit. Chemical resistant boots. 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. Absorb with an inert material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.

Large spill

Stop leak if without risk. Move containers from spill area. Approach release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations. Contaminated absorbent material may pose the same hazard as the spilled product. Dispose of via a licensed waste disposal contractor.

Section 7. Handling and storage

Precautions for safe handling

Protective measures

Put on appropriate personal protective equipment (see Section 8). Avoid contact with eyes, skin and clothing. Do not ingest. Empty containers retain product residue and can be hazardous. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Do not reuse container. Do not breathe vapor or mist.

Advice on general occupational hygiene

Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Wash thoroughly after handling. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.

Conditions for safe storage, including any incompatibilities

Store in accordance with local regulations. Store in 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. Store and use only in equipment/containers designed for use with this product. 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. DO NOT ADD NITRITES TO THIS FLUID.

Section 7. Handling and storage

Not suitable Prolonged exposure to elevated temperature

Section 8. Exposure controls/personal protection

Control parameters

Occupational exposure limits

Ingredient name	Exposure limits
2,2' -oxybisethanol	**AIHA WEEL (United States).** TWA: 10 mg/m³ 8 hours. Issued/Revised: 1/1999

While specific OELs for certain components may be shown in this section, other components may be present in any mist, vapor or dust produced. Therefore, the specific OELs may not be applicable to the product as a whole and are provided for guidance only.

Appropriate engineering controls

All activities involving chemicals should be assessed for their risks to health, to ensure exposures are adequately controlled. Personal protective equipment should only be considered after other forms of control measures (e.g. engineering controls) have been suitably evaluated. Personal protective equipment should conform to appropriate standards, be suitable for use, be kept in good condition and properly maintained. Your supplier of personal protective equipment should be consulted for advice on selection and appropriate standards. For further information contact your national organisation for standards.
Provide exhaust ventilation or other engineering controls to keep the relevant airborne concentrations below their respective occupational exposure limits.
The final choice of protective equipment will depend upon a risk assessment. It is important to ensure that all items of personal protective equipment are compatible.

Environmental exposure controls

Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

Individual protection measures

Hygiene measures

Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

Eye/face protection

Safety glasses with side shields.

Skin protection

Hand protection

Wear protective gloves if prolonged or repeated contact is likely. Wear chemical resistant gloves. Recommended: Butyl gloves. Neoprene gloves. The correct choice of protective gloves depends upon the chemicals being handled, the conditions of work and use, and the condition of the gloves (even the best chemically resistant glove will break down after repeated chemical exposures). Most gloves provide only a short time of protection before they must be discarded and replaced. Because specific work environments and material handling practices vary, safety procedures should be developed for each intended application. Gloves should therefore be chosen in consultation with the supplier/manufacturer and with a full assessment of the working conditions.

Consult your supervisor or Standard Operating Procedure (S.O.P) for special handling instructions.

Body protection

Use of protective clothing is good industrial practice. Cotton or polyester/cotton overalls will only provide protection against light superficial contamination that will not soak through to the skin. Overalls should be laundered on a regular basis. When the risk of skin exposure is high (e.g. when cleaning up spillages or if there is a risk of splashing) then chemical resistant aprons and/or impervious chemical suits and boots will be required. 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.

Section 8. Exposure controls/personal protection

Other skin protection	Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.
Respiratory protection	In case of insufficient ventilation, wear suitable respiratory equipment. The correct choice of respiratory protection depends upon the chemicals being handled, the conditions of work and use, and the condition of the respiratory equipment. Safety procedures should be developed for each intended application. Respiratory protection equipment should therefore be chosen in consultation with the supplier/manufacturer and with a full assessment of the working conditions.

Section 9. Physical and chemical properties

Appearance

Physical state	Liquid.
Color	Yellow. Amber.
Odor	Not available.
Odor threshold	Not available.
pH	7.5 to 9
Melting point	<-70°C (<-94°F)
Boiling point	>260°C (>500°F)
Flash point	Closed cup: >125°C (>257°F) [Pensky-Martens.]
Evaporation rate	Not available.
Flammability (solid, gas)	Not applicable. Based on - Physical state
Lower and upper explosive (flammable) limits	Not available.
Vapor pressure	<0.133 kPa (<1 mm Hg) at 20°C
Vapor density	Not available.
Density	1065 kg/m³ (1.065 g/cm³) at 20°C
Solubility	Soluble in water.
Solubility	Insoluble in the following materials: cold water.
Partition coefficient: n-octanol/water	Not available.
Auto-ignition temperature	Not available.
Decomposition temperature	Not available.
Viscosity	Kinematic: 16 mm²/s (16 cSt) at 20°C

Section 10. Stability and reactivity

Reactivity	No specific test data available for this product. Refer to Conditions to avoid and Incompatible materials for additional information.
Chemical stability	The product is stable.
Possibility of hazardous reactions	Under normal conditions of storage and use, hazardous reactions will not occur. Under normal conditions of storage and use, hazardous polymerization will not occur.
Conditions to avoid	Avoid all possible sources of ignition (spark or flame).
Incompatible materials	Miscible in water. Do not use in brake systems requiring mineral oil. On contact these fluids will soften and may lift industrial coatings and paints. Reactive or incompatible with the following materials: strong acids

Section 10. Stability and reactivity

Strong 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

Specific target organ toxicity (repeated exposure)

Name	Category	Route of exposure	Target organs
2,2' -oxybisethanol	Category 2	Oral	kidneys

Information on the likely routes of exposure Routes of entry anticipated: Dermal, Inhalation.

Potential acute health effects

Eye contact No known significant effects or critical hazards.

Skin contact No known significant effects or critical hazards.

Inhalation Exposure to decomposition products may cause a health hazard. Serious effects may be delayed following exposure.

Ingestion No known significant effects or critical hazards.

Symptoms related to the physical, chemical and toxicological characteristics

Eye contact No specific data.

Skin contact No specific data.

Inhalation May be harmful by inhalation if exposure to vapor, mists or fumes resulting from thermal decomposition products occurs.

Ingestion No specific data.

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

Short term exposure

Potential immediate effects Not available.

Potential delayed effects Not available.

Long term exposure

Potential immediate effects Not available.

Potential delayed effects Not available.

Potential chronic health effects

General May cause damage to organs through prolonged or repeated exposure.

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

Route	ATE value
Oral	5050.5 mg/kg

Section 11. Toxicological information

Other information

Diethylene glycol: This product contains diethylene glycol which has been reported to cause CNS depression, kidney and liver damage when ingested. Diethylene glycol has also been reported to cause developmental effects in laboratory animals at maternally toxic doses, and reproductive effects in laboratory animals at high doses.

Additional information

Alkanolamine: This product contains an alkanolamine. In all metalworking fluids containing amines, there is a potential for forming nitrosamines which are animal carcinogens. Therefore, no nitrites or related nitrosating agents should be added to such compositions.

Section 12. Ecological information

Toxicity

No testing has been performed by the manufacturer.

Persistence and degradability

Expected to be biodegradable.

Bioaccumulative potential

The product is not expected to bioaccumulate.

Mobility in soil

Soil/water partition coefficient (K_{OC})

Not available.

Mobility

Spillages may penetrate the soil causing ground water contamination.

Other adverse effects

No known significant effects or critical hazards.

Other ecological information

Miscible in water.

Section 13. Disposal considerations

Disposal methods

The generation of waste should be avoided or minimized wherever possible. Significant quantities of waste product residues should not be disposed of via the foul sewer but processed in a suitable effluent treatment plant. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. 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. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. This material and its container must be disposed of in a safe way. Care should be taken when handling emptied containers that have not been cleaned or rinsed out. Empty containers or liners may retain some product residues. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

Section 14. Transport information

	DOT Classification	TDG Classification	IMDG	IATA
UN number	Not regulated.	Not regulated.	Not regulated.	Not regulated.
UN proper shipping name	-	-	-	-
Transport hazard class(es)	-	-	-	-

Section 14. Transport information

Packing group	-	-	-	-
Environmental hazards	No.	No.	No.	No.
Additional information	-	-	-	-

Special precautions for user Not available.

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

United States inventory (TSCA 8b) All components are listed or exempted.

SARA 302/304

Composition/information on ingredients

No products were found.

SARA 311/312

Classification Immediate (acute) health hazard
Delayed (chronic) health hazard

SARA 313

	Product name	CAS number	Concentration
Form R - Reporting requirements	Glycol ethers	-	1 - 14.9
Supplier notification	Glycol ethers	-	1 - 14.9

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: DIISOPROPANOLAMINE

New Jersey None of the components are listed.

Pennsylvania The following components are listed: ETHANOL, 2,2'-OXYBIS-; 2-PROPANOL, 1,1'-IMINOBIS-

California Prop. 65 **California Prop 65:** No products were found

Other regulations

Australia inventory (AICS) At least one component is not listed.

Canada inventory All components are listed or exempted.

China inventory (IECSC) All components are listed or exempted.

Japan inventory (ENCS) All components are listed or exempted.

Korea inventory (KECI) All components are listed or exempted.

Philippines inventory (PICCS) All components are listed or exempted.

REACH Status For the REACH status of this product please consult your company contact, as identified in Section 1.

Section 16. Other information

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

Health	2
Flammability	1
Physical hazards	0
Personal protection	X

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.

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

History

Date of issue/Date of revision	03/31/2014.
Date of previous issue	No previous validation.
Key to abbreviations	ACGIH = American Conference of Industrial Hygienists ATE = Acute Toxicity Estimate BCF = Bioconcentration Factor CAS Number = Chemical Abstracts Service Registry Number 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) OEL = Occupational Exposure Limit SDS = Safety Data Sheet STEL = Short term exposure limit TWA = Time weighted average UN = United Nations UN Number = United Nations Number, a four digit number assigned by the United Nations Committee of Experts on the Transport of Dangerous Goods.

Indicates information that has changed from previously issued version.

Notice to reader

All reasonably practicable steps have been taken to ensure this data sheet and the health, safety and environmental information contained in it is accurate as of the date specified below. No warranty or representation, express or implied is made as to the accuracy or completeness of the data and information in this data sheet.

The data and advice given apply when the product is sold for the stated application or applications. You should not use the product other than for the stated application or applications without seeking advice from BP Group.

It is the user's obligation to evaluate and use this product safely and to comply with all applicable laws and regulations. The BP Group shall not be responsible for any damage or injury resulting from use, other than the stated product use of the material, from any failure to adhere to recommendations, or from any hazards inherent in the nature of the material. Purchasers of the product for supply to a third party for use at work, have a duty to take all necessary steps to ensure that any person handling or using the product is provided with the information in this sheet. Employers have a duty to tell employees and others who may be affected of any hazards described in this sheet and of any precautions that should be taken. You can contact the BP Group to ensure that this document is the most current available. Alteration of this document is strictly prohibited.

Material Safety Data Sheet

1. Chemical product and company identification

Product name	Castrol High Mileage Automatic Transmission Fluid
MSDS #	465557
Historic MSDS #:	0000003100
Code	465557-US10
Product use	Transmission fluid For specific application advice see appropriate Technical Data Sheet or consult our company representative.
Manufacturer	BP Lubricants USA Inc. 1500 Valley Road Wayne, NJ 07470 Telephone: (973) 633-2200 Telecopier: (973) 633-7475
EMERGENCY HEALTH INFORMATION:	1 (800) 447-8735 Outside the US: +1 703-527-3887 (CHEMTREC)
EMERGENCY SPILL INFORMATION:	1 (800) 424-9300 CHEMTREC (USA)
OTHER PRODUCT INFORMATION	1 (866) 4 BP - MSDS (866-427-6737 Toll Free - North America) email: bpcares@bp.com

2. Composition/information on ingredients

Ingredient name	CAS #	%
Base oil - highly refined	Mixture	85
Long chain alkylamino thiophosphate	proprietary	1 - 5

3. Hazards identification

Physical state	Liquid.
Color	Not available.
Emergency overview	WARNING! CAUSES EYE IRRITATION. CAUSES SKIN IRRITATION. MAY CAUSE RESPIRATORY TRACT IRRITATION. MAY CAUSE ALLERGIC SKIN REACTION. Avoid contact with eyes, skin and clothing. Avoid breathing vapor or mist. Keep container closed. Use with adequate ventilation. Wash thoroughly after handling. Prolonged or repeated contact can defat the skin and lead to irritation, cracking and/or dermatitis.
Routes of entry	Dermal contact. Eye contact. Inhalation. Ingestion.
Potential health effects	
Eyes	Causes eye irritation.
Skin	Causes skin irritation. May cause allergic skin reaction. Prolonged or repeated contact can defat the skin and lead to irritation and/or dermatitis.
Inhalation	May cause respiratory tract irritation.

Ingestion	Ingestion may cause gastrointestinal irritation and diarrhea.
Medical conditions aggravated by over-exposure	None identified.

See toxicological information (section 11).

4. First aid measures

Eye contact	In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Get medical attention immediately.
Skin contact	Immediately wash exposed skin with soap and water. Remove contaminated clothing and shoes. Wash clothing before reuse. Thoroughly clean shoes before reuse. Get medical attention immediately.
Inhalation	If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention.
Ingestion	Do NOT induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Get medical attention if symptoms appear. If large quantities of this material are swallowed, call a physician immediately.

5. Fire-fighting measures

Flammability of the product	May be combustible at high temperature.
Flash point	>200 °C (Open cup) Cleveland.
Products of combustion	These products are carbon oxides
Unusual fire/explosion hazards	This material is not explosive as defined by established regulatory criteria.
Fire-fighting media and instructions	In case of fire, use water fog, foam, dry chemicals, or carbon dioxide. Do not use water jet.
Protective clothing (fire)	Fire-fighters should wear positive pressure self-contained breathing apparatus (SCBA) and full turnout gear.

6. Accidental release measures

Personal precautions	Immediately contact emergency personnel. Keep unnecessary personnel away. Use suitable protective equipment (See Section: "Exposure controls/personal protection"). Follow all fire fighting procedures (See Section: "Fire-fighting measures").
Environmental precautions and clean-up methods	If emergency personnel are unavailable, contain spilled material. For small spills add absorbent (soil may be used in the absence of other suitable materials) scoop up material and place in a sealed, liquid-proof container for disposal. For large spills dike spilled material or otherwise contain material to ensure runoff does not reach a waterway. Place spilled material in an appropriate container for disposal. Avoid contact of spilled material with soil and prevent runoff entering surface waterways. See Section 13 for Waste Disposal Information.
Personal protection in case of a large spill	Chemical splash goggles. Chemical resistant protective suit. Boots. Chemical resistant gloves. Vapor respirator or a self-contained breathing apparatus. Suggested protective clothing might not be sufficient; consult a specialist BEFORE handling this product. CAUTION: The protection provided by air-purifying respirators is limited. Use a positive pressure air-supplied respirator if there is any potential for an uncontrolled release, if exposure levels are not known, or if concentrations exceed the protection limits of air-purifying respirator.

7. Handling and storage

Handling

Avoid contact with skin and clothing. Avoid prolonged or repeated contact with skin. Avoid contact with eyes. Use only with adequate ventilation Avoid breathing vapor or mist. Wash thoroughly after handling.

orage

Keep container tightly closed. Keep container in a cool, well-ventilated area. Empty containers may contain harmful, flammable/combustible or explosive residue or vapors. Do not cut, grind, drill, weld, reuse or dispose of containers unless adequate precautions are taken against these hazards.

8. Exposure controls/personal protection

Occupational exposure limits

Ingredient name	Occupational exposure limits
Base oil - highly refined	**ACGIH (United States).** STEL: 10 mg/m³ 15 minute(s). Form: Oil mist, mineral TWA: 5 mg/m³ 8 hour(s). Form: Oil mist, mineral **OSHA (United States).** TWA: 5 mg/m³ 8 hour(s). Form: Oil mist, mineral
Long chain alkylamino thiophosphate	None assigned.

Some states may enforce more stringent exposure limits.

Control Measures

Provide exhaust ventilation or other engineering controls to keep the relevant airborne concentrations below their respective occupational exposure limits. Ensure that eyewash stations and safety showers are close to the work-station location.

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.

Personal protection

Eyes

Avoid contact with eyes. Chemical splash goggles.

Skin and body

Avoid contact with skin and clothing. Wear suitable protective clothing.

Respiratory

Use only with adequate ventilation In accordance with good industrial hygiene and safety work practices, airborne exposures should be controlled to the lowest extent practicable.

Hands

Wear gloves that cannot be penetrated by chemicals or oil.
Recommended: Nitrile gloves.
The correct choice of protective gloves depends upon the chemicals being handled, the conditions of work and use, and the condition of the gloves (even the best chemically resistant glove will break down after repeated chemical exposures). Most gloves provide only a short time of protection before they must be discarded and replaced. Because specific work environments and material handling practices vary, safety procedures should be developed for each intended application. Gloves should therefore be chosen in consultation with the supplier/manufacturer and with a full assessment of the working conditions.

Consult your supervisor or S.O.P. for special handling directions

Consult local authorities for acceptable exposure limits.

9. Physical and chemical properties

Physical state Liquid.

Heat of combustion Not available.

Density 860 kg/m³ (0.86 g/cm³)

Solubility insoluble in water.

Viscosity Kinematic: 8.24 mm²/s (8.24 cSt) at 100°C

10. Stability and reactivity

Stability and reactivity	The product is stable.
Conditions to avoid	Keep away from heat, sparks and flame.
Incompatibility with various substances	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.
Hazardous polymerization	Will not occur.

11. Toxicological information

Chronic toxicity

Carcinogenic effects	No component of this product at levels greater than 0.1% is identified as a carcinogen by ACGIH or the International Agency for Research on Cancer (IARC). No component of this product present at levels greater than 0.1% is identified as a carcinogen by the U.S. National Toxicology Program (NTP) or the U.S. Occupational Safety and Health Act (OSHA).
Mutagenic effects	No component of this product at levels greater than 0.1% is classified by established regulatory criteria as a mutagen.
Reproductive effects	No component of this product at levels greater than or equal to 0.1% is classified by established regulatory criteria as a reproductive toxin.
Teratogenic effects	No component of this product at levels greater than 0.1% is classified by established regulatory criteria as teratogenic or embryotoxic.

12. Ecological information

Ecotoxicity

No testing has been performed by the manufacturer.

13. Disposal considerations

Waste information

Avoid contact of spilled material and runoff with soil and surface waterways. Consult an environmental professional to determine if local, regional or national regulations would classify spilled or contaminated materials as hazardous waste. Use only approved transporters, recyclers, treatment, storage or disposal facilities. Dispose of in accordance with all applicable local and national regulations.

Consult your local or regional authorities.

14. Transport information

Not classified as hazardous for transport (DOT, TDG, IMO/IMDG, IATA/ICAO)

15. Regulatory information

U.S. Federal regulations

United States inventory (TSCA 8b): All components are listed or exempted.

TSCA 12(b) one-time export notification:: Diphenylamine

This product is not regulated under Section 302 of SARA and 40 CFR Part 355.

SARA 311/312 MSDS distribution - chemical inventory - hazard identification: Castrol High Mileage Automatic Transmission Fluid: Immediate (Acute) Health Hazard

SARA 313

Form R - Reporting requirements	This product does not contain any hazardous ingredients at or above regulated thresholds.
Supplier notification	This product does not contain any hazardous ingredients at or above regulated thresholds.
	CERCLA Sections 102a/103 Hazardous Substances (40 CFR Part 302.4):: This material is not regulated under CERCLA Sections 103 and 107.

State regulations

Massachusetts Substances	**Massachusetts RTK**: The following components are listed: MINERAL OIL, PETROLEUM DISTILLATES, HYDROTREATED LIGHT PARAFFINIC
New Jersey Hazardous Substances	**New Jersey Hazardous Substances**: None of the components are listed.
Pennsylvania RTK Hazardous Substances	**Pennsylvania RTK**: None of the components are listed.
	California Prop 65: No products were found
Inventories	**Canada inventory:** All components are listed or exempted.
	Europe inventory: At least one component is not listed in EINECS but all such components are listed in ELINCS. Please contact your supplier for information on the inventory status of this material.
	Australia inventory (AICS): At least one component is not listed.
	China inventory (IECSC): All components are listed or exempted.
	Japan inventory (ENCS): At least one component is not listed.
	Korea inventory (KECI): All components are listed or exempted.
	Philippines inventory (PICCS): At least one component is not listed.

16. Other information

Label requirements

WARNING!

CAUSES EYE IRRITATION.
CAUSES SKIN IRRITATION.
MAY CAUSE RESPIRATORY TRACT IRRITATION.
MAY CAUSE ALLERGIC SKIN REACTION.

HMIS® Rating :

Health	**2**
Flammability	**1**
Physical Hazard	**0**
Personal protection	**X**

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

History

Date of issue 06/11/2007.

Date of previous issue 06/07/2007.

Prepared by Product Stewardship

Notice to reader

NOTICE : This Material Safety Data Sheet is based upon data considered to be accurate at the time of its preparation. Despite our efforts, it may not be up to date or applicable to the circumstances of any particular case. We are not responsible for any damage or injury resulting from abnormal use, from any failure to follow appropriate practices or from hazards inherent in the nature of the product.

SAFETY DATA SHEET

Castrol Power Steering Fluid

Section 1. Identification

GHS product identifier	Castrol Power Steering Fluid
Product code	461707-CA01
SDS #	461707

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

Use of the substance/ mixture	Automatic transmission fluid For specific application advice see appropriate Technical Data Sheet or consult our company representative.
Manufacturer	BP Lubricants USA Inc. 1500 Valley Road Wayne, NJ 07470 Telephone: (973) 633-2200
Supplier	Wakefield Canada, Limited 3620 Lakeshore Blvd West Toronto, Ontario, Canada M8W 1P2 Phone Number - 416-252-5511
EMERGENCY HEALTH INFORMATION:	1 (800) 447-8735 Outside the US: +1 703-527-3887 (CHEMTREC)
EMERGENCY TELEPHONE NUMBER	1 (800) 447-8735 Outside the US: +1 703-527-3887 (CHEMTREC)

Section 2. Hazard identification

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	P103 - Read label before use. P102 - Keep out of reach of children. P101 - If medical advice is needed, have product container or label at hand.
Prevention	Not applicable.
Response	Not applicable.
Storage	Not applicable.
Disposal	Not applicable.
Other hazards which do not result in classification	Defatting to the skin.

Section 3. Composition/information on ingredients

Substance/mixture Mixture

Ingredient name	CAS number	% (w/w)
Base oil - highly refined	Varies - See Key to abbreviations	≥90
Base oil - highly refined	Varies - See Key to abbreviations	≤10
Methacrylate copolymer	Proprietary	≤3
Alkoxylated long chain alkyl amine	Proprietary	≤0.3

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 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 In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Eyelids should be held away from the eyeball to ensure thorough rinsing. Check for and remove any contact lenses. Get medical attention.

Skin contact Wash skin thoroughly with soap and water or use recognized skin cleanser. Remove contaminated clothing and shoes. Wash clothing before reuse. Clean shoes thoroughly before reuse. Get medical attention if symptoms occur.

Inhalation If inhaled, remove to fresh air. Get medical attention if symptoms occur.

Ingestion Do not induce vomiting unless directed to do so by medical personnel. Get medical attention if symptoms occur.

Protection of first-aiders No action shall be taken involving any personal risk or without suitable training.

Most important symptoms/effects, acute and delayed

See Section 11 for more detailed information on health effects and symptoms.

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

Notes to physician Treatment should in general be symptomatic and directed to relieving any effects.

Specific treatments No specific treatment.

Section 5. Fire-fighting measures

Extinguishing media

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

Unsuitable extinguishing media Do not use water jet.

Specific hazards arising from the chemical In a fire or if heated, a pressure increase will occur and the container may burst.

Hazardous thermal decomposition products Combustion products may include the following:
carbon dioxide
carbon monoxide

Special protective actions for fire-fighters Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training.

Special protective equipment for fire-fighters Fire-fighters should wear positive pressure self-contained breathing apparatus (SCBA) and full turnout gear.

Section 6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

For non-emergency personnel	No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Put on appropriate personal protective equipment. Floors may be slippery; use care to avoid falling.
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. Absorb with an inert material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.
Large spill	Stop leak if without risk. Move containers from spill area. 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. Dispose of via a licensed waste disposal contractor.

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. Wash thoroughly after handling. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.
Conditions for safe storage, including any incompatibilities	Store in accordance with local regulations. Store in 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. Store and use only in equipment/containers designed for use with this product. 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.
Not suitable	Prolonged exposure to elevated temperature

Section 8. Exposure controls/personal protection

Control parameters

Occupational exposure limits

Ingredient name	Exposure limits
Base oil - highly refined	**CA Alberta Provincial (Canada).** 15 min OEL: 10 mg/m³ 15 minutes. Issued/Revised: 7/2009 Form: Mist 8 hrs OEL: 5 mg/m³ 8 hours. Issued/Revised: 4/2004 Form: Mist **CA Québec Provincial (Canada).** STEV: 10 mg/m³ 15 minutes. Issued/Revised: 1/2000 Form: mist TWAEV: 5 mg/m³ 8 hours. Issued/Revised: 1/2000 Form: mist
Base oil - highly refined	**CA Alberta Provincial (Canada).** 15 min OEL: 10 mg/m³ 15 minutes. Issued/Revised: 7/2009 Form: Mist 8 hrs OEL: 5 mg/m³ 8 hours. Issued/Revised: 4/2004 Form: Mist

	CA Québec Provincial (Canada). STEV: 10 mg/m³ 15 minutes. Issued/Revised: 1/2000 Form: mist TWAEV: 5 mg/m³ 8 hours. Issued/Revised: 1/2000 Form: mist

Appropriate engineering controls

All activities involving chemicals should be assessed for their risks to health, to ensure exposures are adequately controlled. Personal protective equipment should only be considered after other forms of control measures (e.g. engineering controls) have been suitably evaluated. Personal protective equipment should conform to appropriate standards, be suitable for use, be kept in good condition and properly maintained.
Your supplier of personal protective equipment should be consulted for advice on selection and appropriate standards. For further information contact your national organisation for standards.
Provide exhaust ventilation or other engineering controls to keep the relevant airborne concentrations below their respective occupational exposure limits.
The final choice of protective equipment will depend upon a risk assessment. It is important to ensure that all items of personal protective equipment are compatible.

Environmental exposure controls

Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

Individual protection measures

Hygiene measures

Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

Eye/face protection

Safety glasses with side shields.

Skin protection

Hand protection

Wear protective gloves if prolonged or repeated contact is likely. Wear chemical resistant gloves. Recommended: Nitrile gloves. The correct choice of protective gloves depends upon the chemicals being handled, the conditions of work and use, and the condition of the gloves (even the best chemically resistant glove will break down after repeated chemical exposures). Most gloves provide only a short time of protection before they must be discarded and replaced. Because specific work environments and material handling practices vary, safety procedures should be developed for each intended application. Gloves should therefore be chosen in consultation with the supplier/manufacturer and with a full assessment of the working conditions.

Body protection

Use of protective clothing is good industrial practice.
Cotton or polyester/cotton overalls will only provide protection against light superficial contamination that will not soak through to the skin. Overalls should be laundered on a regular basis. When the risk of skin exposure is high (e.g. when cleaning up spillages or if there is a risk of splashing) then chemical resistant aprons and/or impervious chemical suits and boots will be required.
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.

Section 8. Exposure controls/personal protection

Respiratory protection	In case of insufficient ventilation, wear suitable respiratory equipment. The correct choice of respiratory protection depends upon the chemicals being handled, the conditions of work and use, and the condition of the respiratory equipment. Safety procedures should be developed for each intended application. Respiratory protection equipment should therefore be chosen in consultation with the supplier/manufacturer and with a full assessment of the working conditions.

Section 9. Physical and chemical properties

Appearance	
Physical state	Liquid.
Color	Brown.
Odor	Not available.
Odor threshold	Not available.
pH	Not available.
Melting point	Not available.
Boiling point	Not available.
Flash point	Open cup: >200°C (>392°F) [Cleveland.]
Pour point	-42 °C
Drop Point	Not available.
Evaporation rate	Not available.
Flammability (solid, gas)	Not applicable. Based on - Physical state
Lower and upper explosive (flammable) limits	Not available.
Vapor pressure	Not available.
Vapor density	Not available.
Density	<1000 kg/m³ (<1 g/cm³) at 15°C
Relative density	Not available.
Solubility	insoluble in water.
Partition coefficient: n-octanol/water	Not available.
Auto-ignition temperature	Not available.
Decomposition temperature	Not available.
Viscosity	Kinematic: 35 to 40 mm²/s (35 to 40 cSt) at 40°C Kinematic: 7.1 to 7.6 mm²/s (7.1 to 7.6 cSt) at 100°C

Section 10. Stability and reactivity

Reactivity	No specific test data available for this product. Refer to Conditions to avoid and Incompatible materials for additional information.
Chemical stability	The product is stable.
Possibility of hazardous reactions	Under normal conditions of storage and use, hazardous reactions will not occur. Under normal conditions of storage and use, hazardous polymerization will not occur.
Conditions to avoid	Avoid all possible sources of ignition (spark or flame).
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

Aspiration hazard

Name	Result
Base oil - highly refined	ASPIRATION HAZARD - Category 1

Information on the likely routes of exposure Routes of entry anticipated: Dermal, Inhalation.

Potential acute health effects

Eye contact No known significant effects or critical hazards.

Skin contact Defatting to the skin. May cause skin dryness and irritation.

Inhalation Vapor inhalation under ambient conditions is not normally a problem due to low vapor pressure.

Ingestion No known significant effects or critical hazards.

Symptoms related to the physical, chemical and toxicological characteristics

Eye contact No specific data.

Inhalation May be harmful by inhalation if exposure to vapor, mists or fumes resulting from thermal decomposition products occurs.

Skin contact Adverse symptoms may include the following:
irritation
dryness
cracking

Ingestion No specific data.

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

Short term exposure

Potential immediate effects Not available.

Potential delayed effects Not available.

Long term exposure

Potential immediate effects Not available.

Potential delayed effects Not available.

Potential chronic health effects

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

Not available.

Section 12. Ecological information

Toxicity

No testing has been performed by the manufacturer.

Persistence and degradability

Expected to be biodegradable.

Bioaccumulative potential

This product is not expected to bioaccumulate through food chains in the environment.

Section 12. Ecological information

Mobility in soil

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

Mobility Spillages may penetrate the soil causing ground water contamination.

Other ecological information Spills may form a film on water surfaces causing physical damage to organisms. Oxygen transfer could also be impaired.

Section 13. Disposal considerations

Disposal methods The generation of waste should be avoided or minimized wherever possible. Significant quantities of waste product residues should not be disposed of via the foul sewer but processed in a suitable effluent treatment plant. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. 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. 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	TDG Classification	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	-	-	-	-

Special precautions for user Not available.

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

Section 15. Regulatory information

Other regulations

Australia inventory (AICS)	All components are listed or exempted.
Canada inventory	All components are listed or exempted.
China inventory (IECSC)	All components are listed or exempted.
Japan inventory (ENCS)	All components are listed or exempted.
Korea inventory (KECI)	All components are listed or exempted.
Philippines inventory (PICCS)	All components are listed or exempted.
Taiwan Chemical Substances Inventory (TCSI)	All components are listed or exempted.
United States inventory (TSCA 8b)	All components are listed or exempted.
REACH Status	For the REACH status of this product please consult your company contact, as identified in Section 1.

Section 16. Other information

History

Date of issue/Date of revision	03/04/2017
Date of previous issue	13/12/2016.
Version	4
Prepared by	Product Stewardship
Key to abbreviations	ATE = Acute Toxicity Estimate BCF = Bioconcentration Factor CAS Number = Chemical Abstracts Service Registry Number GHS = Globally Harmonized System of Classification and Labelling of Chemicals IATA = International Air Transport Association IBC = Intermediate Bulk Container IMDG = International Maritime Dangerous Goods LogPow = logarithm of the octanol/water partition coefficient MARPOL = International Convention for the Prevention of Pollution From Ships, 1973 as modified by the Protocol of 1978. ("Marpol" = marine pollution) UN = United Nations HPR = Hazardous Products Regulations Varies = may contain one or more of the following 101316-69-2, 101316-70-5, 101316-71-6, 101316-72-7, 64741-88-4, 64741-89-5, 64741-95-3, 64741-96-4, 64741-97-5, 64742-01-4, 64742-44-5, 64742-45-6, 64742-52-5, 64742-53-6, 64742-54-7, 64742-55-8, 64742-56-9, 64742-57-0, 64742-58-1, 64742-62-7, 64742-63-8, 64742-64-9, 64742-65-0, 64742-70-7, 72623-85-9, 72623-86-0, 72623-87-1, 74869-22-0, 90669-74-2
References	Not available.

Indicates information that has changed from previously issued version.

Notice to reader

All reasonably practicable steps have been taken to ensure this data sheet and the health, safety and environmental information contained in it is accurate as of the date specified below. No warranty or representation, express or implied is made as to the accuracy or completeness of the data and information in this data sheet.

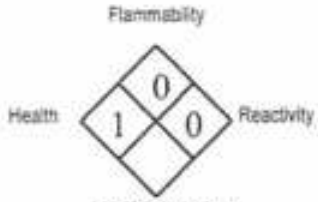
The data and advice given apply when the product is sold for the stated application or applications. You should not use the product other than for the stated application or applications without seeking advice from BP Group.

It is the user's obligation to evaluate and use this product safely and to comply with all applicable laws and regulations. The BP Group shall not be responsible for any damage or injury resulting from use, other than the stated product use of the material, from any failure to adhere to recommendations, or from any hazards inherent in the nature of the material. Purchasers of the product for supply to a third party for use at work, have a duty to take all necessary steps to ensure that any person handling or using the product is provided with the information in this sheet. Employers have a

Section 16. Other information

duty to tell employees and others who may be affected of any hazards described in this sheet and of any precautions that should be taken. You can contact the BP Group to ensure that this document is the most current available. Alteration of this document is strictly prohibited.

Document # 6810-004



HMIS Rating

MATERIAL SAFETY DATA SHEET

GENERAL INFORMATION

PRODUCT NAME OR NUMBER (as it appears on label)	CATALOG NUMBER
ClearGlide™ Wire Pulling Lubricant	All "31" Series
MANUFACTURER'S NAME	EMERGENCY TELEPHONE NO.
IDEAL INDUSTRIES, INC.	**(815) 895-5181**
ADDRESS (Number, Street, City, State, Zip Code)	
Becker Place, Sycamore, IL 60178	
HAZARDOUS MATERIAL DESCRIPTION, PROPER SHIPPING NAME, HAZARD CLASS, HAZARD CLASS, HAZARD ID NO. (49 CFR 172.101)	
None	
CHEMICAL DESCRIPTION	FORMULA
Polymer-based Mixture	Proprietary

SECTION I - INGREDIENTS

CAS REGISTRY NO.	%W	CHEMICAL NAME(S)*	Listed as a carcinogen in NTP, I ARC or OSHA 1910.(z) (specify)
7732-18-5	<98	Water	No
6440-58-0	<1	DMDM Hydantoin	No
9038-95-3	<5	Oxirane, Methyl-, Polymer With Oxirane, Monobutyl Ether	No
9003-11-6	<1	Amino-Methyl-Propanol	No
25322-68-3	<1	Polyethylene Glycol	No
9003-01-4	<1	Carbomer Thickener	No
68037-64-9	<1	Silicone Glycol Blend	No

SECTION II - PHYSICAL DATA

BOILING POINT	SPECIFIC GRAVITY (H_2O=1)	PERCENT VOLATILE BY VOLUME (%)
212°F °C	1.09	<98
SOLUBILITY IN WATER	pH =	PERCENT SOLID BY WEIGHT (%)
Infinite	7.0 - 8.0	~5
APPEARANCE AND ODOR		IS MATERIAL: LIQUID SOLID (GEL) GAS PASTE
Clear, colorless gel, slight odor		

SECTION III - FIRE AND EXPLOSION HAZARD DATA

FLASH POINT	method used	FLAMMABLE LIMITS	LEL	UEL
None	C.O.C		None	None

EXTINGUISHING MEDIA

Use extinguishing media suitable for surrounding materials.

SPECIAL FIRE FIGHTING PROCEDURES

None

UNUSUAL FIRE AND EXPLOSION HAZARDS

None

* None of the chemical raw materials contained in this formulation are considered hazardous under the Federal Hazards Communication Standard 29 C. F. R 1910.1200

SECTION IV - HEALTH HAZARD INFORMATION

EFFECTS OF OVEREXPOSURE - Conditions to Avoid	None normally expected. Upon prolonged contact, may cause temporary eye discomfort.
THRESHOLD LIMIT VALUE	N.E.
PRIMARY ROUTES OF ENTRY Inhalation ☐ Skin Contact ☒ Other (specify)	
EMERGENCY FIRST AID PROCEDURES	
SKIN CONTACT:	Wash with soap and water for 15 minutes.
EYE CONTACT:	Flush with water for 15 minutes. Inhalation - Move to fresh air.
INGESTION:	Administer water or milk. Consult physician or local poison control center.

SECTION V - REACTIVITY DATA

STABILITY	UNSTABLE		CONDITIONS TO AVOID: Avoid prolonged storage at temperatures exceeding 190 F.
	STABLE	X	
INCOMPATIBILITY (materials to avoid)	Avoid strong oxidizers and nitrites.		
HAZARDOUS DECOMPOSTION PRODUCTS:	Oxides of carbon, nitrogen and silicone		
HAZARDOUS POLYMERIZATION	MAY OCCUR		CONDITIONS TO AVOID: None
	WILL NOT OCCUR	X	

SECTION VI - SPILL AND LEAK PROCEDURES

STEPS TO BE TAKEN IF MATERIAL IS RELEASED OR SPILLED	Wipe up, shovel or vacuum spilled material. Clean up spills immediately as they can be dangerously slippery.
WASTE DISPOSAL METHOD	Comply with Federal, state or local regulations for solid landfill.
CERCLA (Superfund) REPORTABLE QUANTITY (in lbs)	N/A
RCRA HAZARDOUS WASTE NO. (40CFR 261.33)	N/A
VOLATILE ORGANIC COMPOUND (VOC) (as packaged, minus water)	17.4 gms / ltr
☐ Theoretical _____ lb/gal N/A	☐ Analytical _____ lb/gal N/A

SECTION VII - PERSONAL PROTECTION INFORMATION

RESPIRATORY PROTECTION (specify type)	None normally required.		
VENTILATION	LOCAL EXHAUST (Specify Rate) None	SPECIAL	None
	MECHANICAL (General) (Specify Rate) Recommended in closed areas.	OTHER	None
PROTECTIVE GLOVES (specify type)	None normally	EYE PROTECTION (specify type)	Safety glasses or splash goggles.
OTHER PROTECTIVE EQUIPMENT	Eye fountain in work area is recommended.		

SECTION VIII - SPECIAL PRECAUTIONS

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORING	Store at temperatures between 40 - 180 F. Avoid freezing.
OTHER PRECAUTIONS	Keep away from children, infants and pets.

SECTION IX - ADDITIONAL INFORMATION

N/A = Not Applicable, N.E. = None Established

THIS MATERIAL SAFETY DATA SHEET PREPARED BY:		
NAME	James R. MacMurdo	SIGNATURE
TITLE	Director, Corporate Quality Assurance	
DATE	02/11/2009	

SAFETY DATA SHEET

1. Identification

Product identifier	**Cutting Oil Thread Cutting Lubricant**
Other means of identification	
Product code	14050
Recommended use	Cutting oil
Recommended restrictions	None known.

Manufacturer/Importer/Supplier/Distributor information

Manufactured or sold by:

Company name	CRC Industries, Inc.
Address	885 Louis Dr. Warminster, PA 18974 US
Telephone	
General Information	215-674-4300
Technical Assistance	800-521-3168
Customer Service	800-272-4620
24-Hour Emergency (CHEMTREC)	800-424-9300 (US) 703-527-3887 (International)
Website	www.crcindustries.com

2. Hazard(s) identification

Physical hazards	Flammable aerosols	Category 1
	Gases under pressure	Liquefied gas
Health hazards	Not classified.	
Environmental hazards	Not classified.	
OSHA defined hazards	Not classified.	

Label elements

Signal word	Danger
Hazard statement	Extremely flammable aerosol. Contains gas under pressure; may explode if heated.
Precautionary statement	
Prevention	Keep away from heat/sparks/open flames/hot surfaces. - No smoking. Do not spray on an open flame or other ignition source. Do not apply while equipment is energized. Pressurized container: Do not pierce or burn, even after use. Extinguish all flames, pilot lights and heaters. Vapors will accumulate readily and may ignite. Use only with adequate ventilation; maintain ventilation during use and until all vapors are gone. Open doors and windows or use other means to ensure a fresh air supply during use and while product is drying. If you experience any symptoms listed on this label, increase ventilation or leave the area.
Response	Wash hands after handling.
Storage	Store in a well-ventilated place. Protect from sunlight. Do not expose to temperatures exceeding 50°C/122°F. Exposure to high temperature may cause can to burst.
Disposal	Dispose of contents/container in accordance with local/regional/national regulations.
Hazard(s) not otherwise classified (HNOC)	None known.

3. Composition/information on ingredients

Mixtures

Chemical name	Common name and synonyms	CAS number	%
Distillates (petroleum), hydrotreated heavy naphthenic		64742-52-5	70 - 80
Liquefied Petroleum Gas		68476-86-8	20 - 30

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

4. First-aid measures

Inhalation	Move to fresh air. Call a physician if symptoms develop or persist.
Skin contact	Rinse skin with water/shower. Get medical attention if irritation develops and persists.
Eye contact	Rinse with water. Get medical attention if irritation develops and persists.
Ingestion	If swallowed, observe for signs of stomach discomfort or nausea. If symptoms persist, seek medical help. Do not induce vomiting. If there is any suspicion of aspiration into lungs, obtain immediate medical attention.
Most important symptoms/effects, acute and delayed	Direct contact with eyes may cause temporary irritation.
Indication of immediate medical attention and special treatment needed	Provide general supportive measures and treat symptomatically.
General information	Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves.

5. Fire-fighting measures

Suitable extinguishing media	Water fog. Foam. Dry chemical powder. Carbon dioxide (CO2).
Unsuitable extinguishing media	Do not use water jet as an extinguisher, as this will spread the fire.
Specific hazards arising from the chemical	Contents under pressure. Pressurized container may rupture when exposed to heat or flame. During fire, gases hazardous to health may be formed.
Special protective equipment and precautions for firefighters	Firefighters must use standard protective equipment including flame retardant coat, helmet with face shield, gloves, rubber boots, and in enclosed spaces, SCBA.
Fire-fighting equipment/instructions	In case of fire: Stop leak if safe to do so. Move containers from fire area if you can do so without risk. Containers should be cooled with water to prevent vapor pressure build up.
General fire hazards	Extremely flammable aerosol. Contents under pressure. Pressurized container may rupture when exposed to heat or flame.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures	Keep unnecessary personnel away. Keep people away from and upwind of spill/leak. Keep out of low areas. Many vapors are heavier than air and will spread along ground and collect in low or confined areas (sewers, basements, tanks). Wear appropriate protective equipment and clothing during clean-up. Emergency personnel need self-contained breathing equipment. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Ventilate closed spaces before entering them. Local authorities should be advised if significant spillages cannot be contained. For personal protection, see section 8 of the SDS.
Methods and materials for containment and cleaning up	Eliminate all ignition sources (no smoking, flares, sparks, or flames in immediate area). Keep combustibles (wood, paper, oil, etc.) away from spilled material. Stop the flow of material, if this is without risk. Wipe up with absorbent material (e.g. cloth, fleece). Clean surface thoroughly to remove residual contamination. For waste disposal, see section 13 of the SDS.
Environmental precautions	Avoid discharge into drains, water courses or onto the ground.

7. Handling and storage

Precautions for safe handling	Pressurized container: Do not pierce or burn, even after use. Do not use if spray button is missing or defective. Do not spray on a naked flame or any other incandescent material. Do not smoke while using or until sprayed surface is thoroughly dry. Do not cut, weld, solder, drill, grind, or expose containers to heat, flame, sparks, or other sources of ignition. Use caution around energized equipment. The metal container will conduct electricity if it contacts a live source. This may result in injury to the user from electrical shock and/or flash fire. Use only in well-ventilated areas. Wear appropriate personal protective equipment. Observe good industrial hygiene practices. For product usage instructions, please see the product label.

Conditions for safe storage, including any incompatibilities

Level 3 Aerosol.

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

8. Exposure controls/personal protection

Occupational exposure limits

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

Components	Type	Value	Form
Distillates (petroleum), hydrotreated heavy naphthenic (CAS 64742-52-5)	PEL	5 mg/m3	Mist.
		2000 mg/m3 500 ppm	

US. ACGIH Threshold Limit Values

Components	Type	Value	Form
Distillates (petroleum), hydrotreated heavy naphthenic (CAS 64742-52-5)	TWA	5 mg/m3	Inhalable fraction.

US. NIOSH: Pocket Guide to Chemical Hazards

Components	Type	Value	Form
Distillates (petroleum), hydrotreated heavy naphthenic (CAS 64742-52-5)	Ceiling	1800 mg/m3	
	STEL	10 mg/m3	Mist.

Biological limit values

No biological exposure limits noted for the ingredient(s).

Appropriate engineering controls

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

Individual protection measures, such as personal protective equipment

Eye/face protection

Wear safety glasses with side shields (or goggles).

Skin protection

Hand protection

Wear protective gloves such as: Nitrile. Neoprene.

Other

Wear suitable protective clothing.

Respiratory protection

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

Thermal hazards

Wear appropriate thermal protective clothing, when necessary.

General hygiene considerations

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

9. Physical and chemical properties

Appearance

Physical state

Liquid.

Form

Aerosol.

Color

Brown.

Odor

Mild petroleum.

Odor threshold

Not available.

pH

Not available.

Melting point/freezing point	-40 °F (-40 °C) estimated
Initial boiling point and boiling range	500 °F (260 °C) estimated
Flash point	> 300 °F (> 148.9 °C) Cleveland Open Cup
Evaporation rate	Slow.
Flammability (solid, gas)	Not available.
Upper/lower flammability or explosive limits	
Flammability limit - lower (%)	Not available.
Flammability limit - upper (%)	Not available.
Vapor pressure	965.3 hPa estimated
Vapor density	> 5 (air = 1)
Relative density	0.85
Solubility (water)	Negligible.
Partition coefficient (n-octanol/water)	Not available.
Auto-ignition temperature	600 °F (315.6 °C) estimated
Decomposition temperature	Not available.
Viscosity (kinematic)	Not available.
Percent volatile	94.4 % estimated

10. Stability and reactivity

Reactivity	The product is stable and non-reactive under normal conditions of use, storage and transport.
Chemical stability	Material is stable under normal conditions.
Possibility of hazardous reactions	No dangerous reaction known under conditions of normal use.
Conditions to avoid	Heat, flames and sparks. Contact with incompatible materials.
Incompatible materials	Strong oxidizing agents.
Hazardous decomposition products	Carbon oxides. Sulfur oxides. Aldehydes.

11. Toxicological information

Information on likely routes of exposure

Inhalation	Prolonged inhalation may be harmful.
Skin contact	Prolonged skin contact may cause temporary irritation.
Eye contact	Direct contact with eyes may cause temporary irritation.
Ingestion	Expected to be a low ingestion hazard.
Symptoms related to the physical, chemical and toxicological characteristics	Direct contact with eyes may cause temporary irritation.

Information on toxicological effects

Acute toxicity Not available.

Product	Species	Test Results
Cutting Oil Thread Cutting Lubricant		
Acute		
Dermal		
LD50	Rabbit	2841 mg/kg estimated
Inhalation		
LC50	Rat	30 mg/l, 4 hours estimated

Product	Species	Test Results
Oral		
LD50	Rat	5924 mg/kg estimated

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

Skin corrosion/irritation	Prolonged skin contact may cause temporary irritation.
Serious eye damage/eye irritation	Direct contact with eyes may cause temporary irritation.
Respiratory sensitization	Not a respiratory sensitizer.
Skin sensitization	This product is not expected to cause skin sensitization.
Germ cell mutagenicity	No data available to indicate product or any components present at greater than 0.1% are mutagenic or genotoxic.
Carcinogenicity	This product is not considered to be a carcinogen by IARC, ACGIH, NTP, or OSHA.
Reproductive toxicity	This product is not expected to cause reproductive or developmental effects.
Specific target organ toxicity - single exposure	Not classified.
Specific target organ toxicity - repeated exposure	Not classified.
Aspiration hazard	Not expected to be an aspiration hazard.

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.

Product		Species	Test Results
Cutting Oil Thread Cutting Lubricant			
Aquatic			
Acute			
Crustacea	EC50	Daphnia	25000 mg/l, 48 hours estimated
Fish	LC50	Fish	16094.4199 mg/l, 96 hours estimated

Components		Species	Test Results
Distillates (petroleum), hydrotreated heavy naphthenic (CAS 64742-52-5)			
Aquatic			
Acute			
Fish	LC50	Pimephales promelas	> 30000 mg/l, 96 hours

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

Persistence and degradability	No data is available on the degradability of this product.
Bioaccumulative potential	No data available.
Mobility in soil	No data available.
Other adverse effects	No other adverse environmental effects (e.g. ozone depletion, photochemical ozone creation potential, endocrine disruption, global warming potential) are expected from this component.

13. Disposal considerations

Disposal of waste from residues / unused products	The dispensed liquid product is not a RCRA hazardous waste (See 40 CFR Part 261.20 - 261.33). Empty container can be recycled. Collect and reclaim or dispose in sealed containers at licensed waste disposal site. Dispose in accordance with all applicable regulations.
Hazardous waste code	Not regulated.
Contaminated packaging	Since emptied containers may retain product residue, follow label warnings even after container is emptied. Empty containers should be taken to an approved waste handling site for recycling or disposal.

14. Transport information

DOT

UN number	UN1950
UN proper shipping name	Aerosols, flammable, Limited Quantity

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

IATA

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

IMDG

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

15. Regulatory information

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

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

Not regulated.

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

Not listed.

SARA 304 Emergency release notification

Not regulated.

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

Not listed.

CERCLA Hazardous Substance List (40 CFR 302.4)

Not listed.

CERCLA Hazardous Substances: Reportable quantity

Not listed.

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

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

Not regulated.

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

Not regulated.

Safe Drinking Water Act (SDWA)	Not regulated.
Food and Drug Administration (FDA)	Not regulated.

Superfund Amendments and Reauthorization Act of 1986 (SARA)

Section 311/312 Hazard categories	Immediate Hazard - No Delayed Hazard - No Fire Hazard - Yes Pressure Hazard - Yes Reactivity Hazard - No
SARA 302 Extremely hazardous substance	No

US state regulations

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

Liquefied Petroleum Gas (CAS 68476-86-8)
Distillates (petroleum), hydrotreated heavy naphthenic (CAS 64742-52-5)

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

Not listed.

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

Distillates (petroleum), hydrotreated heavy naphthenic (CAS 64742-52-5)

US. Massachusetts RTK - Substance List

Distillates (petroleum), hydrotreated heavy naphthenic (CAS 64742-52-5)

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

Not listed.

US. Rhode Island RTK

None.

US. California Proposition 65

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

Volatile organic compounds (VOC) regulations

EPA

VOC content (40 CFR 51.100(s))	100 %
Consumer products (40 CFR 59, Subpt. C)	Not regulated

State

Consumer products	This product is regulated as a Cutting or Tapping Oil (aerosol). This product is compliant for use in all 50 states. Local restriction: This product cannot be used in the South Coast Air Quality Management District of California.
VOC content (CA)	20 %
VOC content (OTC)	20 %

International Inventories

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

Country(s) or region	Inventory name	On inventory (yes/no)*
United States & Puerto Rico	Toxic Substances Control Act (TSCA) Inventory	Yes

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

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

Issue date	04-28-2015
Revision date	05-21-2015
Prepared by	Allison Cho
Version #	02
Further information	CRC # 574
HMIS® ratings	Health: 1 Flammability: 3 Physical hazard: 0 Personal protection: B
NFPA ratings	Health: 1 Flammability: 3 Instability: 0
NFPA ratings	
Disclaimer	The information contained in this document applies to this specific material as supplied. It may not be valid for this material if it is used in combination with any other materials. This information is accurate to the best of CRC Industries' knowledge or obtained from sources believed by CRC to be accurate. Before using any product, read all warnings and directions on the label. For further clarification of any information contained on this (M)SDS consult your supervisor, a health & safety professional, or CRC Industries.

SAFETY DATA SHEET

1. Identification

Product identifier **Glycerin-USP**

Other means of identification

Product Number 0701154

Recommended use Not available.

Recommended restrictions None known.

Manufacturer/Importer/Supplier/Distributor information

Manufacturer

Company name	Thatcher Company, Inc.	
Address	1905 Fortune Road Salt Lake City, UT 84104 United States	
Telephone	General Assistance 8-5	(801) 972-4587
E-mail	Not available.	
Emergency phone number	Chemtrec (CCN 22106)	(800) 424-9300

2. Hazard(s) identification

Physical hazards Not classified.

Health hazards Not classified.

Environmental hazards Not classified.

OSHA defined hazards Not classified.

Label elements

Hazard symbol None.

Signal word None.

Hazard statement The substance does not meet the criteria for classification.

Precautionary statement

Prevention Not available.

Response Not available.

Storage Not available.

Disposal Not available.

Hazard(s) not otherwise classified (HNOC) None known.

Supplemental information Not applicable.

3. Composition/information on ingredients

Substances

Chemical name	Common name and synonyms	CAS number	%
Glycerin		56-81-5	100

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

4. First-aid measures

Inhalation Call a physician if symptoms develop or persist.

Skin contact Get medical attention if irritation develops and persists.

Eye contact Get medical attention if irritation develops and persists.

Ingestion Get medical attention if symptoms occur.

Most important symptoms/effects, acute and delayed Not available.

Indication of immediate medical attention and special treatment needed	Treat symptomatically.
General information	Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves.

5. Fire-fighting measures

Suitable extinguishing media	Alcohol resistant foam. Water fog. Dry chemical powder. Carbon dioxide (CO2).
Unsuitable extinguishing media	Do not use water jet as an extinguisher, as this will spread the fire.
Specific hazards arising from the chemical	Not applicable.
Special protective equipment and precautions for firefighters	Wear suitable protective equipment.
Fire fighting equipment/instructions	Move containers from fire area if you can do so without risk.
Specific methods	Use standard firefighting procedures and consider the hazards of other involved materials.
General fire hazards	No unusual fire or explosion hazards noted.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures	Keep unnecessary personnel away. Keep people away from and upwind of spill/leak. Keep out of low areas. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. For personal protection, see section 8 of the SDS.
Methods and materials for containment and cleaning up	This product is miscible in water. Large Spills: Stop the flow of material, if this is without risk. Dike the spilled material, where this is possible. Cover with plastic sheet to prevent spreading. Absorb in vermiculite, dry sand or earth and place into containers. Use water spray to reduce vapors or divert vapor cloud drift. Prevent entry into waterways, sewer, basements or confined areas. Following product recovery, flush area with water. Small Spills: Wipe up with absorbent material (e.g. cloth, fleece). Clean surface thoroughly to remove residual contamination. Never return spills to original containers for re-use. For waste disposal, see section 13 of the SDS.
Environmental precautions	Avoid discharge into drains, water courses or onto the ground.

7. Handling and storage

Precautions for safe handling	Avoid prolonged exposure. Observe good industrial hygiene practices.
Conditions for safe storage, including any incompatibilities	Store in original tightly closed container. Store away from incompatible materials (see Section 10 of the SDS).

8. Exposure controls/personal protection

Occupational exposure limits

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

Material	Type	Value	Form
Glycerin (CAS 56-81-5)	PEL	5 mg/m3	Respirable fraction.
		15 mg/m3	Total dust.

Biological limit values	No biological exposure limits noted for the ingredient(s).
Appropriate engineering controls	Good general ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level.

Individual protection measures, such as personal protective equipment

Eye/face protection	Wear safety glasses with side shields (or goggles).
Skin protection	
Hand protection	Wear protective gloves.
Other	Wear appropriate chemical resistant clothing.

Respiratory protection	When workers are facing concentrations above the exposure limit they must use appropriate certified respirators.
Thermal hazards	Wear appropriate thermal protective clothing, when necessary.
General hygiene considerations	Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants.

9. Physical and chemical properties

Appearance	
Physical state	Liquid.
Form	Liquid.
Color	Not available.
Odor	Not available.
Odor threshold	Not available.
pH	Not available.
Melting point/freezing point	68 °F (20 °C)
Initial boiling point and boiling range	554 °F (290 °C) 101.325 kPa
Flash point	350.6 °F (177.0 °C) Open Cup
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	0.00002 kPa at 25 °C
Vapor density	3.17
Relative density	Not available.
Solubility(ies)	
Solubility (water)	Miscible
Partition coefficient (n-octanol/water)	-1.76
Auto-ignition temperature	739 °F (392.78 °C)
Decomposition temperature	Not available.
Viscosity	Not available.
Other information	
Density	1.26 g/cm3 estimated at 20 °C
Dynamic viscosity	17 mPa.s 954 mPa.s
Flammability class	Combustible IIIB estimated
Kinematic viscosity	13.48 mm²/s estimated
Molecular formula	C3-H8-O3
Molecular weight	92.09 g/mol
Percent volatile	100 %
Specific gravity	1.26 at 20 °C
VOC (Weight %)	100 % 100 % EPA estimated

10. Stability and reactivity

Reactivity	The product is stable and non-reactive under normal conditions of use, storage and transport.

Chemical stability	Material is stable under normal conditions.
Possibility of hazardous reactions	No dangerous reaction known under conditions of normal use.
Conditions to avoid	Avoid temperatures exceeding the flash point. Contact with incompatible materials.
Incompatible materials	Strong oxidizing agents.
Hazardous decomposition products	No hazardous decomposition products are known.

11. Toxicological information

Information on likely routes of exposure

Inhalation	Health injuries are not known or expected under normal use. Prolonged inhalation may be harmful.
Skin contact	Health injuries are not known or expected under normal use.
Eye contact	Health injuries are not known or expected under normal use.
Ingestion	Health injuries are not known or expected under normal use.
Symptoms related to the physical, chemical and toxicological characteristics	Not available.

Information on toxicological effects

Acute toxicity	Not available.
Skin corrosion/irritation	Health injuries are not known or expected under normal use.
Serious eye damage/eye irritation	Health injuries are not known or expected under normal use.

Respiratory or skin sensitization

Respiratory sensitization	Not available.
Skin sensitization	This product is not expected to cause skin sensitization.
Germ cell mutagenicity	No data available to indicate product or any components present at greater than 0.1% are mutagenic or genotoxic.
Carcinogenicity	This product is not considered to be a carcinogen by IARC, ACGIH, NTP, or OSHA.

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

Not listed.

Reproductive toxicity	This product is not expected to cause reproductive or developmental effects.
Specific target organ toxicity - single exposure	Not classified.
Specific target organ toxicity - repeated exposure	Not classified.
Aspiration hazard	Not available.
Chronic effects	Prolonged inhalation may be harmful.

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.

Product		Species	Test Results
Glycerin (CAS 56-81-5)			
Aquatic			
Fish	LC50	Rainbow trout,donaldson trout (Oncorhynchus mykiss)	51000 - 57000 mg/l, 96 hours

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

Persistence and degradability	No data is available on the degradability of this product.
Bioaccumulative potential	Not available.

Partition coefficient n-octanol / water (log Kow)

-1.76

Mobility in soil	No data available.

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

13. Disposal considerations

Disposal instructions	Collect and reclaim or dispose in sealed containers at licensed waste disposal site.
Local disposal regulations	Dispose in accordance with all applicable regulations.
Hazardous waste code	The waste code should be assigned in discussion between the user, the producer and the waste disposal company.
Waste from residues / unused products	Dispose of in accordance with local regulations. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe manner (see: Disposal instructions).
Contaminated packaging	Empty containers should be taken to an approved waste handling site for recycling or disposal. Since emptied containers may retain product residue, follow label warnings even after container is emptied.

14. Transport information

DOT

Not regulated as dangerous goods.

IATA

Not regulated as dangerous goods.

IMDG

Not regulated as dangerous goods.

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

15. Regulatory information

US federal regulations All components are on the U.S. EPA TSCA Inventory List.

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

Not regulated.

CERCLA Hazardous Substance List (40 CFR 302.4)

Not listed.

SARA 304 Emergency release notification

Not regulated.

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

Not listed.

Superfund Amendments and Reauthorization Act of 1986 (SARA)

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

SARA 302 Extremely hazardous substance

Not listed.

SARA 311/312 Hazardous chemical	Yes

SARA 313 (TRI reporting)

Not regulated.

Other federal regulations

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

Not regulated.

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

Not regulated.

Safe Drinking Water Act (SDWA)	Not regulated.

US state regulations

US - New Jersey RTK - Substances: Listed substance

Glycerin (CAS 56-81-5)

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

Not listed.

US. Massachusetts RTK - Substance List

Glycerin (CAS 56-81-5)

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

Not regulated.

US. Pennsylvania RTK - Hazardous Substances

Glycerin (CAS 56-81-5)

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

Glycerin (CAS 56-81-5)

US. Rhode Island RTK

Not regulated.

US. California Proposition 65

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

International Inventories

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

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

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

Issue date 02-08-2016

Version # 01

NFPA ratings Health: 0
Flammability: 0
Instability: 0

NFPA ratings

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.

Revision Information Product and Company Identification: Product and Company Identification

MATERIAL SAFETY DATA SHEET

SECTION I: IDENTITY

Product/Material Name: Castrol GTX High Mileage Motor Oil (All SAE Grades) 5W-20, 5W-30, 10W-30, 10W-40, 20W-50, 25W-60
Chemical Name: Mixture
Chemical Family/Classification: Petroleum hydrocarbon
Molecular Weight: NA **Chemical Formula:** NA
Material Use: Motor Oil

HMIS HAZARD RATING:
[0 - Minimal; 1 - Slight; 2 - Moderate; 3 - Serious; 4 - Severe]
Health: 1
Flammability: 1
Reactivity: 0

WARNING STATEMENTS (If Applicable):
WARNING! AVOID SKIN CONTACT WITH USED MOTOR OILS.

MANUFACTURER'S/ SUPPLIER NAME & ADDRESS:

In the US:
BP Lubricants USA Inc.
1500 Valley Road
Wayne, NJ USA 07474
Telephone: (973) 633-2200
Telecopier: (973) 633-7475

In Canada:
Castrol Canada Inc.
3660 Lakeshore Blvd
Toronto, Ontario M8W 1P2
Telephone: (416) 252-5511
Telecopier: (416) 252-1774

In Latin America:
Castrol Latin America Lubricants
3750 NW 87th Avenue Suite 600
Miami. FL USA 33178
Telephone: (305) 714-2640
Telecopier: (786) 437-6380

IN THE EVENT OF AN EMERGENCY PLEASE CALL: BP Emergency Response Center 1-800-321-8642

Date Prepared/Updated: 11/28/2005

Preparer: Regulatory, Environmental, Safety Department
Telephone: (973) 633-2200

SECTION II: PRODUCT/HAZARDOUS INGREDIENT INFORMATION

INGREDIENTS - CHEMICAL/COMMON NAME	EXPOSURE LIMITS - TLV	LD_{50}	LC_{50}	%
Severely refined petroleum base stocks. May contain one or more of the following CASRN, 64742-41-2; 64741-88-4; 64742-01-4; 64742-41-2; 64742-46-7; 64742-54-7; 64742-56-9; 64742-57-0; 64742-62-7; 64742-65-0; 72623-83-7; 72623-84-8; 72623-85-9; 72623-86-0; 72623-87-1	PEL/TWA: 5 mg/m3, mist (OSHA, ACGIH) STEL: 10 mg/m3, mist (ACGIH)	Oral, rat: > 5 g/kg.	Inhalation, 4 hr., rat: > 5000 mg/m3	60-100
Multi-functional additive mixture composed of organo-metallic compounds, typically containing zinc dialkyl dithiophosphate, calcium salts of alkylated phenol sulfides, alkylated diphenyl amines [CASRN NA, mixture]	ND	ND	ND	5-20
Methacrylate polymer and/or ethylene-propylene copolymer with a nitrogen functional group blend [CASRN NA, mixture]	ND	ND	ND	7-13

NOTE: Product contains no materials currently classified as carcinogenic per the Annual Report of the National Toxicology Program [NTP], OSHA Hazard Communication Standard or the International Agency for Research on Cancer [IARC, Groups 1, 2A or 2B].

SECTION III: FIRST AID MEASURES

Signs/Symptoms: Transient eye irritation, redness, tearing.

Eye contact: Flush with clear water for at least 15 minutes or until any irritation subsides. If irritation persists, seek medical attention.

Skin contact: Remove contaminated clothing and wash before reuse. Wipe excess material from skin. Wash exposed area with soap and water.

Inhalation: If irritation or drowsiness occur, move the person to fresh air. Administer respiratory assistance if breathing is difficult or stops; Consult a physician.

Ingestion: Give plenty of water or other mild drinkable fluids and call a physician immediately. Do not induce vomiting without express consent of medical personnel.

SECTION IV: HEALTH HAZARD DATA

Exposure Limits:
See Section II, Product/Ingredient Information.
(For product) - Recommend using 5 mg/m3 for mineral oil mist averaged over an 8 hour daily exposure, based on established OSHA and ACGIH limits.

PRIMARY ROUTES OF ENTRY:

[X] Eye Contact
[X] Skin Contact
[ ] Skin Absorption
[ ] Inhalation (Acute)
[ ] Inhalation (Chronic)
[ ] Ingestion

EFFECTS OF EXPOSURE

Acute - (Evaluation based on components and/or similar products)

Eyes: Not expected to cause prolonged or significant eye irritation.
Skin: Not expected to cause prolonged or significant skin irritation.
Respiratory system: Harmful concentrations of mists/vapors are unlikely through customary handling or use of this product.
Ingestion: Low order of toxicity, but may cause gastrointestinal disturbances, diarrhea. Ingestion of large amounts may cause headache, drowsiness, nausea, vomiting or diarrhea.

Chronic -

Prolonged or repeated skin contact may cause skin drying, cracking, irritation, defatting and dermatitis.
WARNING! AVOID SKIN CONTACT WITH USED MOTOR OILS. Used motor oils have caused skin cancer in laboratory animals when repeatedly applied and left in place between applications.
The product contains petroleum baseoils which may be refined by various processes including severe solvent extraction, severe hydrocracking, or severe hydrotreating. None of the oils require a cancer warning under the OSHA Hazard Communication Standard [29 CFR 1910.1200]. These oils have not been listed in the National Toxicology Program (NTP) Annual Report nor have they been classified by the International Agency for Research on Cancer (IARC) as carcinogenic to humans (Group 1), probably carcinogenic to humans (Group 2A) or possibly carcinogenic to humans (Group 2B).

Medical Conditions Generally Aggravated by Exposure: Pre-existing skin disorders.

TOXICOLOGY DATA (Product)
Acute Data (Median Lethal Dose - species)

Oral LD_{50} - rat: ND
Dermal LD_{50} - rabbit: ND
Inhalation LC_{50} - rat: ND

Irritancy Data

Eye irritation - rabbit: ND
Skin irritation - rabbit: ND
Sensitization - guinea pig: ND

Other: No data regarding presence of carcinogenicity, tetragenicity, mutagenicity, respiratory toxicity, sensitizing ability or synergistic substances.

SECTION V: EMPLOYEE PROTECTION

Ventilation:
No special ventilation is usually necessary. However, if operating conditions may create high airborne concentrations of this material, special or local ventilation may be needed.

PERSONAL PROTECTIVE EQUIPMENT

Respiratory Protection: None required under normal use. If exposure is expected to exceed occupational exposure limits, use a NIOSH-approved respirator to prevent overexposure. In accordance with 29 CFR 1910.134, use either an atmosphere supplying respirator or an air-purifying respirator for organic vapors and particulates.
Eye: Safety goggles or glasses.
Gloves (specify): Wear oil impervious type, such as neoprene, nitrile, polyvinylchloride, to minimize skin contact.
Clothing: No special requirement; Normal work clothing. A coverall or apron may be used to minimize skin contact
Footwear: No special requirement.
Other: NA

Work/Hygienic Practices: Avoid prolonged and repeated skin contact. Do not wear contaminated clothing; Launder before reuse or discard. Wash thoroughly with soap and water after handling.

Storage/Handling: Keep containers closed when not in use. Do not store near heat, sparks, flame or strong oxidants. Avoid breathing mist. Maintain adequate ventilation. Avoid prolonged or repeated contact with skin.

SECTION VI: PHYSICAL/CHEMICAL CHARACTERISTICS

Boiling Point: > 500° F (> 260° C)

Vapor Pressure (mm.Hg. @ 25° C): < 0.01

Percent Volatiles: Negligible

Solubility in Water: Negligible

pH-Value: NA

Odor Threshold: NA

Coefficient of Water/Oil Distribution: ND

Appearance, Odor & Physical State: Clear, amber liquid; mild petroleum odor

Specific Gravity (Water=1): 0.87

Vapor Density (Air=1): > 1

Evaporation Rate (BuAc=1): < 0.1

Freezing Point: -22° F to -40° F (-30° C to -40° C)

Viscosity Range @ 100° C, cSt.:

5W-20	5.6 to 9.3	10W-30	9.3 to 12.5
5W-30	9.3 to 12.5	10W-40	12.5 to 16.3
20W-50	16.3 to 21.9	25W-60	21.9 to 26.1

SECTION VII: FIRE AND EXPLOSION DATA

FLAMMABILITY Yes [X] No [ ] NFPA Class IIIB material - Combustible liquid

Flash Point (COC): 400° F (204° C) min.
Fire Point (COC): 430° F (221° C) min.
Autoignition Temperature: ND

Flammability limits in Air, % Vol.: Upper - ND Lower - ND

Extinguishing Media:
CO_2, dry chemical, foam and water fog. Do not use water jets.

Special Firefighting Procedures/Unusual and Explosion Hazards:
Material must be preheated to burn. Do not enter confined areas without full protective equipment, including a positive pressure NIOSH approved self-contained breathing apparatus. Cool fire exposed containers with water.

EXPLOSION DATA
Sensitivity to Mechanical Impact: NA
Sensitivity to Static Discharge: NA

SECTION VIII: REACTIVITY

Stability: Stable at ambient temperatures

Hazardous Polymerization: Will not occur.

Conditions and Materials to Avoid (Incompatibilities):
Heat, open flame and oxidizing materials.

Hazardous Combustion or Decomposition Products:
Smoke, fumes, oxides of carbon

SECTION IX: ENVIRONMENTAL PROTECTION

CHEMTREC EMERGENCY PHONE NUMBER: (800) 424-9300, 24 hrs. for U.S. transportation related spills, leaks, fire, exposure, or accident.
CANUTEC EMERGENCY PHONE NUMBER: (613) 996-6666, 24 hrs. for Canadian transportation related spills, leaks, fire, exposure, or accident.

Spill or Leak Procedures:
Product may burn but is not readily ignitable. Use best engineering practices when attempting cleanup of a large spill.

> **Large spills** - Wear respirator and protective clothing as appropriate. Stop source of leak if possible. Prevent entry into water sources. Dike and contain spill. Remove with vacuum trucks or pump to storage/salvage vessels. Soak up residue with an inert absorbent such as clay, sand or other suitable materials; Store and dispose of properly. Where feasible and appropriate, remove contaminated soil.
>
> **Small spills** - Soak up spill with an inert absorbent such as clay, sand or other suitable materials; Store in a closed container and dispose of properly.

Regulatory spill reporting requirements may apply; Contact governmental agency or legal counsel for advice.

Waste Disposal Method:
If discarded as supplied, material does not meet RCRA characteristic definition of ignitability, corrosivity or reactivity and is not listed in 40 CFR 261.33. The toxicity characteristic has not been evaluated. Under RCRA, the applicable hazardous waste classification must be evaluated prior to disposal of the material. Use of the product, processing or contamination may render the resulting material hazardous.

All recovered material should be packaged, labeled, transported and disposed of or reclaimed in accordance with governmental regulations regarding air pollution, water pollution or health.

Don't pollute - Conserve Resources. Dispose of used oil properly.

CAUTION: Improper disposal or reuse of the empty container may be hazardous and illegal. Cutting or welding of empty containers may cause fire, explosion or toxic fumes from residues. Do not pressurize or expose to open flame or heat. Keep container closed and drum bungs in place. Refer to applicable governmental regulations.

SECTION X: REGULATORY INFORMATION

TRANSPORTATION
Special Shipping Information/DOT Proper Shipping Name: Not regulated.

CHEMICAL CONTROL REGULATIONS:
TSCA Status: All components of this material appear on the Toxic Substance Control Act Chemical Substances Inventory.
This product contains trace amounts of Diphenylamine (CAS #122-39-4) which will require notification prior to export.
CEPA Status: All components of this material appear on the Canadian Domestic Substances List.

Canadian Workplace Hazardous Material Identification System (WHMIS) Classification: Material is not a "controlled product".

EPCRA (SARA Title III):
Section 302/304 Extremely Hazardous Substance: NA
CERCLA Section 102(a) Hazardous Substance: NA
Section 311 Hazard Category
[ ] Acute (immediate)
[ ] Chronic (delayed)
[ ] Fire
[ ] Sudden Release of Pressure
[ ] Reactive
[X] Not applicable

Section 313 Toxic Release Inventory Chemical/Category:
Zinc compounds, 2.5% (wt.) max.

U.S. STATE RIGHT TO KNOW LAWS
New Jersey Worker and Community Right to Know Act, N.J.A.C. 8:59-5 Labelling Information: Motor Oil

MSDS - Material Safety Data Sheet

Product Name: HEAVY DUTY SILICONE SPRAY LUBRICANT

MSDS No.: M914

I. Basic Information:

Manufacturer: RADIATOR SPECIALTY COMPANY
Address: 600 RADIATOR ROAD
City, ST Zip: INDIAN TRAIL, NC 28079
Country:

Contact: Robert Geer
Information Telephone Number: 704-684--181 1
Emergency Contact: Rocky Mountain Poision Control Center
Emergency Telephone Number: 303-623-5716
Emergency Restrictions:

Product Name: HEAVY DUTY SILICONE SPRAY LUBRICANT
MSDS No.: M914

Issue Date: 01/07/2009
Supersedes Date: 02/27/2008

II. Hazards Identification:

EMERGENCY OVERVIEW

Flammable. Harmful or fatal if swallowed. Eye and Skin Irritant. Contents under Pressure.

Level 3 Aerosol

OSHA Regulatory Status

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

Potential Health Effects

Route(s) of Entry:

Absorption, Eye, Inhalation, and Ingestion.

Health Hazards (Acute and Chronic):

See Signs and Symptoms below

Signs and Symptoms:

Eye Contact: Irritant. Prolonged contact may cause conjunctivitis.
Skin Contact: Irritant. Defatting of tissue, dermatitis may occur.
Inhalation: Irritant to mucous membranes. Repeated exposure may cause narcosis..
Ingestion: HARMFUL OR FATAL IF SWALLOWED.

Medical Conditions Generally Aggravated by Exposure:

N/D

Other Health Warnings:

Vomiting and subsequent aspiration into the lungs may lead to chemical pneumonia and pulmonary edema which is a potentially fatal condition.

Potential Environmental Effects

Not Available

III. Composition/Information on Ingredients:

Chemical Name	CAS No.	% Range	Trade Secret
1,2,4-Trimethylbenzene	95-63-6	3.0 - 7.0	
Aliphatic Hydrocarbon Solvent	8052-41-3	40.0 - 70.0	
Carbon dioxide	124-38-9	3.0 - 4.0	
Dimethyl Polysiloxane	63148-62-9	3.0 - 7.0	
Ethylbenzene	100-41-4	0.1 - 1.0	
Hydrocarbon Fluid	64742-47-8	10.0 - 30.0	
Low Odor Base Solvent	Proprietary	10.0 - 30.0	
Mesitylene	108-67-8	3.0 - 7.0	
Naphthenic Petroleum Distillate	64742-52-5	3.0 - 7.0	
Xylene (mixed isomers)	1330-20-7	1.0 - 5.0	

MSDS - Material Safety Data Sheet

Product Name: HEAVY DUTY SILICONE SPRAY LUBRICANT

MSDS No.: M914

IV. First Aid Measures:

Emergency and First Aid Procedures:

Eye Contact: Flush eyes with clean water for 15 minutes while lifting eyelids. Get prompt medical attention.
Skin Contact: Wash with soap and water thoroughly. If adverse effects persist, get prompt medical attention. Launder contaminated clothing before reuse.
Inhalation: Remove to fresh air. If breathing becomes difficult give oxygen and get prompt medical attention. If breathing stops, give artificial respiration and get prompt medical attention.
Ingestion: DO NOT INDUCE VOMITING! Call Poison Control Center, physician, or hospital emergency room immediately. Aspiration of vomitus into the lungs can cause pneumonitis, which can be fatal.

Note to Physicians:

N/E

V. Fire Fighting Measures:

Suitable Extinguishing Media:

Water Fog, Foam, Carbon Dioxide, Dry Chemical

Unsuitable Extinguishing Media:

Do not use forced water stream as this could cause the fire to spread.

Products of Combustion:

Normal products of combustion, smoke, carbon dioxide, carbon monoxide, and sulfur trioxides.

Protection of Firefighters:

Wear self-contained positive pressure breathing apparatus and protective clothes. Use shield to protect from rupturing and venting containers. At elevated temperatures containers may vent, rupture or burst, even violently

VI. Accidental Release Measures:

Personal Precautions:

Eliminate all ignition sources. Persons not wearing protective equipment should be excluded from area of spill until clean-up has been completed.

Environmental Precautions:

Prevent run-off to sewers, streams, or other bodies of water. If run-off occurs, notify proper authorities as required that a spill has occured. Run off to sewer may create fire or explosion hazard.

Methods for Containment:

Dike or contain spill and absorb with inert materials (sand, sawdust, absorbent sweeping compounds, rags, etc).

Methods for Cleanup:

Using a non-metalic scoop, place contaminated material into an approved chemical waste container. Where possible, vacuum spilled liquid using an explosion proof vacuum to recover material.

Other Information:

Eliminate all ignition sources. Persons not wearing protective equipment should be excluded from area of spill until clean-up has been completed. Prevent run-off to sewers, streams, or other bodies of water. If run-off occurs, notify proper authorities as required that a spill has occured. Run off to sewer may create fire or explosion hazard.. Dike or contain spill and absorb with inert materials (sand, sawdust, absorbent sweeping compounds, rags, etc). Using a non-metalic scoop, place contaminated material into an approved chemical waste container. Where possible, vacuum spilled liquid using an explosion proof vacuum to recover material. All equipment used with handling the concentrate must be grounded. If run-off occurs, notify proper authorities as required that a spill has occured.

VII. Handling and Storage:

Handling Precautions:

Handling: Use with adequate ventilation and proper protective equipment.
Do not use near fire, sparks, or flame. Do not puncture or incinerate container.
Contact lenses may cause further damage in case of splash into eye. KEEP AWAY FROM CHILDREN AND ANIMALS!

Storage Precautions:

Flammable. Store in cool, well ventilated area below 120°F away from heat sources, oxidizers and acids. Exposure to temperatures above 120° may cause container to vent, rupture, or burst.

MSDS - Material Safety Data Sheet

Product Name: HEAVY DUTY SILICONE SPRAY LUBRICANT

MSDS No.: M914

VIII. Exposure Controls/Personal Protection:

Chemical Name	OSHA PEL	ACGIH TLV	Other Limits
Aliphatic Hydrocarbon Solvent	100 ppm	100 ppm	Not Available
Dimethyl Polysiloxane	N/E	N/E	Not Available
Low Odor Base Solvent	N/E	N/E	Not Available
Naphthenic Petroleum Distillate	5 mg/m3	5 mg/m3	Not Available
Carbon dioxide	N/AV	5000 ppm	Not Available
1,2,4-Trimethylbenzene	N/E	25 ppm	Not Available
Mesitylene	N/A	N/A	Not Available
Xylene (mixed isomers)	100 ppm	100 ppm	Not Available
Ethylbenzene	100 ppm	100 ppm	Not Available
Hydrocarbon Fluid	5 mg/m3	5 mg/m3	Not Available

Engineering Controls:

See Section above for applicable exposure limits. Use with adequate ventilation. If TLV is exceeded, wear NIOSH approved respirator.

Personal Protective Equipment:

For prolonged exposure wear protective safety glasses, gloves, and apron.

IX. Physical and Chemical Properties:

Boiling Point: 310°F

Boiling Range: N/D

Solubility In Water: Insoluble

Flash Point: 125°F

Odor Threshold: N/D

Vapor Density (AIR = 1): N/D

pH Range: N/A

Decomposition Temp: N/D

Lower Explosive Limit: N/D

Specific Gravity (H20 = 1): 0.81

Other Information: % VOC: 58.17%

Melting Point: N/A

Freezing Point: N/D

Evaporation Rate (Butyl Acetate = 1): N/D

Flash Point Method: TCC

Appearance and Odor: Clear to slight yellow liquid with petroleum odor.

Vapor Pressure (mm Hg.): N/D

Partition Coefficient: N/D

Auto-Ignition Temp: N/D

Upper Explosive Limit: N/D

X. Stability and Reactivity:

Stability:

Stable

Conditions to Avoid:

See Incompatible Materials below.

Incompatible Materials:

Oxidizing agents and acids.

Hazardous Decomposition Products:

Normal products of combustion, carbon dioxide, smoke and Nitrogen and Sulfur Oxides

Possibility of Hazardous Reactions:

Will not occur

MSDS - Material Safety Data Sheet

Product Name: HEAVY DUTY SILICONE SPRAY LUBRICANT

MSDS No.: M914

XI. Toxicological Information:

N/D

XII. Ecological Information:

N/D

XIII. Disposal Considerations:

DISPOSAL: This container may be recycled in a recycling centers when empty. Before offering for recycling, empty the can or bottle by using the product according to the label. If recycling is not available, wrap the container and discard in the trash. Dispose of unused product in accordance with all local, state government and federal laws and regulations

XIV. Transport Information:

Shipping Name: Not Available

DOT Hazard Class: Not Available

UN/NA#: Not Available

DOT Subsidiary Hazard Class: Not Available

Packing Group: Not Available

Transportation Information:

DOT Hazard Class: ORM-D
Shipping Name: Consumer Commodity

The DOT description is provided to assist in the proper shipping classification of this product and may not be suitable for international and air shipping purposes.

ICAO/IATA (US)
Shipping Name: Aerosols
Class: 2.1
UN number: UN1950

International:

ICAO/IATA
UN number: UN1950
Shipping Name: Aerosols
Class: 2.1

IMDG
UN number: UN1950
Shipping Name: Aerosols
Class: 2.1
EmS: F-D, S-U

XV. Regulatory Information:

SARA 313 Reportable Chemicals.
1,2,4, Trimethylbenzene 95-63-6
Xylene 1330-20-7
Ethylbenzene 100-41-4

USA TSCA: All components of this material are listed on the US TSCA Inventory.

Warning: This product contains a chemical(s) known to the State of California to cause cancer or birth defects or other reproductive harm.

State RTK Chemicals
Aliphatic hydrocarbon solvent 8052-41-3
Xylene 1330-20-7
Ethylbenzene 100-41-4

MSDS - Material Safety Data Sheet

Product Name: HEAVY DUTY SILICONE SPRAY LUBRICANT

MSDS No.: M914

XVI. Other Information:

Chemical State: [X] Liquid [ ] Gas [ ] Solid

Chemical Type: [ ] Pure [X] Mixture

Hazard Category:

[X] Acute [ ] Chronic [X] Fire

[X] Pressure [ ] Reactive

Additional Manufacturer Warnings:

Do not used in confined area without proper ventilation. Contact lenses may cause further damage in case of splash into eye. KEEP AWAY FROM CHILDREN AND ANIMALS!

N/E: Not Established
N/D: Not Determined
N/A: Not Applicable
N/AV: Not Available

Additional Product Information:

While Radiator Specialty Company believes this data is accurate as of the revision date, we make no warranty with respect to the data and we expressly disclaim all liability for reliance thereon. The data is offered solely for information, investigation, and verification. Various government agencies may have specific regulations regarding the transportation, handling, storage, use, or disposal of this product which may not be covered by this MSDS. The user is responsible for full compliance.

Fire Protection Products, Inc.
3198 Lionshead Avenue
Carlsbad, CA 92010
Phone: +1 (800) 344-1822
Fax: +1 (800) 344-3775

SAFETY DATA SHEET

Last Updated: 9/17/2015

Section 1 IDENTIFICATION

LubeFit® Gasket Lubricant

Manufacturer Information	Emergency Contact
Fire Protection Products, Inc. 3198 Lionshead Avenue Carlsbad, CA 92010 Phone: +1 (800) 344-1822 Fax: +1 (800) 344-3775	CHEMTREC 1300 Wilson Boulevard Arlington, VA 22209-2380 Phone: +1 (800) 424-9300 International: +1 (703) 527-3887

Product Use	Joint Lubricant

Section 2 HAZARDS IDENTIFICATION

Hazard Classification	Not Hazardous
Skin Irritant: 3 Eye Irritant: 2B	Warning
Hazard Statements	Causes mild skin and eye irritation.
Precautionary Statements	Wash skin thoroughly after handling.
Prevention	Wash skin thoroughly after handling.
Response	If skin irritation occurs, get medical advice/attention. If in eyes, rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists, get medical advice/attention.
Storage	Keep containers tightly closed in a dry, cool and well-ventilated place. Keep in properly labeled containers. Keep out of the reach of children.
Disposal	Disposal should be in accordance with applicable regional, national and local laws and regulations. Contact your supplier or a licensed contractor for detailed recommendations. Do not re-use empty containers.

Section 3 COMPOSITION/INFORMATION ON INGREDIENTS

Component Name	CAS Number	Weight %
Mixed sodium and potassium salts of tall oil (soap)	68606-06-4 EINECS 271-723-9	15-25%

Section 4	FIRST AID MEASURES
Inhalation	Move to fresh air. If symptoms persist, call a physician.
Skin	Wash off immediately with soap and water. If skin irritation persists, call a physician.
Eye	Rinse thoroughly with plenty of water for at least 15 minutes, lifting lower and upper eyelids. If symptoms persist, call a physician.
Ingestion	Do NOT induce vomiting. Drink plenty of water. Rinse mouth. Never give anything by mouth to an unconscious person. Call a physician or poison control center immediately
Symptoms	Direct contact with eyes may cause temporary irritation. Prolonged or repeated skin contact may cause irritation.
Medical Care	If symptoms persist, call a physician.

Section 5	FIRE FIGHTING MEASURES
Flash Point	> 104° C/ > 220° F
Extinguishing Media	Water. Water spray (fog). Alcohol resistant foam. Carbon dioxide (CO2). Dry chemical.
Special Firefighting Procedures/Equipment	As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear. Prevent runoff from fire control or dilution from entering streams, sewers, or drinking water supply.
Unusual Fire and Explosion Hazards	CAUTION: Use of water spray when fighting fires may be inefficient.
Additional Information	N/A

Section 6	ACCIDENTAL RELEASE MEASURES
Personal Precautions	Avoid contact with the skin and the eyes. Evacuate personnel to safe areas. Use personal protective equipment. Keep people away from and upwind of spill/leak.
Environmental Precautions	Prevent further leakage or spillage if safe to do so. Prevent product from entering drains. Do not flush into surface water or sanitary sewer system. Prevent entry into waterways, sewers, basements or confined areas. See Section 12 for additional Ecological information.
Methods and Materials Use for Containment	Dike to collect large liquid spills. Prevent leakage or spillage if safe to do so.
Methods for Clean Up	Dam up. Soak up with inert absorbent material. Place the bulk of any spilled material into properly labeled containers. Rinse any remaining material to sewage treatment facility. Clean up in accordance with all applicable regulations.

Section 7	HANDLING AND STORAGE
Handling	Wear personal protective equipment. Avoid contact with skin, eyes and clothing. Do not breathe vapors or spray mist. Ensure adequate ventilation. Use only in area provided with appropriate exhaust ventilation. Do not eat, drink or smoke when using this product. Wash thoroughly after handling. Do not take internally.
Storage	Keep containers tightly closed in a dry, cool and well-ventilated place. Keep in properly labeled containers. Keep out of the reach of children.

Section 8	EXPOSURE CONTROLS/ PERSONAL PROTECTION		
Exposure Guidelines			
Components	**CAS-No.**	**Type**	**Value**
Mixed sodium and potassium salts of tall soap.	68606-06-4 EINECS 271-723-9	Not hazardous to health	15-25%

Engineering Controls	Eyewash stations, Showers, Ventilation Systems.
Personal Protection	Eye/Face Protection: Wear protective eyeglasses or chemical safety goggles. Contact lenses are not eye protective devices. Appropriate eye protection must be worn instead of, or in conjunction with contact lenses.
	Skin Protection: Wear chemically protective gloves to prevent prolonged or repeated skin contact.
	Respiratory Protection: If respirators are used, OSHA requires a written respiratory program that includes at least medical certification, training, fit-testing, periodic environmental monitoring, maintenance, inspection, cleaning, and convenient, sanitary storage areas.
General Measures	Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Do not eat, drink or smoke when using this product. Regular cleaning of equipment, work area and clothing is recommended.

Section 9	PHYSICAL AND CHEMICAL PROPERTIES
Appearance: Paste, off-white	**Evaporation Rate:** N/A
Odor: Bland	**Flammability:** Not Determined.
Odor Threshold: Not Determined.	**Upper/lower Flammability and/or Explosive Limits:** N/A
pH: ≈9	**Vapor Pressure:** N/A
Melting Point/Freezing Point: < 0° C/< 32° F	**Vapor Density:** N/A
Boiling Point and Boiling Range: > 104° C/ > 220° F	**Relative Density:** g/mL
Flash Point: > 104° C/ > 220° F	**Solubility:** Not Determined.
Partition Coefficient: Not Determined.	**Auto-Ignition Temperature:** Not Determined.
Decomposition Temperature: Not Determined.	**Viscosity:** < 1%
VOC Content: 4 g/L	

Section 10	STABILITY AND REACTIVITY
Reactivity	Not reactive under normal conditions.
Chemical Stability	Stable under recommended storage conditions.
Possibility of Hazardous Reactions	None under normal processing.
Conditions to Avoid	Contact with incompatible material.
Hazardous Decomposition	Carbon oxides.

Section 11	TOXICOLOGICAL INFORMATION
Ingestion Toxicity	Do not taste or swallow. **LD50 Oral** 22665 mg/kg: Acute toxicity estimate mg/kg mg/L
Skin Toxicity	May cause mild skin irritation.
Eye Irritation	Causes eye irritation.
Respiratory Irritation	Not a likely route of exposure.
Chronic Toxicity	Direct contact with eyes may cause temporary irritation. Prolonged or repeated contact may dry skin and cause irritation.
Carcinogenicity	This product does not contain and carcinogens or potential carcinogens as listed by OSHA, IARC, or NTP.
Other	N/A
Section 12	**ECOLOGICAL INFORMATION**
Ecotoxicity	The environmental impact of this product has not been fully investigated.
Degradability	No information available.
Other	No information available.
Section 13	**DISPOSAL CONSIDERATIONS**
Waste Disposal Method	Disposal should be in accordance with applicable regional, national and local laws and regulations. Contact your supplier or a licensed contractor for detailed recommendations. Don not re-use empty containers.
Section 14	**TRANSPORT INFORMATION**
UN Number	Not regulated.
UN Proper Shipping Name	Not regulated.
Transport Hazard Class	N/A
Canadian Transportation of Dangerous Goods	N/A
Marine Pollutants	N/A
Special Precautions	N/A

Section 15	REGULATORY INFORMATION
TSCA Status	All ingredients appear on inventory.
SARA 311/312 Hazards	Acute Health Hazard: Yes Chronic Health Hazard: No Fire Hazard: No Sudden Release of Pressure Hazard: No Reactive Hazard: No
California Prop 65	This product does not contain any Proposition 65 chemicals.
DSL Status (Canada)	All components of this product are listed or are exempt
Section 16	**OTHER INFORMATION**
Additional Information	There are no Red List materials included in this product.
Prepared By	Human Resource Department
Revised Date	September 17, 2015
Disclaimer	Although the information and recommendations set forth herein are presented in good faith and believed to be correct as of the date hereof, **Fire Protection Products, Inc.** makes no representations as to the completeness or accuracy thereof. **Fire Protection Products, Inc.** makes no warranty whatsoever, expressed or implied, of merchantability or fitness for the particular purpose since the conditions of use are beyond our control. **Fire Protection Products, Inc.** assumes no responsibility for injury to recipient or to third persons for any damage to any property and recipient.

SAFETY DATA SHEET

O-LUBE

2/6/2017

1. PRODUCT AND COMPANY INDENTIFICATION

Product Name: O-Lube
Recommended Use: Lubricant (not for incidental food contact or medical purpose)
Company: Parker Hannifin
2360 Palumbo Drive
Lexington, KY 40509
Telephone: 859-335-5101
Emergency Telephone: 859-269-2351

2. HAZARDS IDENTIFICATION

Classification: Category 5, Acute Toxicity – No Symbol

Labeling: Symbol: None
Signal Word: None

Hazard Statements
May be harmful if swallowed
May cause eye irritation
May cause skin irritation
Nonflammable or combustible, but may burn if involved in a fire

Precautionary Statements:
Use personal protective equipment as required. Wear safety glasses and gloves.

3. COMPSOTION / INFORMATION ON INGREDIENTS

Chemical Identity: Barium, acetate tallow fatty acids complex; 10%-25%
Common Name: None
CAS Number: 68201-19-4

This product contains no other hazardous components above reportable concentrations.

4. FIRST AID MEASURES

Eye Contact: Flush eyes with large amounts of water. If signs/symptoms persist, get medical attention.

Skin Contact: Was affected area with soap and water. If signs/symptoms persist, get medical attention. No need for first aid is anticipated.

Inhalation: If signs/symptoms develop, remove person to fresh air. If signs/symptoms persist, get medical attention.

Ingestion: If swallowed, do not induce vomiting. If irritation or discomfort occurs, obtain medical assistance.

5. FIRE FIGHTING MEASURES

Flammable Limits (LEL) Not Determined
Flammable Limits (UEL) Not Determined
Suitable Extinguishing Media: On large fires use dry chemicals, foam, or water spray. On small fires use carbon dioxide, dry chemical, or water spray. Water can be used to cool fire exposed containers.
Unsuitable Extinguishing Media: None
Specific hazards in case of fire: Decomposes on heating and produces incompletely burned carbon compounds. Avoid reaction with oxidizers.
Special protective equipment and precautions for fire fighters:

No acute hazard. Move container from fire area if possible. Avoid breathing vapors or dusts. Keep upwind. Use full firefighting gear (bunker gear). Any supplied-air respirator with full face piece and operated in a pressure-demand or other positive pressure mode in combination with a separate escape air supply. Use any self-contained breathing apparatus with full face piece.

Alter fire brigade and indicate hazard location. Wear breathing apparatus plus protective clothing. Cool fire exposed containers with water spray from a protected location. Do not approach containers suspected to be hot. If safe to do so, remove containers from the path of the fire.

6. ACCIDENTAL RELEASE MEASURES

Personal Precautions: Not Required

Environmental Precautions: For larger spills, cover drains and build dikes to prevent entries into sewer systems or bodies of water. Collect the resulting residue containing solution. Place in metal container approved for transportation by appropriate authorities. Dispose of collected material as soon as possible.

Methods for material containment and cleaning up: Observe precautions from other sections. Contain spill. Working from around the edges of the spill inward, cover with bentonite, vermiculite, or commercially available inorganic absorbent material. Mix in sufficient absorbent until it appears dry. Collect as much of the spill material as possible. Clean up residue with an appropriate solvent. Seal the container.

7. HANDLING AND STORAGE

Precautions for safe handling: No special measures required.

Conditions for safe storage, including any incompatibles: Store away from oxidizing materials. Store product in a closed container located in a dry area. Do not store in open, inadequate, or mislabeled packaging. Check that containers are clearly labeled. Use metal cans, metal drums, plastic, or lined fiber containers. Keep away from heat and flame.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control Parameters: Under most handling conditions, this product will not generate mist or dust.

Components with limit values that require monitoring at the workplace:

64742-52-5 Distillates (petroleum), hydrotreated heavy naphthenic (50-100%)

ACGIH TLV	Short-term value: 10mg/m³
	Long-term value: 5mg/m³
OSHA PEL	Long-term value: 5mg/m³

68201-19-4 Barium, acetate tallow fatty acids complex (10-25%)

ACGIH TLV	Long-term value: 0.5mg/m³
OSHA PEL	Long-term value: 0.5mg/m³

Additional Information: The lists were valid during the creation were used as basis.

9. CHEMICAL AND PHSYICAL PROPERTIES

Physical State:	Semi-solid
Color:	Amber colored
Odor:	Mild. Petroleum like
Odor Threshold:	Not determined

pH Value:	Not determined
Melting Point:	Undetermined
Freezing Point:	Becomes very stiff with decreasing temperature around -20°C
Boiling Point:	370°C (698°F)
Flash Point:	190°C (374°F)
Evaporation Rate:	Not available
Flammability:	Not applicable
Ignition Temperature:	>315°C (>599°F)
Explosion Limits:	Not available
Vapor Pressure:	Negligible at 20°C
Density:	0.9338g/cm³ (7.793 lbs/gal)
Vapor Density:	Not available
Solubility in water:	Not miscible or difficult to mix
Partition coefficient:	Not available
Viscosity:	
Dynamic:	Not determined
Kinematic:	Not determined
Auto-ignition Temperature:	Product is not self-igniting
Solvent Content:	
Organic Solvent:	0.0%
Solids Content:	20.0%
Decomposition temperature:	Not determined
Danger of explosion:	Product does not present an explosion hazard
Other information:	No further relevant information available

10. STABILITY AND REACTIVITY

Reactivity:

Chemical Stability: Stable under ambient temperatures and pressures.

Thermal decomposition/ conditions to be avoided: No decomposition if used according to specifications.

Possibility of hazardous reactions: No hazardous reactions have been identified.

Conditions to avoid: No specific conditions to avoid have been identified.

Materials to avoid: Oxidizers

Hazardous decomposition products: No dangerous decomposition products known.

11. TOXICOLOGICAL INFORMATION

Acute Toxicity:
LD/LC50 values that are relevant for classification:

ATE (Acute Toxicity Estimates)

Oral	LD50	2500mg/kg
Inhalative	LC50/4 h	55mg/l

68201-19-4 Barium, acetate tallow fatty acids complex

Oral	LD50	500mg/kg (ATE)
Inhalative	LC50/4 h	11mg/l (ATE)

Primary irritant effect:
On the skin: No irritant effect.

Sensitization: No irritating effect.

Carcinogenic Categories:

IARC:	None of the ingredients listed.
NTP:	None of the ingredients listed.
OSHA-Ca:	None of the ingredients listed.

12. ECOLOGICAL INFORMATION

Toxicity

Aquatic Toxicity:	No relevant information available.
Persistence and degradability:	No relevant information available.
Bio accumulative potential:	No relevant information available.
Mobility in soil:	No relevant information available.
General notes:	Water hazard class 1 (Self-assessment): Slightly hazardous in water. Do not allows undiluted product or large quantities

	of it to reach ground water, water course, or sewage system.
PBT:	Not available
vPvB:	Not available
Other adverse effects:	No relevant information available.

13. DISPOSAL PROCEDURES

Waste treatment methods: Waste (substance and container material) shall be recycled/recovered or disposed of as applicable and in accordance with community (EU) and local legislation. Recycle wherever possible. Consult state land waste management authority for disposal. Bury at an approved site. Recycle containers if possible, or dispose of in an authorized landfill.
According to European Waste Catalogue, Waste codes are not product specific buy application specific. Waste codes should be assigned by the user based on the application in which the product is used.
For USA Disposal: Waste must be disposed of in accordance with federal, stae, and local environmental control regulations.

14. TRANSPORT INFORMATION

Class or Type: US DOT, IMO, ADR, RID, AND, IMDG, and IATA: Non-hazardous

15. REGULATORY INFORMATION

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

Other Information:
U.S. Regulatory Information

TSCO Inventory Status:	Y
TSCA 12(b) Export Notification:	Not listed
CERCLA Section 103 (40 CFR 302.4):	N
SARA Section 302 (40 CFR 355.30):	N
SARA Section 304 (40 CFR 355.40):	N
SARA Section 313 (40 CFR 372.65):	Barium compounds 68201-19-4
OSHA Process Safety (29 CFR 1910.119):	N
SARA Section 355	N
SARA Hazards Categories, SARA Sections 311/312 (40 CFR 370.21)-	
Acute Hazard:	N
Chronic Hazard:	N
Fire Hazard:	N

Reactivity Hazard:	N
Sudden Release Hazard:	N

State Regulations: Not on California Prop 65 list. Does not contain any components known to the State of California to cause cancer or reproductive toxicity.

Carcinogenic categories:

EPA	N
TLV	N
NIOSH-Ca	N

16. OTHER INFORMATION

NFPA Hazard Classification:

Health:	1
Flammability:	1
Reactivity:	0

Special hazards: None

National Fire Protection Association (NFPA) hazard ratings are designed for use by emergency personnel to address the hazards that are presented by short-term, acute exposure to material under conditions of fire, spill, or similar emergencies. Hazard ratings are primarily based on inherent physical and toxic properties of the material but also include the toxic properties of combustion or decomposition products that are known to be generated in significant quantities.

HMIST Hazard Classification:

Health:	1
Flammability:	1
Reactivity:	0
Protection:	B (See PPE Section)

Hazardous Material Identification System (HMIS) hazard ratings are designed to inform employees of chemical hazards in the workplace. The ratings are based on inherent properties of the material under expected conditions of normal use and are not intended for use in emergency situations.

These data are offered in good faith as typical values and not product specifications. No warranty, either expressed or implied, is hereby made. The recommended industrial hygiene and safe handling procedures are believed to be generally applicable. However, each user

should review these recommendations in the specific context of the intended use and determine whether they are appropriate.

Prepared By: Parker Hannifin
2360 Palumbo Drive
Lexington KY 40509

Email: ordmailbox@parker.com
Phone: (859) 335-5101

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Phone: (760) 599-1168
Fax: (800) 344-3775

SAFETY DATA SHEET

Last Updated: 6-1-2015

Section 1 IDENTIFICATION

ThreadFit® Cutting Oil, Clear

Manufacturer Information	Emergency Contact
Fire Protection Products, Inc. 3198 Lionshead Avenue Carlsbad, CA 92010 Phone: +1 (800) 344-1822 Fax: +1 (800) 344-3775	CHEMTREC 1300 Wilson Boulevard Arlington, VA 22209-2380 Phone: +1 (800) 424-9300 International: +1 (703) 527-3887

Product Use	Cutting Oil

Section 2 HAZARDS IDENTIFICATION

Hazard Classification	This product is not classified as hazardous according to 29 CFR 1910, amended to conform to the United Nations Global Harmonized System of Classification and Labeling of Chemicals (OSHA/GHS).
Hazard Not Otherwise Classified	None as defined under 29 CFR 1910
Hazard Statements	This product is not considered to be a carcinogen by IARC, ACGIH, NTP or OSHA. This material should not be used for any other purpose than the intended use in Section 1 without expert advice.
Precautionary Statements	No hazards resulting from the material as supplied. Health injuries are not known or expected under normal use. Excessive exposure may result in eye, skin or respiratory irritation.
Potential Health Effects	**Routes of Exposure:** Ingestion, Skin Contact, Eye Contact, Inhalation **Eyes:** Exposure may cause irritation **Skin:** Prolonged or excessive skin contact may cause mild skin irritation **Inhalation:** Prolonged or excessive inhalation may cause respiratory tract irritation **Ingestion:** No significant adverse effects are expected upon ingestion of this product. Small amounts (a tablespoon) swallowed during normal handling operations are not likely to cause injury; swallowing larger amounts than that may cause injury. **Signs and Symptoms:** May cause eye/skin irritation. Inhalation of vapors in high concentrations may cause irritation of respiratory systems.
Response	In the case of fire, refer to section 5. In the case of spill, refer to section 6 In the case where first aid is required, refer to section 4.
Storage	Keep in a dry, cool well-ventilated place. Keep away from heat, sparks and open flame. Use care in handling/storage. Keep container closed when not in use. Do not store in unlabelled containers.
Empty Container Warning	Empty containers may contain residue and can be dangerous. DO NOT PRESSURIZE, CUT, WELD, BRAZE, SOLDER, DRILL GRIND OR EXPOSE SUCH CONTAINERS TO HEAT, FLAME, SPARKS OR OTHER SOURCES OF IGNITION. Empty containers should be disposed of in accordance with all Federal, state and local regulations. Consider recycling where practical.

Section 3	COMPOSITION/INFORMATION ON INGREDIENTS

Component Name	CAS Number	Weight %
Severely Hydrotreated Base Oil	64742-54-7	40-60
Hydrotreated Heavy Naphthenic	64742-52-5	20-30

Section 4	FIRST AID MEASURES
Inhalation	No specific treatment is necessary since this material is not likely to be hazardous by inhalation. If symptoms are experienced, remove source of contamination or move victim to fresh air.
Skin	Wash contact area with soap and water. Get medical attention if irritation develops or persists.
Eye	Flush eyes with water as a precaution. Get medical attention of irritation develops or persists.
Ingestion	Have victim rinse mouth thoroughly with water. Drink water as a precaution. Do not induce vomiting without medical advice. If ingestion of a large amount does occur, seek medical attention.
Symptoms	May cause eye/skin irritation. Inhalation of vapors in high concentration may cause irritation of the respiratory system.
General Advice	No hazards which require special first aid. Not expected to be toxic. Seek medical attention if ill effects develop.

Section 5	FIRE FIGHTING MEASURES
Flash Point, ASTM D-92	Greater than 182.2 °C
Extinguishing Media	Use water fog, foam, dry chemical or carbon dioxide.
Special Firefighting Procedures/Equipment	Wear suitable protective gear. In the event of fire, wear self-contained breathing apparatus. Use MSHA/NIOSH (approved or equivalent).
Unusual Fire and Explosion Hazards	None special. Irritating and/or toxic gases may be emitted upon the products decomposition.
Additional Information	Do not scatter spilled material with high pressure water streams.

Section 6	ACCIDENTAL RELEASE MEASURES
Personal Precautions	Keep unnecessary personnel away. Ensure adequate ventilation. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing.
Environmental Precautions	Prevent further leakage or spillage if safe to do so. Do not flush into surface water or sanitary sewer system. Notify appropriate authorities if necessary.
Methods and Materials Use for Containment	Eliminate all ignition sources (NO SMOKING, FLARES, SPARKS OR FLAMES IN THE IMMEDIATE AREA). Stop leak if you can do so without risk. Dike the spilled material where this is possible. Do not allow to enter sewers and waterways.
Methods for Clean Up	For larger spills, absorb with earth, sand or other non-combustible material and transfer to containers for later disposal. Do not allow the spill to enter sewers or waterways. For small spills, wipe with an absorbent material. Clean surface thoroughly to remove residual contamination. For waste disposal, see section 13 of the SDS.

Section 7	HANDLING AND STORAGE
Handling	Do not handle or store near open flames, sources of heat or sources of ignition. Protect material from direct sunlight. Do not get this material in contact with skin or eyes. Handle open container with care. Avoid breathing vapors or mists of this product.
Storage	Keep in a dry, cool and well-ventilated place. Keep away from heat, sparks and open flame. Use care in handling/storage. Keep container closed when not in use.

Section 8 EXPOSURE CONTROLS/ PERSONAL PROTECTION

Exposure Guidelines

Components	CAS-No.	Type	Value
Severely hydrotreated base oil	64742-54-7	ACGIH TLV	5 mg/m^3
Hydrotreated Heavy Naphthenic	64742-52-5	ACGIH TLV	5 mg/m^3

Engineering Controls	Provide local and general exhaust to effectively remove and prevent buildup of any vapors or mists generated for the handling or use of this product.
Personal Protection	Eye/Face Protection: Wear chemical goggles. If splashes occur, wear face shield
	Skin Protection: Wear suitable protective clothing including oil impervious gloves
	Respiratory Protection: No personal respiratory protective equipment normally required. If mist is generated (heating or spraying) and engineering controls are not sufficient, wear approved organic vapor respirator suitable for oil mist.
General Measures	Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking and/or smoking. Routinely wash work clothes and protective equipment to remove contaminants. Practice good housekeeping.

Section 9 PHYSICAL AND CHEMICAL PROPERTIES

Appearance: Light amber liquid	**Evaporation Rate: Not Determined**
Odor: Typical sulfurized oil odor	**DMSO Extract (mineral oil only, IP-346 <3 % wt**
Odor Threshold: Not Available	**Upper/lower Flammability LEL 0.9 UEL 7.0**
pH: Not Applicable	**Vapor Pressure: <0.013 kPa (0.1 mm hG) at 20 °C**
Melting Point/Freezing Point: 0 °F	**Vapor Density: (air=1) >2 at 101 kPa**
Boiling Point and Boiling Range: > 600 °F	**Relative Density: 0.8735 specific gravity**
Flash Point: > 182.2 °C	**Solubility: Negligible**
Partition Coefficient: > 3.5	**Auto-Ignition Temperature: Not Determined**
Decomposition Temperature: Not Determined	**Viscosity: approximately 35 cSt @ 40 °C**
VOC Content: 2.0 g/L	

Section 10 STABILITY AND REACTIVITY

Reactivity	See sub-sections below.
Chemical Stability	Material is stable under normal conditions.
Possibility of Hazardous Reactions	Will not occur.
Conditions to Avoid	Heat, flames and sparks. None known. Avoid temperatures exceeding the flash point. This product may react with strong oxidizing agents.

Hazardous Decomposition	Carbon oxides and sulfur oxides
Section 11	**TOXICOLOGICAL INFORMATION**
Ingestion Toxicity	Minimally toxic. Based on test data for structurally similar materials. Test(s) equivalent or similar to OECD Guideline 401
Skin Toxicity	Minimally toxic. Based on test data for structurally similar materials. Test(s) equivalent or similar to OECD Guideline 402
Eye Irritation	May cause mild, short-lasting discomfort to eyes. Based on test data structurally similar materials. Test(s) equivalent or similar to OECD Guideline 405
Respiratory Irritation	Minimally toxic. Based on test data for structurally similar materials. Test(s) equivalent or similar to OECD Guideline 403
Chronic Toxicity	No data available
Carcinogenicity	Not expected to cause cancer. Based on test data for structurally similar materials. Test(s) equivalent or similar to OECD Guideline 451 453
Other	For the product itself: Base oil severely refined: Not carcinogenic in animal studies. Representative material passes IP-346, Modified Ames test, and/or other screening tests.
Section 12	**ECOLOGICAL INFORMATION**
Ecotoxicity	Material not expected to be harmful to aquatic organisms.
Degradability	Biodegradation: Material – Expected to be inherently biodegradable
Other	Ecological injuries are not known or expected under normal use. An environmental hazard cannot be excluded in the event of unprofessional handling or disposal
Section 13	**DISPOSAL CONSIDERATIONS**
Waste Disposal Method	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. Protect the environment. Dispose of used oil at designated sites. Minimize skin contact. Do not mix oils with solvents, brake fluids or coolants. RCRA Information. The unused product 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 waste. However, after use it is the responsibility of the user to determine the products status for disposal.
Section 14	**TRANSPORT INFORMATION**
UN Number	Not Regulated for Land Transport
UN Proper Shipping Name	Not Applicable
Transport Hazard Class	Not Regulated for Land Transport
Canadian Transportation of Dangerous Goods	Not Regulated for Land Transport
Marine Pollutants	Not regulated for Sea Transport according to IMDG-Code Marine Pollutant: No

Air (IATA)	Not regulated for Air Transport.
Section 15	**REGULATORY INFORMATION**
TSCA Status	All components are on the U. S. EPA TSCA Inventory list.
SARA 311/312 Reportable Hazard Categories	None Listed
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. California Safe Drinking Water and Toxic Enforcement Act of 1986 (Proposition 65): This material is not known to contain any chemicals currently listed as carcinogens or reproductive toxins.
WHMIS DSL Status (Canada)	Not controlled
Section 16	**OTHER INFORMATION**
Additional Information	**HMIS ratings:** Health = 1, Flammability = 1, Physical Hazard = 0, Personal Protection = B **NFPA ratings:** **Health = 1, Flammability = 1, Instability = 0**
	There are no Red List materials included in this product.
Prepared By	Human Resource Department
Revised Date	June 1, 2015
Disclaimer	Although the information and recommendations set forth herein are presented in good faith and believed to be correct as of the date hereof, **Fire Protection Products, Inc.** makes no representations as to the completeness or accuracy thereof. **Fire Protection Products, Inc.** makes no warranty whatsoever, expressed or implied, of merchantability or fitness for the particular purpose since the conditions of use are beyond our control. **Fire Protection Products, Inc.** assumes no responsibility for injury to recipient or to third persons for any damage to any property and recipient.

Safety Data Sheet

1 – Product Identifier & Identity for the Chemical

Manufacturer: WD-40 Company Australia Pty Ltd **Address:** 41 Rawson Street (Level 2, Suite 23) Epping NSW, 2121, Australia **Telephone:** **Information:** +61 2 9868 2200 **Emergency only:** 1800 024 973 **New Zealand Registered Company Name:** Eproducts New Zealand Limited **Address:** 7D Orbit Drive Albany New Zealand **Telephone:** **Information:** 09 916 6750 **Emergency only:** 0800 POISON (0800 764 766)	**Product Name: WD-40 Bulk Liquid** **Chemical Name:** Mixture **Product Use:** Lubricant, Penetrant, Drives Out Moisture, Removes and Protects Surfaces From Corrosion **Restriction on Use:** None Identified **SDS Date Of Preparation:** 19 February 2015 **HSNO Approval Number:** HSR002519

2 – Hazards Identification

Considered a Hazardous Substance according to the criteria of the New Zealand Hazardous Substances New Organisms legislation. Classified as Dangerous Good for transport purposes.

Poisons Schedule: None

Classification of the Hazardous Chemical (in accordance with HSNO Regulation):

Health	Environmental	Physical
Aspiration Toxicity Category 1 (6.1E) Eye Irritant Category 2A (6.4A) Skin Irritant Category 2 (6.3A)	Aquatic Acute Toxicity Category 3 (9.1D) Aquatic Chronic Toxicity Category 3 (9.1C)	Flammable Liquid Category 3 (3.1C)

Label Elements

Contains: Naphtha (petroleum), hydrodesulfurized heavy; 1,2,4-Trimethyl benzene; 1,3,5-Trimethyl benzene; Xylene, Mixed Isomers; and Surfactant

Danger!
H226 Flammable liquid and vapour.
H304 May be fatal if swallowed and enters airways.

H315 Causes skin irritation.
H319 Causes serious eye irritation.
H412 Harmful to aquatic life with long lasting effects.

Prevention
P210 Keep away from heat, sparks, open flames and hot surfaces.-No smoking.
P233 Keep container tightly closed.
P240 Ground or bond container and receiving equipment.
P241 Use explosion-proof electrical, ventilating or lighting equipment.
P242 Use only non-sparking tools.
P243 Take precautionary measures against static discharge.
P264 Wash thoroughly after handling.
P273 Avoid release to the environment.
P280 Wear protective gloves, eye protection and face protection.
Response
P303+P361+P353 IF ON SKIN (or hair): Remove immediately all contaminated clothing. Rinse skin with water or shower.
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 it before reuse.
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.
P301+P310 IF SWALLOWED: Immediately call a POISON CENTER or doctor or physician.
P331 Do NOT induce vomiting.
P370+P378 In case of fire: Use water fog, dry chemical, carbon dioxide or foam for extinction.
Storage
P403+P235 Store in a well-ventilated place. Keep cool.
P405 Store locked up.
Disposal
P501 Dispose of contents and container in accordance with local and national regulations.

Other Hazards that do not Result in Classification: None

3 - Composition/Information on Ingredients

Ingredient	CAS #	Weight Percent	Substance Classification
Naphtha (petroleum), hydrodesulfurized heavy	64742-82-1	>60%	Flam. Liq. Cat 3 (H226, 3.1C) Asp. Tox. Cat 1 (H304, 6.1E)
Distillates, Hydrotreated Heavy Paraffinic	64742-54-7	10-20%	Not Hazardous
Non-Hazardous Ingredients	Mixture	>10%	Not Hazardous
1,2,4-Trimethyl benzene	95-63-6	<10%	Flam. Liq. Cat 3 (H226, 3.1C) Acute Tox. Cat 4 (H332, 6.1D) Eye Irrit. Cat 2 (H319, 6.4A) Skin Irrit. Cat 2 (H315, 6.3A) STOT SE Cat 3 (H335, 6.1E) Aq. Chronic Cat 2

			(H411, 9.1B)
1,3,5-Trimethyl benzene	108-67-8	<10%	Flam. Liq. Cat 3 (H226, 3.1C) STOT SE Cat 3 (H335, 6.1E) Aq. Chronic Cat 2 (H411, 9.1B)
Xylene, Mixed Isomers	1330-20-7	<10%	Flam. Liq. Cat 3 (H226, 3.1C) Acute Tox. Cat 4 (H312, 6.1D) Acute Tox. Cat 4 (H332, 6.1D) Skin Irrit. Cat 2 (H315, 6.3A)
Surfactant	Proprietary	<1%	Eye Dam. Cat 1 (H318, 8.3A) Skin Irrit. Cat 2 (H315, 6.3A)

See Section 16 for full text of GHS Classification and H phrases

4 – First Aid Measures

Ingestion (Swallowed): Aspiration Hazard. DO NOT induce vomiting. Call a Poisons Information Center (phone 0800 764 766 in New Zealand) 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.
Most Important Symptoms: May cause eye, skin, and respiratory irritation. Prolonged skin contact may cause drying of the skin. Inhalation may cause headache, dizziness, nausea and other symptoms of central nervous system depression. Accidental ingestion may cause gastrointestinal effects with irritation, nausea, vomiting, dizziness, coma and death. Aspiration into the lungs during ingestion or vomiting may cause lung damage.
Indication of Immediate Medical Attention and Special Treatment, if Needed: Immediate medical attention is required for ingestion.

5 – Fire Fighting Measures

Suitable 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: Flammable liquid and vapor. Keep away from ignition source and open fire. Vapors are heavier than air and may travel along surfaces to remote ignition sources and flash back. A vapor and air mixture can create an explosion hazard in confined spaces.
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.

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.
Environmental Precautions: Avoid releases to the environment. Report spills to authorities as required.

Methods and Materials for Containment/Cleanup: Contain and collect liquid with an inert absorbent material and place in a container for disposal. Clean spill area thoroughly.

7 – Handling and Storage

Precautions for Safe Handling: Avoid contact with eyes and skin. Avoid breathing vapors or aerosols. Use only with adequate ventilation. Keep away from heat, sparks, hot surfaces and open flames. Wash thoroughly with soap and water after handling. Keep containers closed when not in use. Keep out of the reach of children.
Conditions for Safe Storage, including any incompatibilities: Store in a cool, dry ventilated area away from incompatible materials. Protect from physical damage.

8 – Exposure Controls /Personal Protection

Chemical	Occupational Exposure Limits	Biological Limit Value
Naphtha (petroleum), hydrodesulfurized heavy	350 mg/m3 TWA (manufacturer recommended)	None Established
Distillates, Hydrotreated Heavy Paraffinic	5 mg/m3 TWA, 10 mg/m3 STEL NZ WES (as oil mist, mineral)	None Established
Non-Hazardous Ingredients	None Established	None Established
1,2,4-Trimethyl benzene	25 ppm TWA NZ WES (as Trimethyl benzene, all isomers)	None Established
1,3,5-Trimethyl benzene	25 ppm TWA NZ WES (as Trimethyl benzene, all isomers)	None Established
Xylene, Mixed Isomers	50 ppm TWA NZ WES	Methylhippuric acids in urine, End of shift, 1.5 g/g creatinine.
Surfactant	None Established	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. Safety glasses or goggles recommended.
Skin Protection: Avoid prolonged or repeated 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 an approved respirator. Respirator selection and use should be based on contaminant type, form and concentration. Follow applicable regulations and good Industrial Hygiene practice.
Work/Hygiene Practices: Eye wash facilities should be available. Wash hands after handling.
Other Protective Equipment: None required.

9 – Physical and Chemical Properties

Appearance and Odor:	Light Amber liquid with	Partition Coefficient of	Not determined

	a mild characteristic odor	n-octanol/water:	
Odor Threshold:	Not determined	Auto-ignition temperature:	Not determined
pH:	Not determined	Decomposition Temperature:	Not determined
Melting/Freezing Point:	-63 °C (-81.4 °F)	Viscosity:	2.79-2.96 cSt @ 40 °C (104 °F)
Boiling Point / Range:	183-187 °C (361.4-368.6 °F)	Specific Heat Value:	Not determined
Flash Point:	49 °C (120.2 °F)	Particle Size:	Not applicable
Evaporation Rate (Butyl Acetate = 1):	Not determined	VOC:	49.5%
Flammability (solid, gas):	Not applicable	Percent Volatile:	70-75%
Flammable Limits:	LEL 0.6% UEL 8.0%	Saturated Vapor Concentration:	Not determined
Vapor Pressure:	6.9 kPa @ 38 °C (100.4 °F)	Release of invisible flammable vapors and gases:	Yes
Vapor Density (air = 1):	>1	Aerosol Protection Level (NFPA 30B):	Not applicable
Relative Density (Water = 1):	0.8-0.82	Solubility:	Immiscible in water
Molecular Weight (g/mol):	Mixture	Taste:	Not applicable
Explosive Properties:	Not determined	Oxidizing Properties:	Not an oxidizer
Surface Tension (dyn/cm or mN/m):	Not determined	Gas Group:	Not applicable

10 – Stability and Reactivity

Reactivity: Non-reactive
Chemical Stability: Stable under normal storage conditions.
Possibility of Hazardous Reactions: Will not occur.
Conditions to Avoid: Avoid extreme heat, flames and other sources of ignition.
Incompatible Materials: Strong oxidizers.
Hazardous Decomposition Products: Carbon monoxide and carbon dioxide.

11 – Toxicological Information

Health Hazards:
Ingestion: Swallowing large amounts may produce 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.
Eye Contact: Liquid sprayed into eyes may cause irritation. May cause redness, stinging, swelling, and tearing.
Skin Contact: May produce mild irritation. Prolonged and/or repeated contact may cause defatting with possible dermatitis.
Inhalation: Mist or vapor can irritate the throat and lungs. 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.
Chronic Exposure: None known.
Medical Conditions Aggravated by Exposure: Preexisting eye, skin and respiratory conditions may be aggravated by exposure.

Acute Toxicity Values:
Naphtha (petroleum), hydrodesulfurized heavy: Oral rat LD50- >5000 mg/kg; Skin rabbit LD50- >3160 mg/kg.
Distillates, Hydrotreated Heavy Paraffinic: Oral rat LD50->15 gm/kg
Non-Hazardous Ingredients: No toxicity data available
1, 2, 4-Trimethyl benzene: Oral rat LD50 3400-6000 mg/kg; Skin rabbit LD50 - >3160 mg/kg

1, 3, 5-Trimethyl benzene: Inhalation rat LC50- 24000 mg/m3/4hr
Xylene, Mixed Isomers: Oral rat LD50 – 4300 mg/kg; Inhalation rat LC50 – 6350 ppm/4hr; Skin rabbit LD50- 1700 mg/kg
Surfactant: Oral rat LD50->3000 mg/kg

Skin Corrosion/Irritation: No data available for mixture. Bases on the ingredients, 1, 2, 4-Trimethyl benzene and Xylenes, this product is classified as a skin irritant.
Serious Eye Damage/Irritation: No data available for mixture. Bases on the ingredients, 1, 2, 4-Trimethyl benzene and Surfactant, this product is classified as an eye irritant.
Respiratory or Skin Sensitization: This product is not expected to cause sensitization.
Germ Cell Mutagenicity: None of the components have been found to be mutagenic.
Carcinogenicity: None of the components are listed as a carcinogen or suspected carcinogen by IARC, NTP, ACGIH, US OSHA or the EU CLP.
Reproductive Toxicity: None of the components are known to cause adverse reproductive effects.
Specific Target Organ Toxicity:
Single Exposure: No data available.
Repeated Exposure: No data available.
Aspiration Hazard: No data available. Based on the ingredients, this product is expected to present an aspiration hazard and may be harmful if the contents are swallowed.

12 – Ecological Information

Ecotoxicity:
Naphtha (petroleum), hydrodesulfurized heavy: 96 hr LC50 Fathead minnow – 8.2 mg/L; 96 hr LC50 Crangon Crangon – 4.3 mg/L
1, 2, 4-Trimethyl benzene: 96 hr LC50 Fathead minnows – 7.72 mg/L; 48 hr EC50 Daphnia magna – 6.14 mg/L
1, 3, 5-Trimethyl benzene: 96 hr LC50 Goldfish - 12.52 mg/L; 48 hr LC50 Daphnia magna- 6.0 mg/L
Xylene, Mixed Isomers: 96 hr LC50 Goldfish- 36.81 mg/L; 96 hr LC50 Rainbow trout – 13.5 mg/L

This product has been classified as harmful to the aquatic environment with long lasting effects based on the components. Releases to the environment should be avoided.

Persistence and Degradability: No data available.
Bioaccumulative Potential: No data available.
Mobility in Soil: No data available.
Other Adverse Effects: None Known

13 - Disposal Considerations

Safe Handling and Disposal Method: Dispose as appropriate for oil waste.
Disposal of Contaminated Packaging: Empty containers may be disposed of through normal waste management options.
Environmental Regulations: Dispose of all waste product, absorbents, and other materials in accordance with applicable Federal, state and local regulations.

14 – Transportation Information

IMDG Shipping Name: Petroleum Distillates, n.o.s. (Naphtha (petroleum), hydrodesulfurized heavy, Distillates, Hydrotreated Heavy Paraffinic)
IMDG Hazard Class: 3, PG III
UN Number: UN1268
Marine Pollutant: No

IATA Shipping Name: Petroleum Distillates, n.o.s. (Naphtha (petroleum), hydrodesulfurized heavy, Distillates, Hydrotreated Heavy Paraffinic)

IATA Hazard Class: 3, PG III
UN Number: UN1268

ADG Shipping Name: Petroleum Distillates, n.o.s. (Naphtha (petroleum), hydrodesulfurized heavy, Distillates, Hydrotreated Heavy Paraffinic)
ADG Hazard Class: 3, PG III
UN Number: UN1268
Hazchem (Emergency Action) Code: 3Y

Special Precautions for User: WD-40 does not test containers to assure that they can withstand the pressure change without leakage when transported by air. We do not recommend that our products be transported by air.

15 – Regulatory Information

New Zealand Inventory: All the ingredients comply with the HSNO regulations.

16 – Other Information

REVISION DATE: 19 February 2015 SUPERSEDES: 17 December 2014

Prepared By: Industrial Health & Safety Consultants, Inc.

Full Text of GHS Classification and H Phrases from Section 3:
Acute Tox. Cat 4 Acute Toxicity Category 4
Aq. Chronic Cat 2 Aquatic Chronic Toxicity Category 2
Asp. Tox. Cat 1 Aspiration Toxicity Category 1
Eye Dam. Cat 1 Eye Damage Category 1
Eye Irrit. Cat 2 Eye Irritant Category 2
Flam. Liq. Cat 3 Flammable Liquid Category 3
Skin Irrit. Cat 2 Skin Irritant Category 2
STOT SE Cat 3 Specific Target Organ Toxicity Single Exposure Category 3
H226 Flammable liquid and vapor.
H304 May be fatal if swallowed and enters airways.
H312 Harmful in contact with skin.
H315 Causes skin irritation.
H318 Causes serious eye damage.
H319 Causes serious eye irritation.
H332 Harmful if inhaled.
H335 May cause respiratory irritation.
H411 Toxic to aquatic life with long lasting effects.

List of Abbreviations or Acronyms:
ACGIH American Conference of Industrial Hygienists
ADG Australian Dangerous Goods
AICS Australian Inventory of Chemical Substances
AU Australia
EC Effective Concentration
EU European Union
GHS Globally Harmonized System of Classification and Labelling of Chemicals
HSNO Hazardous Substances and New Organisms
IARC International Agency of Research on Cancer
IATA International Air Transport Association
IMDG International Maritime Dangerous Goods
LC Lethal Concentration
LD Lethal Dosage
LEL Lower Explosive Limit

NTP National Toxicology Program
NZ New Zealand
OEL Occupational Exposure Limits
US OSHA United States Occupational Safety and Health Administration
PEL Permissible Exposure Limit
SDS Safety Data Sheet
STEL Short Term Exposure Limit
TWA Time-Weighted Average
UEL Upper Explosive Limit
VOC Volatile Organic Compounds
WES Workplace Exposure Standards
WHS Work Health and Safety

APPROVED BY: *I. Kowalski* TITLE: Manager Regulatory Affairs

This SDS complies with Australian guidelines for SDS. The foregoing information has been compiled from sources believed to be accurate but is not warranted to be. Recipients are advised to confirm in advance of need that data is correct. Standards change without notice. It is the responsibility of the recipient to insure that their personnel have been notified of any changes which may affect them. The data provided on this SDS are not meant to be used as specifications, only as guideline information as to the safe use of this product. User should refer to applicable laws before use.

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