Material Name: Bio-Penetrating Lubricant (BPL) Page 1 of 6 Issue Date: 15 May 2015 **No Hazardous Substance(s) or Complex Substance(s) required for disclosure.** As per paragraph (i) of 29 CFR 1910.1200, formulation is considered a trade secret and specific chemical identity and exact percentage (concentration) of composition may have been withheld. Specific chemical identity and exact percentage composition will be provided to health professionals, employees, or designated representatives in accordance with applicable provisions of paragraph (i).

SECTION 4 - FIRST AID MEASURES		
Eye contact:	Flush eye with water for 15 minutes. If symptoms persist, call a physician.	
Skin contact:	Wash off immediately with soap and plenty of water. Remove and wash contaminated clothing before re-use. If skin irritation persists, call a physician.	
Inhalation:	Move to fresh air. If breathing is difficult, give oxygen. If not breathing, give artificial respiration. If symptoms persist, call a physician.	
Ingestion:	Do not induce vomiting. If conscious, drink plenty of water. Obtain medical attention.	
Most important symptoms and effects, both acute and delayed		
Symptoms:	No information available.	
Indication of any immediate medical attention and special treatment needed		
Notes to physician:	Treat symptomatically	

### **SECTION 5 - FIRE-FIGHTING MEASURES**

Suitable extinguishing media: Use dry chemical, CO2, water spray or "alcohol" foam.

Unsuitable extinguishing media: Do not use a solid water stream as it may scatter and spread fire.

**Fire Fighting Instructions:** Evacuate area. Prevent runoff from fire control or dilution from entering streams, sewers, or drinking water supply. Use water spray to cool fire exposed surfaces and to protect personnel.

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

<u>Specific hazards arising from the chemical:</u> In the event of fire, cool tanks and protect personnel with water spray. FLASH POINT (PMCC) 146°C (295°F)

### **Explosion data:**

Sensitivity to Mechanical Impact Sensitivity to Static Discharge None. None.

### **Special protective equipment for firefighters:**

Firefighters should use standard protective equipment and in enclosed spaces, self-contained breathing apparatus.

### SECTION 6 - ACCIDENTAL RELEASE MEASURES

### Personal precautions, protective equipment and emergency procedures

Personal precautions: Use personal protective equipment.

### **Environmental precautions**

**Environmental precautions:** Prevent product from entering drains. Do not contaminate surface water. Check on local, national and international regulatory information to determine any reporting requirements for spills.

#### Methods and material for containment and cleaning up

Methods for containment: Prevent further leakage or spillage if safe to do so, confine spill immediately with booms.

**Methods for cleaning up:** Absorb spill with inert material (e.g. dry sand or earth), or skimming surface with suitable absorbent, then transfer non-combustible material in approved containers.

### **SECTION 7 - HANDLING AND STORAGE**

Material Name: Bio-Penetrating Lubricant (BPL) Page 2 of 6 Issue Date: 15 May 2015

## Precautions for safe handling

Handling:	andle in accordance with good industr	rial hygiene and safety practice. Keep c	containers closed when not
ir	use. Wash thoroughly after handling.		
Conditions for safe storage, in	cluding any incompatibilities		
Storage Conditions: K	leep containers tightly closed and store	e in a cool well-ventilated place free of	f contaminants.
E	mpty containers may retain product pr	roperties. Follow all MSDS / Label wa	rnings after container is
e	mptied. No special storage precautions	s required.	
SECTION 8 - EXPOSURE CONTROLS/PERSONAL PROTECTION			
Control parameters			
Exposure Guidelines			-
Components	ACGIH TLV	OSHA (TWA mg/m 3 ):	IDLH
Oil Mist	5 mg/m 3	5 mg/m 3	
Appropriate engineering controls			
<b>Engineering measures to reduce exposure:</b> Use only in area provided with appropriate exhaust ventilation.			

## Individual protection measures, such as personal protective equipment

Respiratory protection:	No personal respiratory protective equipment normally required. In case of insufficient ventilation wear suitable respiratory equipment.
Hand protection:	Nitrile rubber Neoprene gloves
Eye protection:	Safety glasses
Skin and body protection:	Impervious clothing
General Hygiene Considerations:	Avoid contact with skin, eyes and clothing

### **SECTION 9 - PHYSICAL AND CHEMICAL PROPERTIES**

## Typical information on basic physical and chemical properties

Specific Gravity $(H_2O = 1)$ :	.88 @ 15.6°C
Flash Point (PMCC):	146°C (295°F)
Kinematic viscosity:	13 cSt @ 40°C
Pour Point:	-30°C (-22°F)
Explosive properties:	Material does not have explosive properties.
Oxidizing properties:	See Section 2, No significant hazards.
Volatile Organic Compound (VOC):	Components contain No VOC according to CARB
Physical state	Liquid
Appearance	Oil
Odor	Mild
Color	Light yellow liquid
Odor threshold	Not Determined
Melting: point/freezing point:	Not Determined
Boiling point /boiling range:	Not Determined
Flammability (solid, gas):	Not Determined
Flammability Limit in Air	Not Determined
Evaporation rate: (n-Butyl Acetate=1)	Approx. <1
Percent Volatile:	Not Determined
Boiling Point:	Not Determined
<b>Vapor Density</b> (Air = 1):	<1
Vapor pressure:	Not Determined
Solubility in Water:	Insoluble
Upper flammability limit:	Not Determined
Lower flammability limit:	Not Determined
Partition coefficient:	Not Determined
Autoignition temperature:	Not Determined
Decomposition temperature:	Not Determined
Other information	

## **Other information**

The above data are typical values and do not constitute a specification.

<u>Reactivity</u>	Not applicable
Chemical stability	
Stability:	Stable under normal conditions
Possibility of Hazardous Reactions	
Possibility of Hazardous Reactions: Hazardous polymerization:	None under normal processing Hazardous polymerization does not occur
Conditions to avoid	
Conditions to avoid:	No special storage conditions required
Hazardous Decomposition Products	
Hazardous Decomposition Products:	None under normal processing
Incompatible materials	
Incompatible materials:	Oxidizing agents

# SECTION 11 - TOXICOLOGICAL INFORMATION

## Information on likely routes of exposure

Product Information	Product does not present an acute toxicity hazard based on known or supplied information	
Eye contact	Contact with eyes may cause irritation. May cause mild, short-lasting discomfort to eyes based on assessment of the components.	
Skin contact	Acute Toxicity: Minimally Toxic, based on assessment of the components. Substance does not generally irritate and is only mildly irritating to the skin with prolonged exposure.	
Inhalation	Acute Toxicity: Minimally Toxic, based on assessment of the components.	
	Irritation: Negligible hazard at ambient/normal handling temperatures.	
Ingestion	Acute Toxicity: Minimally Toxic, based on assessment of the components and structurally similar materials.	
Aspiration	Not expected to be an aspiration hazard, based on physical and chemical properties of the material.	
<b>Respiratory Sensitization</b>	Not expected to be a respiratory sensitizer, based on assessment of the components and structurally similar materials.	
Germ Cell Mutagenicity	Not expected to be a germ cell mutagen, based on assessment of the components and structurally similar materials.	
Carcinogenicity	Not expected to cause cancer, based on assessment of the components and structurally	
	similar materials. This product does not contain any carcinogens or potential carcinogens as listed by OSHA,	
	IARC or NTP.	
<b>Reproductive Toxicity</b>	Not expected to be a reproductive toxicant, based on assessment of the components.	
Lactation	Not expected to cause harm to breast-fed children.	
Specific Target Organ Tox	cicity (STOT)Single Exposure: Not expected to cause organ damage from a single exposure.Repeated Exposure: Not expected to cause organ damage from prolonged or repeated exposure.	

### **OTHER INFORMATION**

**Product Information:** Product does not present an acute toxicity hazard based on known or supplied information. Not expected to cause significant health effects under conditions of normal use, based on laboratory studies with the same or similar materials. Not mutagenic or genotoxic. Not sensitizing in test animals and humans.

## SECTION 12 - ECOLOGICAL INFORMATION

Ecotoxicity: No known hazards to the aquatic environment

**Biodegradation:** Based on previous biodegradability studies, the products provide Ultimate Biodegradation Pw1 >60% within 28 days in ASTM D-5864 Aerobic Aquatic Biodegradation of Lubricants.

Material Name: Bio-Penetrating Lubricant (BPL) Page 4 of 6 Issue Date: 15 May 2015 Aquatic/Ecotoxicity: Based on previous studies, (OECD 201, 202, and 203) LC50/EC50 >3,000 ppm (3000 mg/L).

**Bioaccumulation:** No Potential to Bioconcentrate

Soil Mobility: Not Established

Persistence and degradability: Readily biodegradable >60% % after 28 days

Water Mobility: The product is insoluble and floats on water. WGK: 1

### **SECTION 13 - DISPOSAL INFORMATION**

### Waste treatment methods

**Disposal of wastes:** Disposal should be in accordance with applicable regional, national and local laws and regulations.

Contaminated packaging: Do not reuse container.

### **SECTION 14 - TRANSPORTATION INFORMATION**

UN number	ADR/RID Not regulated.
ICAO Not regulated.	IMDG Not regulated.
UN proper shipping name	ADR/RID Not regulated.
ICAO Not regulated.	IMDG Not regulated. Marine Pollutant: NO
Transport hazard class(es)	ADR/RID Not regulated.
ICAO Not regulated.	IMDG Not regulated.
Packing group	ADR/RID Not regulated.
AIR	IATA Not regulated.
LAND	<b>TDG</b> Not regulated.
LAND	<b>DOT</b> Not regulated.

### **SECTION 15 - REGULATORY INFORMATION**

### **International Inventories**

TSCA: Listed in TSCA

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

### **Global Chemical Inventories:**

USA	All components of this material are on the US TSCA Inventory or are exempt.
EU	All components are in compliance with the EC Seventh amendment Directive 92 /32/EEC.
Japan	All components are in compliance with the Chemical Substances Control Law of Japan.
Australia	All components are in compliance with chemical notification requirements in Australia.
Canada	All components are in compliance with the Canadian Environmental Protection Act and are
	Canadian DSL/NDSL.
Switzerland	All components are in compliance with the Environmentally Hazardous Substances Ordinance in Switzerland.
China	All components of this product are listed on the Inventory of Existing Chemical Substances in China
Korea	All components are in compliance in Korea.
Philippines	All components are in compliance with the Philippines Toxic Substances and Hazardous and Nuclear Wastes
	Control Act of 1990 (R.A. 6969).
TSCA:	All ingredients in this product are listed or exempt from listing on the TSCA Chemical inventory.
CEPA:	All ingredients in this product are listed or exempt from listing on the Canadian DSL/NDSL.
Proposition 65:	This product contains no chemicals know to the State of California to cause cancer, birth defects of other reproductive harm.

### **Federal Regulations**

### SARA 313

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

No

## SARA 311/312 Hazard Categories

Acute Health Hazard

Material Name: Bio-Penetrating Lubricant (BPL) Page 5 of 6 Issue Date: 15 May 2015

Material Name: Bio-Penetrating Lubricant (BPL) Page 6 of 6