

Pulsarlube PL6 (Multipurpose Grease with MoS₂)

1. MANUFACTURER INFORMATION

- 1) Product Name : Pulsarlube PL6 (Multipurpose Grease with MoS₂)
- 2) Recommended use of the chemical and restrictions on use
 - A. Product description : An electrochemical automatic single point lubricator
 - B. Restrictions on use : Not available except the intended use of the product

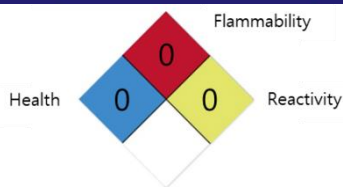
3) Supplier's details

| | |
|--------------------------------------|-----------------------------------|
| KLT Co., Ltd. | Telephone Number for Information: |
| 34-12, Bangchon-ro 955beon-gil | Tel.: +82 (02) 2083-8488 |
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| Republic of Korea | sales.asia@pulsarlube.com |

Emergency telephone number +82 (02) 2083-8488

2. HAZARDS IDENTIFICATION

- 1) Hazard / Risk Classification
 - Not applicable
 - (This material is not hazardous according to GHS regulatory guidelines)
- 2) Label elements including precautionary statements
 - Pictogram
 - Not applicable
 - Signal word : Not applicable
 - Hazard/Risk Statement :
 - Not applicable
 - Precautionary Statement
 - <Prevention>
 - Not applicable
 - <Response>
 - Not applicable
 - <Storage>
 - Not Applicable
 - <Disposal>
 - Not applicable
- 3) Other Hazard Risk which do not included in the classification criteria
 - This material should not be used for any other purpose than the intended use in Section 1 without expert advice.
 - Health studies have shown that chemical exposure may cause potential human health risks which may vary from person to person.

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3. COMPOSITION/INFORMATION ON INGREDIENTS

General information

Reportable Hazardous Substance(s) or Complex Substance(s)

| Chemical name | Other name | CAS No | Content (%) |
|--|--|------------|-------------|
| 1. BENZENAMINE, N-PHENYL-, REACTION PRODUCTS WITH 2,4,4-TRIMETHYLPENTENE | MIXTURE OF OCTYLATED DIPHENYLAMINES | 68411-46-1 | 1 - < 5% |
| 2. ZINC DITHIOPHOSPHATE | zinc bis[0-(6-methylheptyl)] bis[0-(sec-butyl)] bis(dithiophosphate) | 93819-94-4 | 1 - < 2.5% |

※ Note - any classification in brackets is a GHS building block that was not adopted by the EU in the CLP regulation (No 1272/2008) and therefore is not applicable in the EU or in non-EU countries which have implemented the CLP regulation and is shown for informational purposes only.

(* All concentrations are percent by weight unless ingredient is a gas. Gas concentrations are in percent by volume)

4. FIRST AID MEASURES

General advice

Take proper precautions to ensure your own health and safety before attempting rescue and providing first aid. Consult a physician. Show this safety data sheet to the doctor in attendance. Move out of dangerous area.

In case of skin contact

Wash contact areas with soap and water. If product is injected into or under the skin, or into any part of the body, regardless of the appearance of the wound or its size, the individual should be evaluated immediately by a physician as a surgical emergency. Even though initial symptoms from high pressure injection may be minimal or absent, early surgical treatment within the first few hours may significantly reduce the ultimate extent of injury.

If inhaled

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

In case of eye contact

Thoroughly flush the eyes with large amounts of clean low-pressure water for at least 15 minutes, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. If irritation persists, consult a physician.

If swallowed

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

5. FIRE FIGHTING MEASURES

Extinguishing media
Suitable extinguishing media

Use extinguishing measures that are appropriate to local circumstances and the surrounding environment
Use alcohol-resistant foam, dry chemical or carbon dioxide.
Avoid use of water jet for extinguishing

Special hazards arising from the substance or mixture

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

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Fume, Sulphur oxides

Advice for firefighters

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

Further information

Flash Point [Method]: >204°C (400°F) [EST. FOR OIL, ASTM D-92 (COC)]

Upper/Lower Flammable Limits (Approximate volume % in air): UEL: No data available LEL: No data available

Autoignition Temperature: No data available

6. ACCIDENTAL RELEASE MEASURES**Personal precautions, protective equipment and emergency procedures****NOTIFICATION PROCEDURES**

In the event of a spill or accidental release, notify relevant authorities in accordance with all applicable regulations.

PROTECTIVE MEASURES

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

Environmental precautions

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

Methods and materials for containment and cleaning up

Land Spill: Stop leak if you can do so without risk. Scrape up spilled material with shovels into a suitable container for recycle or disposal.

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

Skim from surface

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

Reference to other sections

For disposal see section 13.

7. HANDLING AND STORAGE**Precautions for safe handling**

Avoid contact with skin and eyes. Avoid inhalation of vapour or mist and avoid formation of dust and aerosols.

Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed.

Remove contaminated clothing and protective equipment before entering eating areas

Conditions for safe storage, including any incompatibilities

Store in cool place. Keep container tightly closed in a dry and well-ventilated place.

Hygroscopic. air, light, and moisture sensitive. Store under inert gas.

Store in accordance with local regulations

Specific end uses

no data available

8. EXPOSURE CONTROLS/PERSONAL PROTECTION**Control parameters****Exposure limits**

no data available

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Appropriate engineering controls

Good general ventilation should be sufficient to control worker exposure to airborne contaminants.

Personal protective equipment

Respiratory protection

Use a properly fitted, air-purifying or air-fed respirator complying with an approved standard if a risk assessment indicates this is necessary

Eye protection

Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts.

Hands protection

Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary.

Body protection

Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

9. PHYSICAL AND CHEMICAL PROPERTIES

| | |
|---|--|
| a) Appearance | Solid Paste, Dark Gray |
| b) Odour | Characteristic |
| c) Odour threshold | no data available |
| d) pH | no data available |
| e) Melting point/freezing point | no data available |
| f) Initial boiling point and boiling range | > 316°C (600°F) [Estimated] |
| g) Flash point | >204°C (400°F) [EST. FOR OIL, ASTM D-92 (COC)] |
| h) Evaporation rate | no data available |
| i) Flammability (solid, gas) | no data available |
| j) Upper/lower flammability or explosive limits | no data available |
| k) Vapor pressure | < 0.013 kPa (0.1 mm Hg) at 20 °C [Estimated] |
| l) Solubility | Negligible |
| m) Vapor density | no data available |
| n) Relative density | 0.914 @ 15°C |
| o) Partition coefficient: n-octanol/water | no data available |
| p) Auto-ignition temperature | no data available |
| q) Decomposition temperature | no data available |
| r) Viscosity | 220 cSt (220 mm ² /sec) at 40 °C |
| s) Formula mass | no data available |

10. STABILITY AND REACTIVITY

Chemical stability

This material is stable under recommended storage and handling conditions.

Possibility of hazardous reactions

Hazardous Polymerization will not occur.

Conditions to avoid

Excessive heat. High energy sources of ignition.

Incompatible materials

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Strong oxidizing substances

Hazardous decomposition products

Material does not decompose at ambient temperatures.

11. TOXICOLOGICAL INFORMATION**Information on the likely routes of exposure**

- Respiratory tracts : no data available
- Oral : no data available
- Eye-Skin : no data available

- Acute toxic
 - Not classified for acute toxicity based on available data.

- Skin corrosion/irritation
 - Negligible irritation to skin at ambient temperatures. Based on assessment of the components.
- Serious eye damage/irritation
 - May cause mild, short-lasting discomfort to eyes. Based on assessment of the components.
- Respiratory sensitization
 - Based on available data, the classification criteria are not met.
- Skin sensitization
 - Based on available data, the classification criteria are not met.
- Carcinogenicity
 - Based on available data, the classification criteria are not met.
 - * IARC
 - no data available
 - * ACGIH
 - no data available
 - * NTP
 - no data available
 - * EU CLP
 - no data available
- Germ cell mutagenicity
 - Based on available data, the classification criteria are not met.
- Reproductive toxicity
 - Based on available data, the classification criteria are not met.
- STOT-single exposure
 - Based on available data, the classification criteria are not met.
- STOT-repeated exposure
 - Based on available data, the classification criteria are not met.
- Aspiration hazard
 - Based on available data, the classification criteria are not met.

12. ECOLOGICAL INFORMATION

Ecotoxicity : Material -- Not expected to be harmful to aquatic organisms.

- Fish
- Crustaceans
- Algae

Persistence and degradability

- Persistence

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- no data available

Degradability

- no data available

Bioaccumulative potential

Bioaccumulative potential

- Base oil component -- Has the potential to bioaccumulate, however metabolism or physical properties may reduce the bioconcentration or limit bioavailability.

Biodegradation

- Base oil component -- Expected to be inherently biodegradable

Mobility in soil

- Base oil component -- Low solubility and floats and is expected to migrate from water to the land.

- Expected to partition to sediment and wastewater solids.

Other adverse effects

- no data available

13. DISPOSAL CONSIDERATIONS

Disposal methods

Offer surplus and non-recyclable solutions to a licensed disposal company.

Waste must be classified and labelled prior to recycling or disposal.

Contact a licensed professional waste disposal service to dispose of this material.

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

14. TRANSPORT INFORMATION

UN number

ADR/RID: - IMDG: - IATA: -

UN proper shipping name

ADR/RID: no data available

IMDG: no data available

IATA: no data available

Transport hazard class(es)

ADR/RID: - IMDG: - IATA: -

Packaging group

ADR/RID: - IMDG: - IATA: -

Environmental hazards

ADR/RID: no IMDG Marine pollute: no IATA: no

Special precautions for user

- Local transport follows in accordance with Dangerous goods Safety Management Law.

- Package and transport follow in accordance with Department of Transportation (DOT) and other regulatory agency requirements.

- Air transport(IATA): Not subject to IATA regulations.

- EmS FIRE SCHEDULE : Not available

- EmS SPILLAGE SCHEDULE : Not available

15. REGULATORY INFORMATION

REGULATORY INFORMATION

POPs Management Law

- Not applicable

Information of EU Classification

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- * Classification
- * Safety Phrase
- U.S. Federal regulations
 - * OSHA PROCESS SAFETY (29CFR1910.119)
 - Not applicable
 - * CERCLA Section 103 (40CFR302.4)
 - Not applicable
 - * EPCRA Section 302 (40CFR355.30)
 - Not applicable
 - * EPCRA Section 304 (40CFR355.40)
 - Not applicable
 - * EPCRA Section 313 (40CFR372.65)
 - Not applicable
- Rotterdam Convention listed ingredients
 - Not applicable
- Stockholm Convention listed ingredients
 - Not applicable
- Montreal Protocol listed ingredients
 - Not applicable

16. OTHER INFORMATION

1) Source of the data

- (1) Chemical manufacturer's information : SDS(SAFETY DATA SHEET) Data
- (2) Chem Guide CAS DataBase
- (3) Corporate Solution From Thomson Micromedex(<http://csi.micromedex.com>)
- (4) ECB-ESIS(European chemical Substances Information System)(<http://ecb.jrc.it/esis>)
- (5) ECOTOX Database, EPA(<http://cfpub.epa.gov/ecotox>)
- (6) IUCLID Chemical Data Sheet, EC-ECB
- (7) International Chemical Safety Cards(ICSC)(<http://www.nihs.go.jp/ICSC>)
- (8) TOXNET, U.S. National Library of Medicine(<http://toxnet.nlm.nih.gov>)
- (9) The Chemical Database, The Department of Chemistry at the University of Akron
(<http://ull.chemistry.uakron.edu/erd>)
- (10) Korea Information System for Chemical Safety, KISChem (<http://kischem.nier.go.kr>)
- (11) Chemical information system (<http://ncis.nier.go.kr>)
- (12) Grease Raw material manufacturer's information : PSDS(PRODUCT SAFETY DATA SHEET) Data

2) The first creation date : 2015.02.11

3) The number of times, and the final revision date : Revision times 05

The final revision date : 2024.05.31

Further information

Pulsarlube has prepared copyrighted Product Safety Datasheets to provide information on the different Pulsarlube automatic grease lubricator systems. As defined in above the text Pulsarlube automatic grease lubricator are manufactured articles, which do not result in exposure to a hazardous chemical under normal conditions of use. The information and recommendations set forth herein are made in good faith, for information only, and are believed to be accurate as of the date of preparation. However, Pulsarlube USA, Inc. MAKES NO WARRANTY, EITHER EXPRESS OR IMPLIED, WITH RESPECT TO THIS INFORMATION AND DISCLAIMS ALL LIABILITY FROM REFERENCE ON IT.