

Pulsarlube PL5 (High Temperature Grease)

1. MANUFACTURER INFORMATION

- 1) Product Name : Pulsarlube PL5 (High Temperature Grease)
- 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.

6-19, Hansan-ro, Tanhyeon-myeon,

Paju-si, Gyeonggi-do,

Republic of Korea

Telephone Number for Information:

Tel.: +82 (02) 2083-8488

Fax : +82 (02) 2083-8485

sales.asia@pulsarlube.com

Emergency telephone number +82 (02) 2083-8488

2. HAZARDS IDENTIFICATION

- 1) Hazard / Risk Classification
Skin corrosion/irritation : Category3

2) Label elements including precautionary statements

○ Pictogram

Not applicable

○ Signal word : Not applicable

○ Hazard/Risk Statement :

H316 Cause mild skin irritation

○ Precautionary Statement

<Prevention>

Not applicable

<Response>

P332+P313 If skin irritation occurs: Get medical advice/attention

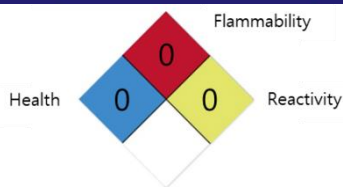
<Storage>

Not Applicable

<Disposal>

Not applicable

3) Other Hazard Risk which do not included in the classification criteria

PSDS (Product Safety Data Sheet)


3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical name	Other name	CAS No	Content (%)
1. Residual oils (petroleum), Hydrotreated	Residual oils (petroleum), Hydrotreated	64742-57-0	75.0 ~ 85.0
2. Secret (S1)	Secret (S1)	Secret (S1)	Secret (S1)

Ingredients 1 DMSO Extract (mineral oil only), IP-346: < 3 %wt

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 skin with soap and copious amounts of water. Consult a physician.
 Wash contaminated clothing thoroughly with water before removing it, or wear gloves
 Remove contaminated clothing and shoe
 Get medical attention if adverse health effects persist or are severe

If inhaled

Remove person to fresh air. If signs/symptoms continue, get medical attention. Give oxygen or artificial respiration as needed.

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

DO NOT induce vomiting. If vomiting does occur, have victim lean forward to prevent aspiration. Rinse mouth with water. Seek medical attention. Never give anything by mouth to an unconscious individual.

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

no data available

Advice for firefighters

Wear self-contained breathing apparatus for fire-fighting if necessary.
 Cool containers with water until well after fire is out.
 Keep unauthorized personnel out.
 Withdraw immediately in case of rising sound from venting safety devices or discoloration of tank.
 Keep containers cool with water spray

PSDS (Product Safety Data Sheet)

Further information

None

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

Use personal protective equipment. Avoid dust formation. Avoid breathing vapors, mist or gas. Ensure adequate ventilation. Evacuate personnel to safe areas. Avoid breathing dust. No action shall be taken involving any personal risk or without suitable training

Environmental precautions

Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution.

Methods and materials for containment and cleaning up

Pick up and arrange disposal without creating dust. Sweep up and shovel. Keep in suitable, closed containers for disposal. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.

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

- ACGIH
 - [Residual oils (petroleum), hydrotreated] : TWA 5 mg/m³, Inhalable particulate matter (Mineral oil, Pure, highly and severely refined)
 - [Secret] : TWA 5 mg/m³, Inhalable particulate matter (Mineral oil, Pure, highly and severely refined)
- OSHA
 - no data available

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

PSDS (Product Safety Data Sheet)

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	Paste, Beige
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	no data available
g) Flash point	no data available
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	no data available
l) Solubility	Insoluble
m) Vapor density	no data available
n) Relative density	0.90 ~ 0.95 @ 20 °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	no data available
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

Avoid contact with incompatible materials and condition.

Avoid : Accumulation of electrostatic charges, Heating, Flames and hot surface.

Incompatible materials

no data available

Hazardous decomposition products

May emit flammable vapour if involved in fire.

11. TOXICOLOGICAL INFORMATION

PSDS (Product Safety Data Sheet)**Information on the likely routes of exposure**

- Respiratory tracts : no data available
- Oral : no data available
- Eye-Skin :
 - Cause mild skin irritation.
- Acute toxic
 - * Oral - 2000mg/kg < ATEmix <= 5000mg/kg
 - [Residual oils (petroleum), hydrotreated] : LD50 >5000 mg/kg Rat (ECHA)
 - [Secret] : LD50 > 5000 mg/kg Rat (ECHA)
 - [Secret] : LD50 = 6450 mg/kg Rat (IUCLID)
 - * Dermal - ATE MIX : >5000mg/kg
 - [Residual oils (petroleum), hydrotreated] : LD50 >5000 mg/kg Rabbit (ECHA)
 - [Secret] : LD50 >5000 mg/kg Rabbit (ECHA)
 - * Inhalation - ATE MIX : no data available
 - [Residual oils (petroleum), hydrotreated] : LC50 >5.53 mg/L/4hr (ECHA)
 - [Secret] : LC50 >5.53 mg/l 4 hr Rat (ECHA)
- Skin corrosion/irritation
 - Cause mild skin irritation.
- Serious eye damage/irritation
 - no data available
- Respiratory sensitization
 - no data available
- Skin sensitization
 - no data available
- Carcinogenicity
 - * IARC
 - no data available
 - * OSHA
 - no data available
 - * ACGIH
 - [Residual oils (petroleum), hydrotreated] : A4
 - [Secret] : A4
 - * NTP
 - no data available
 - * EU CLP
 - [Residual oils (petroleum), hydrotreated] : Carc.1B
 - [Secret] : Carc.1B
- Germ cell mutagenicity
 - no data available
- Reproductive toxicity
 - no data available
- STOT-single exposure
 - no data available
- STOT-repeated exposure
 - no data available
- Aspiration hazard
 - no data available

12. ECOLOGICAL INFORMATION**Ecotoxicity**

- Fish

PSDS (Product Safety Data Sheet)

- [Secret] : LC50 5000 mg/ℓ 96 hr Oncorhynchus mykiss (IUCLID)
- [Secret] : LC50 56000 mg/ℓ 96 hr (ECOTOX)
- Crustaceans
 - [Secret] : EC50 1000 mg/ℓ 48 hr Daphnia magna (IUCLID)
- Algae
 - [Secret] : EC50 1000 mg/ℓ 96 hr Scenedesmus subspicatus (IUCLID)
 - [Secret] : EC50 = 22000 mg/ℓ 96 hr (Estimate)

Persistence and degradability

- Persistence
 - [Secret] : log Kow = 3.9 ~ 6 (Estimate)
- Degradability
 - no data available

Bioaccumulative potential

- Bioaccumulative potential
 - [Secret] : BCF 3.162 (Estimate)
- Biodegradation
 - [Secret] : Biodegradability = 6 (%) 28 day (Aerobic, Domestic wastewater, does not decompose easily)

Mobility in soil

- [Secret] : Koc = 4.971

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

PSDS (Product Safety Data Sheet)

- EmS SPILLAGE SCHEDULE : Not available

15. REGULATORY INFORMATION

REGULATORY INFORMATION

- POPs Management Law
 - Not applicable
- Information of EU Classification
 - * Classification
 - [Residual oils (petroleum), hydrotreated] : Carc. Cat. 2; R45
 - [Secret] : Carc. Cat. 2; R45
 - * Risk Phrases
 - [Residual oils (petroleum), hydrotreated] : R45
 - [Secret] : R45
 - * Safety Phrase
 - [Residual oils (petroleum), hydrotreated] : S53, S45
 - [Secret] : S53, S45
- 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 03

The final revision date : 2017.06.12

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

PSDS (Product Safety Data Sheet)

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.