Pulsarlube PL2

(High Performance Mining Grease)

1. MANUFACTURER INFORMATION

1) Product Name : Pulsarlube PL2 (High Performance Mining 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

Pulsarlube USA, Inc.
1480 Howard Street,
Elk Grove Village,
IL 60007, USA

Telephone Number for Information:
Tel.: +1 (847) 593-5300
Fax : +1 (847) 593-5303
info@pulsarlube.com

Emergency telephone number +1 (847) 593-5300 (Monday – Friday, 08:30 am ~ 05:30 pm)

2. HAZARDS IDENTIFICATION

1) Hazard / Risk Classification

Classification of the chemical in accordance with paragraph (d) of §1910.1200;

GHS Classification : Not classified as hazardous under OSHA
Hazard Statements : Not hazardous under OSHA regulations

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
Not applicable

3. COMPOSITION/INFORMATION ON INGREDIENTS

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

Chemical name	Other name	CAS No	Content (%)
1. 1,3,4-thiadiazole-2(3H)-thione,5,5'-dithiobis-	1,3,4-thiadiazole-2(3H)-thione,5,5'-dithiobis-	72676-55-2	1.0 ~ 5.0

Note: Specific chemical identities and/or exact percentages have been withheld as a trade secret.

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.
Treat symptomatically.

In case of skin contact
Wash with soap and water. Get medical attention if irritation develops or persists.

If inhaled
This material does not present a hazard if inhaled. Remove individual to fresh air after an airborne exposure if any symptoms develop, as a precautionary measure.

In case of eye contact
Immediately flush eyes with plenty of water for at least 20 minutes retracting eyelids often.
Tilt the head to prevent chemical from transferring to the uncontaminated eye. Get immediate medical attention and monitor the eye daily as advised by your physician..

In case of ingestion
Do not induce vomiting. Seek medical attention immediately. Provide medical care provider with this SDS.

Most important symptoms/effects, acute and delayed : See Section 11

Indication of immediate medical attention and special treatment needed : Treat symptomatically

5. FIRE FIGHTING MEASURES

Extinguishing media

Suitable extinguishing media
Use alcohol resistant foam, carbon dioxide, or dry chemical when fighting fires.
Water or foam may cause frothing if liquid is burning but it still may be a useful extinguishing agent if carefully applied to the surface of the fire.
Do not use water jet as an extinguisher, as this will spread the fire..

Fire and/or Explosion Hazards
Material may be ignited only if preheated to temperatures above the high flash point, for example in a fire.

Fire Fighting Methods and Protection
Do not enter fire area without proper protection including self-contained breathing apparatus and full protective equipment. Use appropriate methods for the surrounding fire.

Hazardous Combustion Products

Oxides of carbon, Calcium oxides, Sulfur oxides

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures
No health effects expected from the clean-up of this material, if contact can be avoided. Follow personal protective equipment recommendations found in Section VIII of this SDS.

Methods and materials for containment and cleaning up
Collect and discard in accordance with local, state and national regulations.

7. HANDLING AND STORAGE

Precautions for safe handling
Mildly irritating material. Avoid unnecessary exposure.

Conditions for safe storage, including any incompatibilities
Store in a cool dry place. Isolate from incompatible materials.

Incompatible materials
Strong oxidizing agents

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

Exposure limits
No exposure limits in vapor form.

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

Personal protective equipment

Respiratory protection
No respiratory protection required under normal conditions of use. Provide general room exhaust ventilation if symptoms of overexposure occur. A respirator is not normally required.

Eye protection
Wear chemically resistant safety glasses with side shields when handling this product.
Wear additional eye protection such as chemical splash goggles and/or face shield when the possibility exists for eye contact with splashing or spraying liquid, or airborne material. Do not wear contact lenses. Have an eye wash station available.

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
Not normally considered a skin hazard. Where use of product can result in skin contact, practice good personal hygiene and wear a barrier cream and/or impervious surgical style gloves. Wash hands and other exposed areas with mild soap and water before eating, drinking, and when leaving work.

9. PHYSICAL AND CHEMICAL PROPERTIES

a)	Appearance	Viscous Liquid, Grey
b)	Odour	Mild Petroleum Type
c)	Odour threshold	no data available

d) pH	no data available
e) Meting point/freezing point	no data available
f) Initial boiling point and boiling range	no data available
g) Flash point	> 478 °F (248 °C)
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	< 0.0003 mmHg
l) Solubility	Negligible; 0-1%
m) Vapor density	no data available
n) Specific Gravity @ 25°C	1.1
o) Partition coefficient: n-octanol/water	no data available
p) Auto-ignition temperature	no data available
q) Decomposition temperature	no data available
r) Viscosity	Typical 200000 cP
s) Formula mass	no data available

10. STABILITY AND REACTIVITY

Chemical stability
Stable under normal conditions. Hazardous polymerization will not occur.

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

Conditions to avoid
Temperatures above the high flash point of this combustible material in combination with sparks, open flames, or other sources of ignition.Contamination.

Incompatible materials
Strong oxidizing agents

Hazardous decomposition products
Under normal conditions of use & storage, decomposition and hazardous decomposition products are unlikely

11. TOXICOLOGICAL INFORMATION

Information on the likely routes of exposure

○ Eye contact, Skin contact, Inhalation
○ Acute toxic
- No chemical interaction known to affect toxicity..

Target Organs Potentially Affected by Exposure No organs known to be damaged from exposure to this product
Chemical Interactions That Change Toxicity No chemical interaction known to affect toxicity
Medical Conditions Aggravated Skin contact may aggravate existing skin disease

Immediate (Acute) Health Effects by Route of Exposure

Inhalation Irritation	Can cause minor respiratory irritation
Skin Contact	Can cause minor skin irritation, defatting, and dermatitis
Eye Contact	Contact with the eyes may cause moderate to severe eye injury. Eye contact may result in tearing and reddening, but not likely to permanently injure eye tissue. Temporary vision impairment (cloudy or blurred vision) is possible
Ingestion Irritation	Ingestion is not considered a likely route of exposure. If swallowed, consult a physician
Ingestion Toxicity	Not believed to have any significant toxicity

Long-Term (Chronic) Health Effects

Carcinogenicity	There are no carcinogenic ingredients present at or over 0.1%
Inhalation	Upon prolonged and/or repeated exposure, can cause minor respiratory irritation, dizziness, weakness, fatigue, nausea, and headache
Skin Contact	Upon prolonged or repeated contact, can cause minor skin irritation, defatting, and dermatitis.
Ingestion	Under normal industrial usage conditions, ingestion is highly unlikely

12. ECOLOGICAL INFORMATION

Ecotoxicity : No ecological information available

- ○ Fish
- ○ Crustaceans
- ○ Algae

Persistence and degradability

- ○ Persistence
  - no data available
- ○ Degradability
  - no data available

Bioaccumulative potential

- ○ Bioaccumulative potential
  - no data available
- ○ Biodegration
  - no data available

Mobility in soil

- no data available

Other adverse effects

- no data available

13. DISPOSAL CONSIDERATIONS

Waste Description for Spent Product	Spent or discarded material is not expected to be a hazardous waste.
Disposal Methods	Dispose of in accordance with Local and National regulations.
Waste Disposal Code(s)	Not applicable

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

14. TRANSPORT INFORMATION

Grease, Non-Hazardous

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
○ TSCA Status
- All components in this product are on the TSCA Inventory or exempt

○ Canadian DSL
- One or more chemical substances in this material are on the Canadian NDSL and the remainder are included on the Canadian DSL or are exempt

○ U.S. Federal regulations
* OSHA PROCESS SAFETY (29CFR1910.1200) - Not classified as hazardous under OSHA
* CERCLA Section 103 (40CFR302.4)
- No CERCLA-listed chemicals in this product
* California Prop. 65 - Developmental/Reproductive list)
- Not applicable

Chemical Name	CAS	# Regulation	Percent
No 313-listed chemicals in this product		SARA 313	
No SARA 302 EHS-listed chemicals in this produc		SARA EHS	

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:// 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 00
The final revision date : 2019.04.26

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.