

Pulsarlube PL4 (Food Machinery Grease)

1. MANUFACTURER INFORMATION

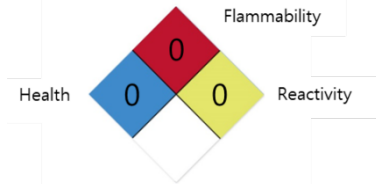
- 1) Product Name : Pulsarlube PL4 (Food Machinery Grease)
- 2) Recommended use of the chemical and restrictions on use
 - A. Product description : An electrochemical automatic single point lubricator
 - B. Restrictions on use : Not available except the intended use of the product
- 3) Supplier's details

Pulsarlube GmbH	Telephone Number for Information:
Silostrasse 31b,	Tel.: +49 (0) 69-3399-7501
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Emergency telephone number +49 (0) 69-3399-7501

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. CARBONIC ACID, CALCIUM SALT (1:1)	CARBONIC ACID, CALCIUM SALT	471-34-1	1.0 ~ 5.0
2. TITANIUM DIOXIDE	TITANIUM DIOXIDE	13463-67-7	0.1 ~ 1.0

※ 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

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

During fire, gases hazardous to health may be formed.

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.

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Withdraw immediately in case of rising sound from venting safety devices or discoloration of tank.
Keep containers cool with water spray

Further information

Flash Point [Method]: >249°C (480°F) [EST. FOR OIL, ASTM D-92 (COC)]

Flammable Limits (Approximate volume % in air): LEL: N/D UEL: N/D

Autoignition Temperature: N/D

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
In case of spills, beware of slippery floors and surfaces.

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

Exposure limits/standards (Note: Exposure limits are not additive)

Substance Name	Form	Limit/Standard			Note	Source
CARBONIC ACID, CALCIUM SALT (1:1)	Inspirable dust.	TWA	10 mg/m ³			Australia OELs
TITANIUM DIOXIDE	Inspirable dust.	TWA	10 mg/m ³			Australia OELs
TITANIUM DIOXIDE		TWA	10 mg/m ³			ACGIH

NOTE: Limits/standards shown for guidance only. Follow applicable regulations.

Appropriate engineering controls

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

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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, White
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	> 371°C (700°F) [Estimated]
g) Flash point	>249°C (480°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	0.88 @ 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

Strong oxidizing substances

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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
 - 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 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

Chemical Name	CAS Number	List Citations
TITANIUM DIOXIDE	13463-67-7	2B

3 = IARC 2B

* 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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- Not applicable for mixtures
- Degradability
- Not applicable for mixtures

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 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 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.