

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.	Telephone Number for Information:
34-12, Bangchon-ro 955beon-gil	Tel.: +82 (02) 2083-8488
Tanhyeon-myeon, Paju-si, Gyeonggi-do	Fax : +82 (02) 2083-8485
Republic of Korea	sales.asia@pulsarlube.com

Emergency telephone number +82 (02) 2083-8488

2. Hazard(s) identification

- 1) **Classification of the substance or mixture**
GHS US classification
Not classified
- 2) **GHS Label elements, including precautionary statements**
GHS US labelling
No labelling applicable
- 3) **Other hazards which do not result in classification**
No additional information available
- 4) **Unknown acute toxicity (GHS US)**
No additional information available

3. Composition/information on ingredients

- 1) **Substances**
Not applicable
- 2) **Mixtures**

Name	Product identifier	%	GHS US classification
Calcium carbonate	CAS-No.: 471-34-1	0.1 – 5	Aquatic Acute 3, H402

Full text of hazard classes and H-statements : see section 16

4. First-aid measures

1) Description of first aid measures

- First-aid measures after inhalation : Remove person to fresh air and keep comfortable for breathing.
- First-aid measures after skin contact : Wash skin with plenty of water
- First-aid measures after eye contact : Rinse eyes with water as a precaution.
- First-aid measures after ingestion : Call a poison center or a doctor if you feel unwell.

2) Most important symptoms and effects (acute and delayed)

No additional information available

3) Immediate medical attention and special treatment, if necessary

Treat symptomatically.

5. Fire-fighting measures

1) Suitable (and unsuitable) extinguishing media

Suitable extinguishing media : Water spray. Dry powder. Foam.

2) Specific hazards arising from the chemical

Hazardous decomposition products in case of fire : Toxic fumes may be released.

3) Special protective equipment and precautions for fire-fighters

Protection during firefighting : Do not attempt to take action without suitable protective equipment. Self-contained breathing apparatus. Complete protective clothing.

6. Accidental release measures

1) Personal precautions, protective equipment and emergency procedures

1-1) For non-emergency personnel

Emergency procedures : Ventilate spillage area.

1-2) For emergency responders

Protective equipment : Do not attempt to take action without suitable protective equipment. For further information refer to section 8: "Exposure controls/personal protection".

2) Environmental precautions

Avoid release to the environment.

3) Methods and material for containment and cleaning up

Methods for cleaning up : Mechanically recover the product

Other information : Dispose of materials or solid residues at an authorized site.

4) Reference to other sections

For further information refer to section 13.

7. Handling and storage

1) Precautions for safe handling

- Precautions for safe handling : Ensure good ventilation of the work station. Wear personal protective equipment.
- Hygiene measures : Do not eat, drink or smoke when using this product. Always wash hands after handling the product.

2) Conditions for safe storage, including any incompatibilities

- Storage conditions : Store in a well-ventilated place. Keep cool.

8. Exposure controls/personal protection

1) Control parameters

PL5	
No additional information available	

Calcium carbonate (471-34-1)	
USA - NIOSH - Occupational Exposure Limits	
NIOSH REL TWA	10 mg/m ³ (total dust) 5 mg/m ³ (respirable dust)

2) Appropriate engineering controls

- Appropriate engineering controls : Ensure good ventilation of the work station
- Environmental exposure controls : Avoid release to the environment.

3) Individual protection measures/Personal protective equipment

Hand protection:
Protective gloves
Eye protection:
Safety glasses
Skin and body protection:
Wear suitable protective clothing
Respiratory protection:
In case of insufficient ventilation, wear suitable respiratory equipment

4) Personal protective equipment symbol(s):



9. Physical and chemical properties

1) Information on basic physical and chemical properties

Physical state	: Solid
Appearance	: Paste

Colour	: Beige
Odour	: Characteristic
Odour threshold	: No data available
pH	: No data available
Melting point	: No data available
Freezing point	: Not applicable
Boiling point	: No data available
Flash point	: Not applicable
Relative evaporation rate (butylacetate=1)	: No data available
Flammability (solid, gas)	: Non flammable.
Vapour pressure	: No data available
Relative vapour density at 20 °C	: No data available
Relative density	: Ca. 0.92 at 20°C
Solubility	: Insoluble
Partition coefficient n-octanol/water (Log Pow)	: No data available
Auto-ignition temperature	: Not applicable
Decomposition temperature	: No data available
Viscosity, kinematic	: Not applicable
Viscosity, dynamic	: No data available
Explosive limits	: Not applicable
Explosive properties	: No data available
Oxidising properties	: No data available

2) Other information

No additional information available

10. Stability and reactivity
1) Reactivity

The product is non-reactive under normal conditions of use, storage and transport.

2) Chemical stability

Stable under normal conditions.

3) Possibility of hazardous reactions

No dangerous reactions known under normal conditions of use.

4) Conditions to avoid

None under recommended storage and handling conditions (see section 7).

5) Incompatible materials

No additional information available

6) Hazardous decomposition products

Under normal conditions of storage and use, hazardous decomposition products should not be produced.

11. Toxicological information
1) Information on toxicological effects

Acute toxicity (oral) : Not classified
 Acute toxicity (dermal) : Not classified
 Acute toxicity (inhalation) : Not classified

Calcium carbonate (471-34-1)	
LD50 oral rat	> 2000 mg/kg bodyweight Animal: rat, Animal sex: female, Guideline: OECD Guideline 420 (Acute Oral Toxicity - Fixed Dose Method), Guideline: EU Method B.1 bis (Acute Oral Toxicity - Fixed Dose Procedure)
LD50 dermal rat	> 2000 mg/kg bodyweight Animal: rat, Guideline: OECD Guideline 402 (Acute Dermal Toxicity), Guideline: EU Method B.3 (Acute Toxicity (Dermal))
LC50 Inhalation - Rat	> 3 mg/l air Animal: rat, Guideline: OECD Guideline 403 (Acute Inhalation Toxicity), Guideline: EU Method B.2 (Acute Toxicity (Inhalation)), Guideline: EPA OPPTS 870.1300 (Acute inhalation toxicity)

Skin corrosion/irritation : Not classified

Calcium carbonate (471-34-1)	
pH	8 – 9 (aqueous solution)

Serious eye damage/irritation : Not classified

Calcium carbonate (471-34-1)	
pH	8 – 9 (aqueous solution)

Respiratory or skin sensitisation : Not classified
 Germ cell mutagenicity : Not classified
 Carcinogenicity : Not classified
 Reproductive toxicity : Not classified
 STOT-single exposure : Not classified
 STOT-repeated exposure : Not classified

Calcium carbonate (471-34-1)	
NOAEL (oral, rat, 90 days)	1000 mg/kg bodyweight Animal: rat, Guideline: OECD Guideline 422 (Combined Repeated Dose Toxicity Study with the Reproduction / Developmental Toxicity Screening Test)
NOAEC (inhalation, rat, dust/mist/fume, 90 days)	≥ 0.212 mg/l air Animal: rat, Guideline: OECD Guideline 413 (Subchronic Inhalation Toxicity: 90-Day Study)

Aspiration hazard : Not classified
 Viscosity, kinematic : Not applicable

Calcium carbonate (471-34-1)	
Viscosity, kinematic	Not applicable (solid)

12. Ecological information

1) Toxicity

Ecology - general

: The product is not considered harmful to aquatic organisms nor to cause long-term adverse effects in the environment.

Calcium carbonate (471-34-1)	
LC50 - Fish [1]	> 56000 mg/l Source: ECOTOX
EC50 - Crustacea [1]	> 100 % (OECD 202: Daphnia sp. Acute Immobilisation Test, 48 h, Daphnia magna, Static system, Fresh water, Experimental value, Locomotor effect)
EC50 72h - Algae [1]	> 14 mg/l Test organisms (species): Desmodesmus subspicatus (previous name: Scenedesmus subspicatus)
EC50 96h - Algae [1]	22000 mg/l Source: Ecological Structure Activity Relationships
ErC50 algae	> 100 mg/l (OECD 201: Alga, Growth Inhibition Test, 72 h, Pseudokirchneriella subcapitata, Static system, Fresh water, Experimental value, Nominal concentration)

2) Persistence and degradability

Calcium carbonate (471-34-1)	
Persistence and degradability	Biodegradability in soil: not applicable. Biodegradability: not applicable
Chemical oxygen demand (COD)	Not applicable (inorganic)
ThOD	Not applicable (inorganic)

3) Bioaccumulative potential

Calcium carbonate (471-34-1)	
BCF - Fish [1]	(no bioaccumulation)
Bioaccumulative potential	Not bioaccumulative.

4) Mobility in soil

Calcium carbonate (471-34-1)	
Mobility in soil	4.971 Source: Quantitative Structure Activity Relation
Surface tension	No data available (test not performed)
Ecology - soil	Low potential for adsorption in soil.

5) Other adverse effects

No additional information available

13. Disposal considerations

1) Disposal methods

Waste treatment methods : Dispose of contents/container in accordance with licensed collector's sorting instructions.

14. Transport information

In accordance with DOT / TDG / IMDG / IATA

1) UN number

Not regulated for transport

2) UN proper shipping name

Proper Shipping Name (DOT) : Not applicable
 Proper Shipping Name (TDG) : Not applicable
 Proper Shipping Name (IMDG) : Not applicable
 Proper Shipping Name (IATA) : Not applicable

3) Transport hazard class(es)

DOT : Not applicable
 Transport hazard class(es) (DOT)
 TDG : Not applicable
 Transport hazard class(es) (TDG)
 IMDG : Not applicable
 Transport hazard class(es) (IMDG)
 IATA : Not applicable
 Transport hazard class(es) (IATA)

4) Packing group

Packing group (DOT) : Not applicable
 Packing group (TDG) : Not applicable
 Packing group (IMDG) : Not applicable
 Packing group (IATA) : Not applicable

5) Environmental hazards

Other information : No supplementary information available.

6) Special precautions for user

DOT

No data available

TDG

No data available

IMDG

No data available

IATA

No data available

7) Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Not applicable

15. Regulatory information

1) US Federal regulations

Commercial status of components according to the United States Environmental Protection Agency's Toxic Substances Control Act (TSCA):

Name	CAS-No.	Listing	Commercial status	Flags
Calcium carbonate	471-34-1	Present	Active	

2) International regulations

CANADA

Calcium carbonate (471-34-1)
Listed on the Canadian DSL (Domestic Substances List)

EU-Regulations

No additional information available

National regulations

Calcium carbonate (471-34-1)
Listed on INSQ (Mexican National Inventory of Chemical Substances)

3) US State regulations

No additional information available

16. OTHER INFORMATION

1) Full text of H-statements

Full text of H-statements	
H402	Harmful to aquatic life

2) The first creation date : 2015.02.11

3) The number of times, and the final revision date : Revision times 06

The final revision date : 2024.07.12

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, Inc. MAKES NO WARRANTY, EITHER EXPRESS OR IMPLIED, WITH RESPECT TO THIS INFORMATION AND DISCLAIMS ALL LIABILITY FROM REFERENCE ON IT.