Pulsarlube PL1 (Multipurpose Grease)

1. MANUFACTURER INFORMATION

1) Product Name : Pulsarlube PL1 (Multipurpose 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
Silostrasse 31b,
65929 Frankfurt am Main,
Germany

Telephone Number for Information:
Tel.: +49 (69) 8700-766-62/-63
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sales.eu@pulsarlube.com

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2. HAZARDS IDENTIFICATION

1) Classification of the substance/mixture

Classification according to Regulation (EC) No. 1272/2008 [CLP]

Not classified

Adverse physicochemical, human health and environmental effects

To our knowledge, this product does not present any particular risk, provided it is handled in accordance with good occupational hygiene and safety practice.

2) Label elements

Labelling according to Regulation (EC) No 1272/2008 [CLP]

EUH-statements : EUH210 - Safety data sheet available on request.

3) Other hazards

No additional information available

3. COMPOSITION/INFORMATION ON INGREDIENTS

1) Substances

Not applicable

2) Mixtures

Name	Product Identifier	%	Classification according to Regulation(EC) No. 1272/2008 [CLP]
1,3,5-Triazine-2,4,6(1H,3H,5H)-trione compd. with 1,3,5-triazine-2,4,6-triamine (1:1)	CAS-No.: 37640-57-6 EC-No.: 253-575-7	0.1 – 5	Aquatic Chronic 3, H412
Phosphorodithioic acid O,O-bis(2-ethylhexyl) ester, zinc salt	CAS-No.: 4259-15-8 EC-No.: 224-235-5	0.1 – 5	Aquatic Chronic 2, H411

Specific concentration limits:		
Name	**Product Identifier**	**%**
Phosphorodithioic acid O,O-bis(2-ethylhexyl) ester, zinc salt	CAS-No.: 4259-15-8 EC-No.: 224-235-5	(50 <C ≤ 100) Eye Dam. 1, H318

Full text of H- and EUH-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, both acute and delayed

No additional information available

3) Indication of any immediate medical attention and special treatment needed

Treat symptomatically.

5. FIREFIGHTING MEASURES

1) Extinguishing media

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

2) Special hazards arising from the substance or mixture

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

3) Advice for firefighters

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

For non-emergency personnel

Emergency procedures : Ventilate spillage area.

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.

3) Specific end use(s)

No additional information available

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

1) Control parameters

National occupational exposure and biological limit values

1,3,5-Triazine-2,4,6(1H,3H,5H)-trione compd. with 1,3,5-triazine-2,4,6-triamine (1:1) (37640-57-6)	
Belgium - Occupational Exposure Limits	
OEL TWA	3 mg/m³ 10 mg/m³
France - Occupational Exposure Limits	
VME (OEL TWA)	10 mg/m³ 5 mg/m³
Lithuania - Occupational Exposure Limits	
IPRV (OEL TWA)	0.5 mg/m³
OEL chemical category	Skin notation
United Kingdom - Occupational Exposure Limits	
WEL TWA (OEL TWA) [1]	10 mg/m³ 4 mg/m³
USA - ACGIH - Occupational Exposure Limits	
ACGIH OEL TWA	3 mg/m³ (Respirable fraction)

Recommended monitoring procedures

No additional information available

Air contaminants formed

No additional information available

DNEL and PNEC

No additional information available

Control banding

No additional information available

2) Exposure controls

Appropriate engineering controls

Appropriate engineering controls:
Ensure good ventilation of the work station.

Personal protection equipment

Personal protective equipment symbol(s):

Eye and face protection

Eye protection:
Safety glasses

Skin protection

Skin and body protection:
Wear suitable protective clothing

Hand protection
Protective gloves

Respiratory protection

Respiratory protection:
In case of insufficient ventilation, wear suitable respiratory equipment

Thermal hazards
No additional information available

Environmental exposure controls

Environmental exposure controls:
Avoid release to the environment

9. PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

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

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

1,3,5-Triazine-2,4,6(1H,3H,5H)-trione compd. with 1,3,5-triazine-2,4,6-triamine (1:1) (37640-57-6)	
LD50 oral rat	> 2000 mg/kg bodyweight Animal: rat, Guideline: OECD Guideline 423 (Acute Oral toxicity - Acute Toxic Class Method), Guideline: EU Method B.1 tris (Acute Oral Toxicity - Acute Toxic Class Method), Guideline: other:US FDA Title 21 Code of Federal Regulations Part 58; US EPA (FIFRA), Title 40 Code of Federal Regulations Part 160; US EPA (TSCA), Title 40 Code of Federal Regulations Part 792;, Guideline: other:Japanese Ministry of Agriculture, Forestry and Fisheries, 59 NohSan, Notifications No.3850; Japanese Ministry of International Trade and Industry, Kanpogyo No.39 Environmental Agency, Kikyoku No.85; Japanese Ministry of Health and Welfare, Ordinance No.21
LD50 dermal rat	5520 mg/kg (Rat, Dermal)
LC50 Inhalation - Rat	> 5.1 mg/l/4h

Phosphorodithioic acid O,O-bis(2-ethylhexyl) ester, zinc salt (4259-15-8)	
LD50 oral rat	3100 mg/kg bodyweight Animal: rat, Animal sex: male, Guideline: OECD Guideline 401 (Acute Oral Toxicity), 95% CL: 1800 - 5100
LD50 dermal rabbit	> 5000 mg/kg bodyweight Animal: rabbit, Animal sex: male, Guideline: OECD Guideline 402 (Acute Dermal Toxicity)

Skin corrosion/irritation : Not classified
Serious eye damage/irritation : Not classified
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

Phosphorodithioic acid O,O-bis(2-ethylhexyl) ester, zinc salt (4259-15-8)	
NOAEL (oral, rat, 90 days)	125 mg/kg bodyweight Animal: rat, Guideline: OECD Guideline 407 (Repeated Dose 28-Day Oral Toxicity in Rodents)

Aspiration hazard : Not classified

PL1	
Viscosity, kinematic	Not applicable

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.

Hazardous to the aquatic environment, short-term (acute) : Not classified

Hazardous to the aquatic environment, long-term (chronic) : Not classified

Not rapidly degradable

1,3,5-Triazine-2,4,6(1H,3H,5H)-trione compd. with 1,3,5-triazine-2,4,6-triamine (1:1) (37640-57-6)	
LC50 - Fish [1]	8000 mg/l Test organisms (species): Menidia beryllina
LC50 - Fish [2]	> 10000 mg/l Test organisms (species): Danio rerio (previous name: Brachydanio rerio)
EC50 - Crustacea [1]	200 mg/l Test organisms (species): Daphnia magna
EC50 96h - Algae [1]	11.563 mg/l Source: Ecological Structure Activity Relationships
NOEC (chronic)	18 mg/l Test organisms (species): Daphnia magna Duration: '21 d'

Phosphorodithioic acid O,O-bis(2-ethylhexyl) ester, zinc salt (4259-15-8)	
LC50 - Fish [1]	46 mg/l Test organisms (species): Cyprinodon variegatus
LC50 - Fish [2]	1 – 5 mg/l (Exposure time: 96 h - Species: Pimephales promelas [static])
EC50 - Crustacea [1]	1 – 1.5 mg/l (Exposure time: 48 h - Species: Daphnia magna)
EC50 96h - Algae [1]	1 – 5 mg/l (Species: Pseudokirchneriella subcapitata)

2) Persistence and degradability

1,3,5-Triazine-2,4,6(1H,3H,5H)-trione compd. with 1,3,5-triazine-2,4,6-triamine (1:1) (37640-57-6)	
Persistence and degradability	Not readily biodegradable in water.

Phosphorodithioic acid O,O-bis(2-ethylhexyl) ester, zinc salt (4259-15-8)	
Persistence and degradability	Not readily biodegradable in water.

3) Bioaccumulative potential

1,3,5-Triazine-2,4,6(1H,3H,5H)-trione compd. with 1,3,5-triazine-2,4,6-triamine (1:1) (37640-57-6)	
Partition coefficient n-octanol/water (Log Pow)	< 0
Bioaccumulative potential	Bioaccumulation: not applicable.

Phosphorodithioic acid O,O-bis(2-ethylhexyl) ester, zinc salt (4259-15-8)	
Partition coefficient n-octanol/water (Log Pow)	2.86 (at 20 °C)
Bioaccumulative potential	Low potential for bioaccumulation (Log Kow < 4).

4) Mobility in soil

Phosphorodithioic acid O,O-bis(2-ethylhexyl) ester, zinc salt (4259-15-8)	
Surface tension	63.7 mN/m (21 °C, 1.25 g/l, OECD 115: Surface Tension of Aqueous Solutions)
Ecology - soil	Low potential for adsorption in soil.

5) Results of PBT and vPvB assessment

Component	
Phosphorodithioic acid O,O-bis(2-ethylhexyl) ester, zinc salt (4259-15-8)	This substance/mixture does not meet the PBT criteria of REACH regulation, annex XIII This substance/mixture does not meet the vPvB criteria of REACH regulation, annex XIII

6) Other adverse effects

No additional information available

13. DISPOSAL CONSIDERATIONS

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

14. TRANSPORT INFORMATION

In accordance with ADR / IMDG / IATA / ADN / RID

ADR	IMDG	IATA	ADN	RID
1) UN number				
Not applicable	Not applicable	Not applicable	Not applicable	Not applicable
2) UN proper shipping name				
Not applicable	Not applicable	Not applicable	Not applicable	Not applicable
3) Transport hazard class(es)				
Not applicable	Not applicable	Not applicable	Not applicable	Not applicable
4) Packing group				
Not applicable	Not applicable	Not applicable	Not applicable	Not applicable
5) Environmental hazards				
Not applicable	Not applicable	Not applicable	Not applicable	Not applicable
No supplementary information available				

6) Special precautions for user

Overland transport

Not applicable

Transport by sea

Not applicable

Air transport

Not applicable

Inland waterway transport

Not applicable

Rail transport

Not applicable

7) Transport in bulk according to Annex II of Marpol and the IBC Code

Not applicable

15. REGULATORY INFORMATION

1) Safety, health and environmental regulations/legislation specific for the substance or mixture

EU-Regulations

Contains no REACH substances with Annex XVII restrictions
Contains no substance on the REACH candidate list
Contains no REACH Annex XIV substances
Contains no substance subject to Regulation (EU) No 649/2012 of the European Parliament and of the Council of 4

July 2012 concerning the export and import of hazardous chemicals.
Contains no substance subject to Regulation (EU) No 2019/1021 of the European Parliament and of the Council of 20 June 2019 on persistent organic pollutants
Contains no substance subject to Regulation (EU) 2019/1148 of the European Parliament and of the Council of 20 June 2019 on the marketing and use of explosives precursors.

National regulations

Not listed on the United States TSCA (Toxic Substances Control Act) inventory

Germany

Employment restrictions :Observe restrictions according Act on the Protection of Working Mothers (MuSchG)
Observe restrictions according Act on the Protection of Young People in Employment (JArbSchG)

Water hazard class (WGK) : WGK 3, Highly hazardous to water (Classification according to AwSV, Annex 1)

Hazardous Incident Ordinance (12. BImSchV) : Is not subject of the Hazardous Incident Ordinance (12. BImSchV)

Storage class (LGK, TRGS 510) LGK 13 - Non-combustible solids

Joint storage table :

LGK 1	LGK 2A	LGK 2B	LGK 3	LGK 4.1A
LGK 4.1B	LGK 4.2	LGK 4.3	LGK 5.1A	LGK 5.1B
LGK 5.1C	LGK 5.2	LGK 6.1A	LGK 6.1B	LGK 6.1C
LGK 6.1D	LGK 6.2	LGK 7	LGK 8A	LGK 8B
LGK 10	LGK 11	LGK 12	LGK 13	LGK 10-13

Joint storage not permitted for : LGK 1, LGK 6.2, LGK 7

Joint storage with restrictions permitted for : LGK 4.1A, LGK 5.1C

Joint storage permitted for : LGK 2A, LGK 2B, LGK 3, LGK 4.1B, LGK 4.2, LGK 4.3, LGK 5.1A, LGK 5.1B, LGK 5.2, LGK 6.1A, LGK 6.1B, LGK 6.1C, LGK 6.1D, LGK 8A, LGK 8B, LGK 10, LGK 11, LGK 12, LGK 13, LGK 10-13

Netherlands

ABM category : Z(1) - non biodegradable substances with hazardous properties for humans and the environment (carcinogenicity/ mutagenicity/ reprotoxicity/bioacumulative potential/ toxicity or persistence)

SZW-lijst van kankerverwekkende stoffen : None of the components are listed

SZW-lijst van reprotoxische stoffen – Borstvoeding : None of the components are listed

SZW-lijst van reprotoxische stoffen – Vruchtbaarheid : None of the components are listed

SZW-lijst van reprotoxische stoffen – Ontwikkeling : None of the components are listed

Switzerland

Storage class (LK) : NG - Non-hazardous

Chemical safety assessment

No chemical safety assessment has been carried out

16. OTHER INFORMATION

1) Abbreviations and acronyms:	
ADN	European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways
ADR	European Agreement concerning the International Carriage of Dangerous Goods by Road
ATE	Acute Toxicity Estimate
BCF	Bioconcentration factor
BLV	Biological limit value
BOD	Biochemical oxygen demand (BOD)
COD	Chemical oxygen demand (COD)
DMEL	Derived Minimal Effect level
DNEL	Derived-No Effect Level
EC-No.	European Community number
EC50	Median effective concentration
EN	European Standard
IARC	International Agency for Research on Cancer
IATA	International Air Transport Association
IMDG	International Maritime Dangerous Goods
LC50	Median lethal concentration
LD50	Median lethal dose
LOAEL	Lowest Observed Adverse Effect Level
NOAEC	No-Observed Adverse Effect Concentration
NOAEL	No-Observed Adverse Effect Level
NOEC	No-Observed Effect Concentration
OECD	Organisation for Economic Co-operation and Development
OEL	Occupational Exposure Limit
PBT	Persistent Bioaccumulative Toxic
PNEC	Predicted No-Effect Concentration
RID	Regulations concerning the International Carriage of Dangerous Goods by Rail
SDS	Safety Data Sheet
STP	Sewage treatment plant
ThOD	Theoretical oxygen demand (ThOD)
TLM	Median Tolerance Limit
VOC	Volatile Organic Compounds
CAS-No.	Chemical Abstract Service number
N.O.S.	Not Otherwise Specified
vPvB	Very Persistent and Very Bioaccumulative
ED	Endocrine disrupting properties

Full text of H- and EUH-statements:	
Aquatic Chronic 2	Hazardous to the aquatic environment — Chronic Hazard, Category 2
Aquatic Chronic 3	Hazardous to the aquatic environment — Chronic Hazard, Category 3
EUH210	Safety data sheet available on request.
Eye Dam. 1	Serious eye damage/eye irritation, Category 1
H318	Causes serious eye damage.
H411	Toxic to aquatic life with long lasting effects.
H412	Harmful to aquatic life with long lasting effects.

2) The first creation date : 2015.02.11

3) The number of times, and the final revision date : Revision times 08

The final revision date : 2021.11.18

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.