

SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006, as amended by
Commission Regulation (EU) 2020/878 - DE

KLÜBER
LUBRICATION

Klüberplex BEM 41-141

Version	Revision Date:	Date of last issue: 04.12.2024	Print Date:
2.6	03.12.2025	Date of first issue: 22.12.2015	19.01.2026

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1 Product identifier

Product name : Klüberplex BEM 41-141

Article-No. : 020320

1.2 Relevant identified uses of the substance or mixture and uses advised against

Use of the Substance/Mixture : Grease

Recommended restrictions on use : Restricted to professional users.

1.3 Details of the supplier of the safety data sheet

Company : Klüber Lubrication München GmbH & Co. KG
Geisenhausenerstr. 7
81379 München
Deutschland
Tel.: +49 (0) 89 7876 0
Fax: +49 (0) 89 7876 333
info@klueber.com

E-mail address of person responsible for the SDS : mcm@klueber.com

National contact : Klüber Lubrication Deutschland GmbH & Co. KG
Geisenhausenerstraße 7
81379 München
Deutschland
Tel.: +49 (0) 89 7876 0
Fax: +49 (0) 89 7876 565
customer.service.de@klueber.com

1.4 Emergency telephone number

Emergency telephone number : +49 89 7876 700 (24 hrs)

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Classification (REGULATION (EC) No 1272/2008)

Not a hazardous substance or mixture.

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2.2 Label elements

Labelling (REGULATION (EC) No 1272/2008)

Not a hazardous substance or mixture.

Additional Labelling

EUH210 Safety data sheet available on request.

2.3 Other hazards

This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

Ecological information: The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

Toxicological information: The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

SECTION 3: Composition/information on ingredients

3.2 Mixtures

Chemical nature : Synthetic hydrocarbon oil
Mineral oil.
special lithium soap

Components

Chemical name	CAS-No. EC-No. Index-No. Registration number	Classification	specific concentration limit M-Factor Notes Acute toxicity estimate	Concentration (% w/w)
dilithium azelate	38900-29-7 254-184-4 01-2120119814-57-XXXX 01-2120119814-57-XXXX 01-2120119814-57-	Acute Tox. 4; H302		>= 1 - < 10

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	XXXX 01-2120119814-57-XXXX			
Molybdenum, bis(dibutylcarbamo- dithioato)di-μ-oxodioxo- sulfurized	68412-26-0 270-180-5 01-2120764792-44-XXXX	Aquatic Chronic 4; H413		>= 1 - < 2,5
O,O,O-tris(2(or 4)-C 9- 10-isoalkylphenyl) phosphorothioate	126019-82-7 406-940-1 015-171-00-7 01-2119930067-42-XXXX01-0000015643-71-XXXX	Repr. 2; H361d Aquatic Chronic 2; H411		>= 0,25 - < 1
Substances with a workplace exposure limit :				
Residual oils (petroleum), hydrotreated; Baseoil — unspecified	64742-57-0 265-160-8 649-470-00-4 01-2119489287-22-XXXX	Not classified	Note L	>= 30 - < 50

For explanation of abbreviations see section 16.

SECTION 4: First aid measures

4.1 Description of first aid measures

- If inhaled : Obtain medical attention.
Remove person to fresh air. If signs/symptoms continue, get medical attention.
Keep patient warm and at rest.
If unconscious, place in recovery position and seek medical advice.
Keep respiratory tract clear.
If breathing is irregular or stopped, administer artificial respiration.
- In case of skin contact : Take off all contaminated clothing immediately.
Get medical attention immediately if irritation develops and persists.
Wash clothing before reuse.
Thoroughly clean shoes before reuse.
Wash off immediately with plenty of water.
- In case of eye contact : Rinse immediately with plenty of water, also under the eyelids, for at least 10 minutes.
If eye irritation persists, consult a specialist.

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If swallowed : Move the victim to fresh air.
If unconscious, place in recovery position and seek medical advice.
Keep respiratory tract clear.
Do not induce vomiting without medical advice.
Obtain medical attention.
Rinse mouth with water.
Never give anything by mouth to an unconscious person.

4.2 Most important symptoms and effects, both acute and delayed

Symptoms : No symptoms known or expected.

4.3 Indication of any immediate medical attention and special treatment needed

Treatment : Treat symptomatically.

SECTION 5: Firefighting measures

5.1 Extinguishing media

Suitable extinguishing media : Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

Unsuitable extinguishing media : High volume water jet

5.2 Special hazards arising from the substance or mixture

Hazardous combustion products : Carbon oxides
Sulphur oxides
Metal oxides

5.3 Advice for firefighters

Special protective equipment for firefighters : In the event of fire, wear self-contained breathing apparatus.
Use personal protective equipment. Exposure to decomposition products may be a hazard to health.

Further information : Standard procedure for chemical fires.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Personal precautions : Evacuate personnel to safe areas.
Ensure adequate ventilation.

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Do not breathe vapours, aerosols.
Refer to protective measures listed in sections 7 and 8.

6.2 Environmental precautions

Environmental precautions : Try to prevent the material from entering drains or water courses.
Local authorities should be advised if significant spillages cannot be contained.

6.3 Methods and material for containment and cleaning up

Methods for cleaning up : Pick up and transfer to properly labelled containers.

6.4 Reference to other sections

For personal protection see section 8.

SECTION 7: Handling and storage

7.1 Precautions for safe handling

Advice on safe handling : Avoid contact with skin and eyes.
For personal protection see section 8.
Smoking, eating and drinking should be prohibited in the application area.
Wash hands and face before breaks and immediately after handling the product.
Do not get in eyes or mouth or on skin.
Do not get on skin or clothing.
Do not ingest.
Do not repack.
These safety instructions also apply to empty packaging which may still contain product residues.
Keep container closed when not in use.

Hygiene measures : Wash face, hands and any exposed skin thoroughly after handling.

7.2 Conditions for safe storage, including any incompatibilities

Requirements for storage areas and containers : Store in original container. Keep container closed when not in use. Keep in a dry, cool and well-ventilated place. Containers which are opened must be carefully resealed and kept upright to prevent leakage. Store in accordance with the particular national regulations. Keep in properly labelled containers.

Storage class (TRGS 510) : 11, Combustible Solids

7.3 Specific end use(s)

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Specific use(s) : Specific instructions for handling, not required.

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

Occupational Exposure Limits

Components	CAS-No.	Value type (Form of exposure)	Control parameters	Basis
Residual oils (petroleum), hydrotreated; Baseoil — unspecified	64742-57-0	AGW (Vapour and aerosols)	5 mg/m ³	DE TRGS 900 (2018-06-07)
	Peak-limit: excursion factor (category): 4;(II)			
	Further information: When there is compliance with the OEL and biological tolerance values, there is no risk of harming the unborn child			

Derived No Effect Level (DNEL) according to Regulation (EC) No. 1907/2006

Substance name	End Use	Exposure routes	Potential health effects	Value
Residual oils (petroleum), hydrotreated; Baseoil — unspecified	Workers	Inhalation	Long-term systemic effects	2,7 mg/m ³
	Workers	Inhalation	Acute systemic effects	5,6 mg/m ³
dilithium azelate	Workers	Skin contact	Long-term systemic effects	1 mg/kg
	Workers	Dermal	Long-term systemic effects	13,5 mg/kg bw/day
Molybdenum, bis(dibutylcarbamoat)di-μ-oxodioxodi-, sulfurized	Workers	Dermal	Long-term local effects	0,172 mg/cm ²
	Workers	Skin contact	Long-term systemic effects	14 mg/kg
O,O,O-tris(2(or 4)-C 9-10-isoalkylphenyl) phosphorothioate	Workers	Inhalation	Long-term systemic effects	49,3 mg/m ³
	Workers	Inhalation	Long-term systemic effects	1,76 mg/m ³
	Workers	Skin contact	Long-term systemic effects	0,5 mg/kg

Predicted No Effect Concentration (PNEC) according to Regulation (EC) No. 1907/2006

Substance name	Environmental Compartment	Value
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dilithium azelate	Fresh water	0,023 mg/l
	Marine water	0,002 mg/l
Molybdenum, bis(dibutylcarbomodithioato)di- μ - oxodioxodi-, sulfurized	Fresh water	0,1 mg/l
	Marine water	0,01 mg/l
O,O,O-tris(2(or 4)-C 9-10- isoalkylphenyl) phosphorothioate	Fresh water sediment	0,1 mg/kg
	Marine sediment	0,01 mg/kg
	Soil	20 mg/kg

8.2 Exposure controls

Engineering measures

Handle only in a place equipped with local exhaust (or other appropriate exhaust).

Personal protective equipment

Eye/face protection : Safety glasses

Hand protection

Material : Nitrile rubber
Break through time : > 10 min
Protective index : Class 1

Remarks : For prolonged or repeated contact use protective gloves. The break through time depends amongst other things on the material, the thickness and the type of glove and therefore has to be measured for each case.
The selected protective gloves have to satisfy the specifications of Regulation (EU) 2016/425 and the standard EN 374 derived from it.

Skin and body protection : Choose body protection in relation to its type, to the concentration and amount of dangerous substances, and to the specific work-place.

Respiratory protection : Not required; except in case of aerosol formation.

Filter type : Filter type P

Protective measures : The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

Environmental exposure controls

Air : No special environmental precautions required.
Soil : The product should not be allowed to enter drains, water courses or the soil.
Water : The product should not be allowed to enter drains, water

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courses or the soil.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Physical state	:	solid
Form	:	paste
Colour	:	yellow
Odour	:	characteristic
Odour Threshold	:	No data available
Melting point/ range	:	No data available
Boiling point/boiling range	:	No data available
Flammability	:	Flammability (solid, gas): Combustible Solids
Upper explosion limit / Upper flammability limit	:	No data available
Lower explosion limit / Lower flammability limit	:	No data available
Flash point	:	Not applicable
Auto-ignition temperature	:	No data available
Decomposition temperature	:	No data available
pH	:	Not applicable

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Viscosity

Viscosity, dynamic : No data available

Viscosity, kinematic : Not applicable

Solubility(ies)

Water solubility : insoluble

Solubility in other solvents : No data available

Partition coefficient: n-
octanol/water : No data available

Vapour pressure : < 0,001 hPa (20 °C)

Relative density : 0,88 (20 °C)
Reference substance: Water
The value is calculated

Density : 0,88 g/cm³
(20 °C)

Bulk density : No data available

Relative vapour density : No data available

Particle characteristics

Particle size : Not applicable

Particle Size Distribution : Not applicable

9.2 Other information

Explosives : Not explosive

Oxidizing properties : No data available

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Self-ignition : No data available

Evaporation rate : No data available

Sublimation point : No data available

SECTION 10: Stability and reactivity

10.1 Reactivity

No hazards to be specially mentioned.

10.2 Chemical stability

Stable under normal conditions.

10.3 Possibility of hazardous reactions

Hazardous reactions : No dangerous reaction known under conditions of normal use.

10.4 Conditions to avoid

Conditions to avoid : No conditions to be specially mentioned.

10.5 Incompatible materials

Materials to avoid : No materials to be especially mentioned.

10.6 Hazardous decomposition products

No decomposition if stored and applied as directed.

SECTION 11: Toxicological information

11.1 Information on hazard classes as defined in Regulation (EC) No 1272/2008

Acute toxicity

Based on available data, the classification criteria are not met.

Product:

Acute oral toxicity : Acute toxicity estimate: > 2.000 mg/kg
Method: Calculation method

Acute inhalation toxicity : Remarks: This information is not available.

Acute dermal toxicity : Remarks: This information is not available.

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Components:

dilithium azelate:

Acute oral toxicity : LD50 (Rat): > 300 mg/kg
Method: OECD Test Guideline 420
GLP: yes

Acute dermal toxicity : LD50 (Rabbit): > 2.000 mg/kg
Assessment: The substance or mixture has no acute dermal toxicity

Molybdenum, bis(dibutylcarbamodithioato)di- μ -oxodioxodi-, sulfurized:

Acute oral toxicity : LD50 (Rat): > 2.000 mg/kg
Method: OECD Test Guideline 420
GLP: yes
Assessment: The substance or mixture has no acute oral toxicity

Acute inhalation toxicity : LC50 (Rat): > 34,4 mg/l
Exposure time: 4 h
Test atmosphere: dust/mist

Acute dermal toxicity : LD50 (Rabbit): > 10.000 mg/kg

O,O,O-tris(2(or 4)-C 9-10-isoalkylphenyl) phosphorothioate:

Acute oral toxicity : LD50 (Rat): > 2.000 mg/kg
Method: OECD Test Guideline 401
GLP: yes
Assessment: The substance or mixture has no acute oral toxicity

Acute inhalation toxicity : Assessment: The substance or mixture has no acute inhalation toxicity

Acute dermal toxicity : LD50 (Rat): > 2.000 mg/kg
Method: OECD Test Guideline 402
GLP: yes
Assessment: The substance or mixture has no acute dermal toxicity

Residual oils (petroleum), hydrotreated; Baseoil — unspecified:

Acute oral toxicity : LD50 (Rat): > 5.000 mg/kg
Method: OECD Test Guideline 401

Acute dermal toxicity : LD50 (Rat): > 5.000 mg/kg
Method: OECD Test Guideline 402

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Skin corrosion/irritation

Based on available data, the classification criteria are not met.

Product:

Remarks : This information is not available.

Components:

dilithium azelate:

Assessment : No skin irritation
Result : No skin irritation

Molybdenum, bis(dibutylcarbamodithioato)di- μ -oxodioxodi-, sulfurized:

Assessment : No skin irritation
Method : OECD Test Guideline 439
Result : No skin irritation
GLP : yes

O,O,O-tris(2(or 4)-C 9-10-isoalkylphenyl) phosphorothioate:

Species : Rabbit
Assessment : No skin irritation
Result : No skin irritation

Residual oils (petroleum), hydrotreated; Baseoil — unspecified:

Species : Rabbit
Assessment : No skin irritation
Method : OECD Test Guideline 404
Result : No skin irritation

Serious eye damage/eye irritation

Based on available data, the classification criteria are not met.

Product:

Remarks : This information is not available.

Components:

dilithium azelate:

Species : Rabbit
Assessment : No eye irritation
Result : No eye irritation

Molybdenum, bis(dibutylcarbamodithioato)di- μ -oxodioxodi-, sulfurized:

Species : Rabbit
Assessment : No eye irritation
Method : OECD Test Guideline 405

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Result : No eye irritation
GLP : yes

O,O,O-tris(2(or 4)-C 9-10-isoalkylphenyl) phosphorothioate:

Species : Rabbit
Assessment : No eye irritation
Method : OECD Test Guideline 405
Result : No eye irritation
GLP : yes

Residual oils (petroleum), hydrotreated; Baseoil — unspecified:

Species : Rabbit
Assessment : No eye irritation
Method : OECD Test Guideline 405
Result : No eye irritation

Respiratory or skin sensitisation

Skin sensitisation

Based on available data, the classification criteria are not met.

Respiratory sensitisation

Based on available data, the classification criteria are not met.

Product:

Remarks : This information is not available.

Components:

dilithium azelate:

Assessment : Does not cause skin sensitisation.
Result : Does not cause skin sensitisation.

Molybdenum, bis(dibutylcarbomodithioato)di- μ -oxodioxodi-, sulfurized:

Species : Mouse
Assessment : Did not cause sensitisation on laboratory animals.
Method : OECD Test Guideline 429
Result : Did not cause sensitisation on laboratory animals.
GLP : yes

O,O,O-tris(2(or 4)-C 9-10-isoalkylphenyl) phosphorothioate:

Test Type : Maximisation Test
Species : Guinea pig
Assessment : Does not cause skin sensitisation.
Method : OECD Test Guideline 406
Result : Does not cause skin sensitisation.

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GLP : yes

Residual oils (petroleum), hydrotreated; Baseoil — unspecified:

Species : Guinea pig
Assessment : Does not cause skin sensitisation.
Method : OECD Test Guideline 406
Result : Does not cause skin sensitisation.

Assessment : Does not cause respiratory sensitisation.
Result : Does not cause respiratory sensitisation.

Germ cell mutagenicity

Based on available data, the classification criteria are not met.

Product:

Genotoxicity in vitro : Remarks: No data available

Genotoxicity in vivo : Remarks: No data available

Components:

Molybdenum, bis(dibutylcarbamodithioato)di- μ -oxodioxodi-, sulfurized:

Germ cell mutagenicity-
Assessment : Tests on bacterial or mammalian cell cultures did not show mutagenic effects.

O,O,O-tris(2(or 4)-C 9-10-isoalkylphenyl) phosphorothioate:

Genotoxicity in vitro : Test Type: Ames test
Test system: Salmonella typhimurium
Metabolic activation: with and without metabolic activation
Method: OECD Test Guideline 471
Result: negative
GLP: yes

Test Type: In vitro mammalian cell gene mutation test
Test system: Chinese hamster ovary cells
Metabolic activation: with and without metabolic activation
Method: OECD Test Guideline 476
Result: negative
GLP: yes

Genotoxicity in vivo : Test Type: Mammalian erythrocyte micronucleus test (in vivo cytogenetic assay)
Species: Chinese hamster (male and female)
Application Route: oral (gavage)
Method: OECD Test Guideline 474
Result: negative
GLP: yes

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Germ cell mutagenicity-
Assessment : Weight of evidence does not support classification as a germ cell mutagen.

Carcinogenicity

Based on available data, the classification criteria are not met.

Product:

Remarks : No data available

Components:

O,O,O-tris(2(or 4)-C 9-10-isoalkylphenyl) phosphorothioate:

Carcinogenicity -
Assessment : Not classifiable as a human carcinogen.

Residual oils (petroleum), hydrotreated; Baseoil — unspecified:

Carcinogenicity -
Assessment : Not classifiable as a human carcinogen.

Reproductive toxicity

Based on available data, the classification criteria are not met.

Product:

Effects on fertility : Remarks: No data available

Effects on foetal
development : Remarks: No data available

Components:

Molybdenum, bis(dibutylcarbamoedithioato)di- μ -oxodioxodi-, sulfurized:

Reproductive toxicity -
Assessment : - Fertility -
No toxicity to reproduction

O,O,O-tris(2(or 4)-C 9-10-isoalkylphenyl) phosphorothioate:

Effects on foetal
development : Test Type: Developmental Toxicity
Species: Rat
Application Route: Oral
Developmental Toxicity: NOAEL: 150 mg/kg body weight
Method: OECD Test Guideline 414
Result: Some evidence of adverse effects on development,
based on animal experiments.
GLP: yes
Remarks: Based on data from similar materials

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Reproductive toxicity - Assessment : - Fertility -
Some evidence of adverse effects on development, based on animal experiments.

STOT - single exposure

Based on available data, the classification criteria are not met.

Product:

Remarks : No data available

Components:

dilithium azelate:

Assessment : The substance or mixture is not classified as specific target organ toxicant, single exposure.

O,O,O-tris(2(or 4)-C 9-10-isoalkylphenyl) phosphorothioate:

Assessment : The substance or mixture is not classified as specific target organ toxicant, single exposure.

STOT - repeated exposure

Based on available data, the classification criteria are not met.

Product:

Remarks : No data available

Components:

dilithium azelate:

Assessment : The substance or mixture is not classified as specific target organ toxicant, repeated exposure.

O,O,O-tris(2(or 4)-C 9-10-isoalkylphenyl) phosphorothioate:

Assessment : The substance or mixture is not classified as specific target organ toxicant, repeated exposure.

Repeated dose toxicity

Product:

Remarks : This information is not available.

Components:

O,O,O-tris(2(or 4)-C 9-10-isoalkylphenyl) phosphorothioate:

Species : Rat

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NOAEL	:	1.000 mg/kg
Application Route	:	Oral
Exposure time	:	28 d
Method	:	OECD Test Guideline 407
GLP	:	yes
Species	:	Rat
NOAEL	:	50 mg/kg
Application Route	:	Oral
Exposure time	:	90 d
Number of exposures	:	daily
Method	:	OECD Test Guideline 408
GLP	:	yes
Remarks	:	Not classified due to data which are conclusive although insufficient for classification.

Aspiration toxicity

Based on available data, the classification criteria are not met.

Product:

This information is not available.

Components:

dilithium azelate:

No aspiration toxicity classification

Molybdenum, bis(dibutylcarbamodithioato)di- μ -oxodioxodi-, sulfurized:

No aspiration toxicity classification

O,O,O-tris(2(or 4)-C 9-10-isoalkylphenyl) phosphorothioate:

No aspiration toxicity classification

Residual oils (petroleum), hydrotreated; Baseoil — unspecified:

No aspiration toxicity classification

11.2 Information on other hazards

Endocrine disrupting properties

Based on available data, the classification criteria are not met.

Product:

Assessment : The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

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Further information

Product:

Remarks : Information given is based on data on the components and the toxicology of similar products.

SECTION 12: Ecological information

12.1 Toxicity

Product:

Toxicity to fish : Remarks: No data available

Toxicity to daphnia and other aquatic invertebrates : Remarks: No data available

Toxicity to algae/aquatic plants : Remarks: No data available

Toxicity to microorganisms : Remarks: No data available

Components:

dilithium azelate:

Toxicity to fish : LC50 (Oncorhynchus mykiss (rainbow trout)): > 100 mg/l
Exposure time: 96 h

Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna (Water flea)): > 100 mg/l
Exposure time: 48 h

Molybdenum, bis(dibutylcarbamodithioato)di- μ -oxodioxodi-, sulfurized:

Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna (Water flea)): > 100 mg/l
Exposure time: 48 h
Test Type: semi-static test

Toxicity to algae/aquatic plants : EC50 (Pseudokirchneriella subcapitata (algae)): > 100 mg/l
Exposure time: 72 h
Test Type: static test

Ecotoxicology Assessment

Chronic aquatic toxicity : May cause long lasting harmful effects to aquatic life.

O,O,O-tris(2(or 4)-C 9-10-isoalkylphenyl) phosphorothioate:

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- Toxicity to fish : LC50 (Danio rerio (zebra fish)): > 25 mg/l
Exposure time: 96 h
Test Type: static test
Method: OECD Test Guideline 203
GLP: yes
- Toxicity to algae/aquatic plants : EC50 (Desmodesmus subspicatus (green algae)): > 100 mg/l
Exposure time: 72 h
Test Type: static test
Method: OECD Test Guideline 201
GLP: yes
- Toxicity to microorganisms : EC50 (activated sludge): > 100 mg/l
Exposure time: 3 h
Test Type: Respiration inhibition
Method: OECD Test Guideline 209
GLP: yes

Ecotoxicology Assessment

- Acute aquatic toxicity : Toxic to aquatic life.
- Chronic aquatic toxicity : Toxic to aquatic life with long lasting effects.

Residual oils (petroleum), hydrotreated; Baseoil — unspecified:

- Toxicity to fish : LC50 (Pimephales promelas (fathead minnow)): > 100 mg/l
Exposure time: 96 h
Test Type: static test
- Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna (Water flea)): > 10.000 mg/l
Exposure time: 48 h
Test Type: Immobilization

12.2 Persistence and degradability

Product:

- Biodegradability : Remarks: No data available
- Physico-chemical removability : Remarks: No data available

Components:

Molybdenum, bis(dibutylcarbamodithioato)di- μ -oxodioxodi-, sulfurized:

- Biodegradability : Result: Not readily biodegradable.
Biodegradation: 0 %
Exposure time: 28 d
Method: OECD Test Guideline 301
GLP: yes

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O,O,O-tris(2(or 4)-C 9-10-isoalkylphenyl) phosphorothioate:

Biodegradability : Test Type: Primary biodegradation
Inoculum: activated sludge
Result: Not readily biodegradable.
Biodegradation: 2 - 4 %
Exposure time: 28 d
Method: OECD Test Guideline 301B
GLP: yes

Residual oils (petroleum), hydrotreated; Baseoil — unspecified:

Biodegradability : Result: Not rapidly biodegradable

12.3 Bioaccumulative potential

Product:

Bioaccumulation : Remarks: No data available

Components:

dilithium azelate:

Bioaccumulation : Bioconcentration factor (BCF): 3,0

Partition coefficient: n-
octanol/water : log Pow: -3,56

Molybdenum, bis(dibutylcarbamoedithioato)di- μ -oxodioxodi-, sulfurized:

Partition coefficient: n-
octanol/water : log Pow: 6,24 - 7,28

O,O,O-tris(2(or 4)-C 9-10-isoalkylphenyl) phosphorothioate:

Biodegradability : Species: Cyprinus carpio (Carp)
Exposure time: 56 d
Concentration: 0,507 mg/l
Bioconcentration factor (BCF): 48
Method: OECD Test Guideline 305C
GLP: yes

Partition coefficient: n-
octanol/water : log Pow: 20

12.4 Mobility in soil

Product:

Mobility : Remarks: No data available

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Distribution among environmental compartments : Remarks: No data available

12.5 Results of PBT and vPvB assessment

Product:

Assessment : This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

Components:

O,O,O-tris(2(or 4)-C 9-10-isoalkylphenyl) phosphorothioate:

Assessment : Non-classified PBT substance. Non-classified vPvB substance

12.6 Endocrine disrupting properties

Product:

Assessment : The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

12.7 Other adverse effects

Product:

Additional ecological information : No information on ecology is available.

SECTION 13: Disposal considerations

13.1 Waste treatment methods

Product : Waste codes should be assigned by the user based on the application for which the product was used.

The product should not be allowed to enter drains, water courses or the soil.
Do not dispose of with domestic refuse.
Dispose of as hazardous waste in compliance with local and national regulations.

Contaminated packaging : Packaging that is not properly emptied must be disposed of as the unused product.
Dispose of waste product or used containers according to

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local regulations.

The following Waste Codes are only suggestions:

Waste Code : used product, unused product
12 01 12*, spent waxes and fats

uncleaned packagings
15 01 10*, packaging containing residues of or contaminated
by hazardous substances

SECTION 14: Transport information

14.1 UN number or ID number

ADN : Not regulated as a dangerous good
ADR : Not regulated as a dangerous good
RID : Not regulated as a dangerous good
IMDG : Not regulated as a dangerous good
IATA : Not regulated as a dangerous good

14.2 UN proper shipping name

ADN : Not regulated as a dangerous good
ADR : Not regulated as a dangerous good
RID : Not regulated as a dangerous good
IMDG : Not regulated as a dangerous good
IATA : Not regulated as a dangerous good

14.3 Transport hazard class(es)

ADN : Not regulated as a dangerous good
ADR : Not regulated as a dangerous good
RID : Not regulated as a dangerous good
IMDG : Not regulated as a dangerous good
IATA : Not regulated as a dangerous good

14.4 Packing group

ADN : Not regulated as a dangerous good
ADR : Not regulated as a dangerous good
RID : Not regulated as a dangerous good

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IMDG : Not regulated as a dangerous good

IATA (Cargo) : Not regulated as a dangerous good

IATA (Passenger) : Not regulated as a dangerous good

14.5 Environmental hazards

ADN : Not regulated as a dangerous good

ADR : Not regulated as a dangerous good

RID : Not regulated as a dangerous good

IMDG : Not regulated as a dangerous good

14.6 Special precautions for user

Not applicable

14.7 Maritime transport in bulk according to IMO instruments

Remarks : Not applicable for product as supplied.

SECTION 15: Regulatory information

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

REACH - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles (Annex XVII) : Conditions of restriction for the following entries should be considered:
Number on list 75: If you intend to use this product as tattoo ink, please contact your vendor.

REACH - Candidate List of Substances of Very High Concern for Authorisation (Article 59). (EU SVHC) : This product does not contain substances of very high concern (Regulation (EC) No 1907/2006 (REACH), Article 57).

Regulation (EU) No 2024/590 on substances that deplete the ozone layer (EC 2024/590) : Not applicable

Regulation (EU) 2019/1021 on persistent organic pollutants (recast) (EU POP) : Not applicable

Regulation (EU) No 649/2012 of the European Parliament and the Council concerning the export and

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import of dangerous chemicals
(EU PIC)

REACH - List of substances subject to authorisation : Not applicable
(Annex XIV)
(EU. REACH-Annex XIV)

Regulation (EU) 2019/1148 on the marketing and use of : Not applicable
explosives precursors

Seveso III: Directive 2012/18/EU of the European : Not applicable
Parliament and of the Council on the control of
major-accident hazards involving dangerous
substances.

Water hazard class : WGK 1 slightly hazardous to water
(Germany) : Classification according to AwSV, Annex 1 (5.2)

TA Luft List (Germany) : 5.2.1: Total dust:
others: 13,32 %
5.2.5: Organic Substances:
Class 1: 86,55 %

Volatile organic compounds : Directive 2010/75/EU of 24 November 2010 on industrial and
livestock rearing emissions (integrated pollution prevention and
control)
Not applicable

15.2 Chemical safety assessment

This information is not available.

SECTION 16: Other information

Full text of H-Statements

H302 : Harmful if swallowed.
H361d : Suspected of damaging the unborn child.

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H411 : Toxic to aquatic life with long lasting effects.
H413 : May cause long lasting harmful effects to aquatic life.

Full text of other abbreviations

Acute Tox. : Acute toxicity
Aquatic Chronic : Long-term (chronic) aquatic hazard
Note L : The harmonised classification as a carcinogen applies unless it can be shown that the substance contains less than 3 % of dimethyl sulphoxide extract as measured by IP 346 ("Determination of polycyclic aromatics in unused lubricating base oils and asphaltene free petroleum fractions - Dimethyl sulphoxide extraction refractive index method" Institute of Petroleum, London), in which case a classification in accordance with Title II of this Regulation shall be performed also for that hazard class.
Repr. : Reproductive toxicity
DE TRGS 900 : Germany. TRGS 900 - Occupational exposure limit values.
DE TRGS 900 / AGW : Time Weighted Average

ADN - European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways; ADR - Agreement concerning the International Carriage of Dangerous Goods by Road; AIIC - Australian Inventory of Industrial Chemicals; ASTM - American Society for the Testing of Materials; bw - Body weight; CLP - Classification Labelling Packaging Regulation; Regulation (EC) No 1272/2008; CMR - Carcinogen, Mutagen or Reproductive Toxicant; DIN - Standard of the German Institute for Standardisation; DSL - Domestic Substances List (Canada); ECHA - European Chemicals Agency; EC-Number - European Community number; ECx - Concentration associated with x% response; ELx - Loading rate associated with x% response; EmS - Emergency Schedule; ENCS - Existing and New Chemical Substances (Japan); ErCx - Concentration associated with x% growth rate response; GHS - Globally Harmonized System; GLP - Good Laboratory Practice; IARC - International Agency for Research on Cancer; IATA - International Air Transport Association; IBC - International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk; IC50 - Half maximal inhibitory concentration; ICAO - International Civil Aviation Organization; IECSC - Inventory of Existing Chemical Substances in China; IMDG - International Maritime Dangerous Goods; IMO - International Maritime Organization; ISHL - Industrial Safety and Health Law (Japan); ISO - International Organisation for Standardization; KECI - Korea Existing Chemicals Inventory; LC50 - Lethal Concentration to 50 % of a test population; LD50 - Lethal Dose to 50% of a test population (Median Lethal Dose); MARPOL - International Convention for the Prevention of Pollution from Ships; n.o.s. - Not Otherwise Specified; NO(A)EC - No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NOELR - No Observable Effect Loading Rate; NZIoC - New Zealand Inventory of Chemicals; OECD - Organization for Economic Co-operation and Development; OPPTS - Office of Chemical Safety and Pollution Prevention; PBT - Persistent, Bioaccumulative and Toxic substance; PICCS - Philippines Inventory of Chemicals and Chemical Substances; (Q)SAR - (Quantitative) Structure Activity Relationship; REACH - Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals; RID - Regulations concerning the International Carriage of Dangerous Goods by Rail; SADT - Self-Accelerating Decomposition Temperature; SDS - Safety Data Sheet; SVHC - Substance of Very High Concern; TCSI - Taiwan Chemical Substance Inventory; TECL - Thailand Existing Chemicals Inventory; TRGS - Technical Rule for Hazardous Substances; TSCA - Toxic Substances Control Act (United States); UN - United Nations; vPvB - Very Persistent and Very Bioaccumulative

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Further information

- || Relevant changes compared to the last edition are highlighted at the left margin. This version replaces all previous editions.

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