

# SAFETY DATA SHEET

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



## Klüberpaste 46 MR 401

Version	Revision Date:	Date of last issue: 30.03.2022	Print Date:
5.3	29.09.2023	Date of first issue: 30.06.2015	15.11.2023

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

### 1.1 Product identifier

Product name : Klüberpaste 46 MR 401  
Article-No. : 005108

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

Use of the Substance/Mixture : Lubricant  
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  
Material Compliance Management

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)

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Skin sensitisation, Category 1	H317: May cause an allergic skin reaction.
Long-term (chronic) aquatic hazard, Category 2	H411: Toxic to aquatic life with long lasting effects.

### 2.2 Label elements

#### Labelling (REGULATION (EC) No 1272/2008)

Hazard pictograms	:		
Signal word	:	Warning	
Hazard statements	:	H317 H411	May cause an allergic skin reaction. Toxic to aquatic life with long lasting effects.
Precautionary statements	:	<b>Prevention:</b> P272 P273 P280	Contaminated work clothing should not be allowed out of the workplace. Avoid release to the environment. Wear protective gloves.
		<b>Response:</b> P333 + P313 P362 + P364 P391	If skin irritation or rash occurs: Get medical advice/ attention. Take off contaminated clothing and wash it before reuse. Collect spillage.

#### Hazardous components which must be listed on the label:

Condensation products of fatty acids, tall oil with 2-amino-2-ethylpropanediol

N,N-bis(2-ethylhexyl)-5-methyl-1H-benzotriazole-1-methylamine, N,N-bis(2-ethylhexyl)-4-methyl-1H-benzotriazole-1-methylamine, 2H-Benzotriazole-2-methanamine, N,N-bis(2-ethylhexyl)-4-methyl-, 2H-Benzotriazole-2-methanamine, N,N-bis(2-ethylhexyl)-5-methyl-, 1H-Benzotriazole-1-methanamine, N,N-bis(2-ethylhexyl)-6-methyl-(Mixture)

#### Additional Labelling

EUH212 Warning! Hazardous respirable dust may be formed when used. Do not breathe dust.

### 2.3 Other hazards

This mixture contains no substance considered to be persistent, bioaccumulating and toxic (PBT). This mixture contains no substance considered to be very persistent and very bioaccumulating (vPvB).

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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 : polyalkylene glycol oil  
lithium soap  
solid lubricant

#### Components

Chemical name	CAS-No. EC-No.  Index-No. Registration number	Classification	specific concentration limit M-Factor Notes Acute toxicity estimate	Concentration (% w/w)
trizinc bis(orthophosphate)	7779-90-0 231-944-3  030-011-00-6 01-2119485044-40- XXXX	Aquatic Acute1; H400 Aquatic Chronic1; H410	M-Factor: 1/1	>= 10 - < 20
disodium sebacate	17265-14-4 241-300-3  01-2120762063-61- XXXX	Eye Irrit.2; H319		>= 1 - < 10
Reaction mass of tris(dipentylidithiocarba mato-S,S')antimony and [bis(2- ethylhexyl)dithiocarba mato-	948-063-1  01-2120795895-29- XXXX	Acute Tox.4; H302 Acute Tox.4; H332 Aquatic Chronic2; H411		>= 1 - < 2,5

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S,S']bis(dipentylthiocarbamate-S,S')antimony and bis[bis(2-ethylhexyl)dithiocarbamate-S,S'](dipentylthiocarbamate-S,S')antimony and tris[bis(2-ethylhexyl)dithiocarbamate-S,S']antimony				
1,3,4-Thiadiazolidine-2,5-dithione, reaction products with hydrogen peroxide and tert-dodecanethiol	939-692-2  01-2119983498-16-XXXX	Aquatic Chronic3; H412		>= 1 - < 2,5
dilithium azelate	38900-29-7 254-184-4  01-2120119814-57-XXXX 01-2120119814-57-XXXX 01-2120119814-57-XXXX 01-2120119814-57-XXXX	Acute Tox.4; H302		>= 1 - < 10
Condensation products of fatty acids, tall oil with 2-amino-2-ethylpropanediol	946-010-7  01-2120770934-44-XXXX	Skin Sens.1; H317		>= 1 - < 10
zinc oxide	1314-13-2 215-222-5  030-013-00-7 01-2119463881-32-XXXX	Aquatic Acute1; H400 Aquatic Chronic1; H410	M-Factor: 1/1	>= 0,25 - < 1
2-(2-heptadec-8-enyl-2-imidazolin-1-yl)ethanol	95-38-5 202-414-9  01-2119777867-13-XXXX	Acute Tox.4; H302 Skin Corr.1C; H314 Eye Dam.1; H318 STOT RE2; H373 Aquatic Acute1;	M-Factor: 10/1	>= 0,25 - < 1

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		H400 Aquatic Chronic1; H410		
N,N-bis(2-ethylhexyl)-5-methyl-1H-benzotriazole-1-methylamine, N,N-bis(2-ethylhexyl)-4-methyl-1H-benzotriazole-1-methylamine, 2H-Benzotriazole-2-methanamine, N,N-bis(2-ethylhexyl)-4-methyl-, 2H-Benzotriazole-2-methanamine, N,N-bis(2-ethylhexyl)-5-methyl-, 1H-Benzotriazole-1-methanamine, N,N-bis(2-ethylhexyl)-6-methyl-(Mixture)	939-700-4  01-2119982395-25-XXXX	Skin Irrit.2; H315 Skin Sens.1B; H317 Aquatic Acute1; H400 Aquatic Chronic2; H411	M-Factor: 1/	$\geq 0,1 - < 0,25$
Substances with a workplace exposure limit :				
titanium dioxide; [in powder form containing <1 % of particles with aerodynamic diameter $\leq 10 \mu\text{m}$ ]	13463-67-7 236-675-5  01-2119489379-17-XXXX	Not classified		$\geq 10 - < 20$
Ethylene, tetrafluoro-, polymer	9002-84-0 618-337-2	Not classified		$\geq 1 - < 10$
Distillates (petroleum), hydrotreated heavy naphthenic; Baseoil — unspecified	64742-52-5 265-155-0  649-465-00-7 01-2119467170-45-XXXX	Not classified	Note L	$\geq 1 - < 10$

For explanation of abbreviations see section 16.

## SECTION 4: First aid measures

### 4.1 Description of first aid measures

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- If inhaled : 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.  
Wash off immediately with soap and plenty of water.  
Get medical attention immediately if irritation develops and persists.  
Wash clothing before reuse.  
Thoroughly clean shoes before reuse.
- 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.
- If swallowed : Get medical attention if symptoms occur.  
If unconscious, place in recovery position and seek medical advice.  
Keep respiratory tract clear.  
Do NOT induce vomiting.  
Never give anything by mouth to an unconscious person.
- 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.  
Never give anything by mouth to an unconscious person.

### 4.2 Most important symptoms and effects, both acute and delayed

- Symptoms : Allergic appearance
- Risks : May cause an allergic skin reaction.

### 4.3 Indication of any immediate medical attention and special treatment needed

- Treatment : The first aid procedure should be established in consultation with the doctor responsible for industrial medicine.

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## SECTION 5: Firefighting measures

### 5.1 Extinguishing media

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

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Unsuitable extinguishing media : High volume water jet

### 5.2 Special hazards arising from the substance or mixture

Hazardous combustion products : Carbon oxides  
Nitrogen oxides (NO<sub>x</sub>)  
Sulphur oxides  
Oxides of phosphorus  
Halogenated compounds  
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. Collect contaminated fire extinguishing water separately. This must not be discharged into drains.

## SECTION 6: Accidental release measures

### 6.1 Personal precautions, protective equipment and emergency procedures

Personal precautions : Evacuate personnel to safe areas.  
Use the indicated respiratory protection if the occupational exposure limit is exceeded and/or in case of product release (dust).  
Do not breathe vapours, aerosols.  
Refer to protective measures listed in sections 7 and 8.

### 6.2 Environmental precautions

Environmental precautions : Do not allow contact with soil, surface or ground water.  
If the product contaminates rivers and lakes or drains inform respective authorities.

### 6.3 Methods and material for containment and cleaning up

Methods for cleaning up : Clean up promptly by sweeping or vacuum.  
Keep in suitable, closed containers for disposal.

### 6.4 Reference to other sections

For personal protection see section 8.

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## 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.  
Persons with a history of skin sensitisation problems or asthma, allergies, chronic or recurrent respiratory disease should not be employed in any process in which this mixture is being used.  
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)

- 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
titanium dioxide; [in powder form	13463-67-7	AGWTime Weighted	10 mg/m <sup>3</sup> (Titanium dioxide)	DE TRGS 900



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containing <1 % of particles with aerodynamic diameter ≤ 10 µm]		Average (Inhalable fraction)		(2014-04-02)
Peak-limit: excursion factor (category): 2;(II)				
Further information: When there is compliance with the OEL and biological tolerance values, there is no risk of harming the unborn child				
		AGWTime Weighted Average (Alveolate fraction)	1,25 mg/m3 (Titanium dioxide)	DE TRGS 900 (2014-04-02)
Peak-limit: excursion factor (category): 2;(II)				
Further information: When there is compliance with the OEL and biological tolerance values, there is no risk of harming the unborn child				
		BMAssessment scale (Alveolar dust fraction)	0,5 mg/m3	DE TRGS 527 (2020-02-19)
Ethylene, tetrafluoro-, polymer	9002-84-0	AGWTime Weighted Average (Inhalable fraction)	10 mg/m3	DE TRGS 900 (2020-03-30)
Peak-limit: excursion factor (category): 2;(II)				
Further information: When there is compliance with the OEL and biological tolerance values, there is no risk of harming the unborn child				
		AGWTime Weighted Average (Alveolate fraction)	1,25 mg/m3	DE TRGS 900 (2020-03-30)
Peak-limit: excursion factor (category): 2;(II)				
Further information: When there is compliance with the OEL and biological tolerance values, there is no risk of harming the unborn child				
		BMAssessment scale (Alveolar dust fraction)	0,5 mg/m3	DE TRGS 527 (2020-02-19)
Distillates (petroleum), hydrotreated heavy naphthenic; Baseoil — unspecified	64742-52-5	AGWTime Weighted Average (Vapour and aerosols)	5 mg/m3	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
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disodium sebacate	Workers	Skin contact	Long-term systemic effects	10 mg/kg
	Workers	Inhalation	Long-term systemic effects	35,26 mg/m <sup>3</sup>
Distillates (petroleum), hydrotreated heavy naphthenic; Baseoil — unspecified	Workers	Inhalation	Long-term local effects	5,58 mg/m <sup>3</sup>
	Workers	Inhalation	Long-term systemic effects	2,73 mg/m <sup>3</sup>
	Workers	Skin contact	Long-term systemic effects	0,97 mg/kg
1,3,4-Thiadiazolidine-2,5-dithione, reaction products with hydrogen peroxide and tert-dodecanethiol	Workers	Inhalation		4,408 mg/m <sup>3</sup>
	Workers	Dermal		6,25 mg/kg bw/day
dilithium azelate	Workers	Dermal	Long-term systemic effects	13,5 mg/kg bw/day
	Workers	Dermal	Long-term local effects	0,172 mg/cm <sup>2</sup>
bis(4-(1,1,3,3-tetramethylbutyl)phenyl)amine	Workers	Inhalation	Long-term systemic effects	49,3 mg/m <sup>3</sup>
	Workers	Dermal	Long-term systemic effects	14 mg/kg bw/day
Condensation products of fatty acids, tall oil with 2-amino-2-ethylpropanediol	Workers	Dermal	Long-term systemic effects	8,33 mg/kg bw/day
2-(2-heptadec-8-enyl-2-imidazolin-1-yl)ethanol	Workers	Skin contact	Long-term systemic effects	0,06 mg/kg
	Workers	Inhalation	Long-term systemic effects	0,46 mg/m <sup>3</sup>
	Workers	Skin contact	Acute systemic effects	2 mg/kg
	Workers	Inhalation	Acute systemic effects	14 mg/m <sup>3</sup>

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

Substance name	Environmental Compartment	Value
trizinc bis(orthophosphate)	Fresh water	0,085 mg/l
	Marine water	0,0425 mg/l
	Microbiological Activity in Sewage	0,59 mg/l

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	Treatment Systems	
	Fresh water sediment	867,4 mg/kg
	Marine sediment	957,7 mg/kg
	Soil	490,7 mg/kg
disodium sebacate	Fresh water	0,018 mg/l
	Marine water	0,002 mg/l
	Sewage treatment plant	10 mg/l
	Fresh water sediment	0,548 mg/kg
	Marine sediment	0,055 mg/kg
	Soil	0,099 mg/kg
Distillates (petroleum), hydrotreated heavy naphthenic; Baseoil — unspecified	Oral	9,33 mg/kg
1,3,4-Thiadiazolidine-2,5- dithione, reaction products with hydrogen peroxide and tert- dodecanethiol	Fresh water	0,041 mg/l
	Marine water	0,0041 mg/l
	Fresh water sediment	380,62 mg/kg
	Marine sediment	38,06 mg/kg
	Sewage treatment plant	8000 mg/l
	Soil	308,98 mg/kg
dilithium azelate	Fresh water	0,023 mg/l
	Marine water	0,002 mg/l
zinc oxide	Fresh water	0,0179 mg/l
	Marine water	0,009 mg/l
	Sewage treatment plant	0,1245 mg/l
	Fresh water sediment	182,8 mg/kg
	Marine sediment	201,9 mg/kg
	Soil	103,4 mg/kg
2-(2-heptadec-8-enyl-2- imidazolin-1-yl)ethanol	Fresh water	0,00003 mg/l
	Marine water	0,000003 mg/l
	Fresh water sediment	0,376 mg/kg
	Marine sediment	0,0376 mg/kg
	Soil	0,075 mg/kg

## 8.2 Exposure controls

### Engineering measures

none

### Personal protective equipment

Eye/face protection : Safety glasses with side-shields

### Hand protection

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

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- Remarks : Wear 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.

## SECTION 9: Physical and chemical properties

### 9.1 Information on basic physical and chemical properties

- Physical state : paste
- Colour : white
- Odour : characteristic
- Odour Threshold : No data available
- Melting point/range : No data available
- Boiling point/boiling range : No data available
- 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

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Auto-ignition temperature : No data available

Decomposition temperature : No data available

pH : Not applicable  
substance/mixture is non-soluble (in water)

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 : 1,23 (20 °C)  
Reference substance: Water  
The value is calculated

Density : 1,23 g/cm<sup>3</sup>  
(20 °C)

Bulk density : Not applicable

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

Self-ignition : No data available

Evaporation rate : No data available

Sublimation point : Not applicable

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## 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

Hazardous decomposition products : >280 °C danger of forming toxic fluorine-containing pyrolysis products.

## SECTION 11: Toxicological information

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

#### Acute toxicity

##### Product:

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

Acute inhalation toxicity : Acute toxicity estimate: > 5 mg/l  
Exposure time: 4 h  
Test atmosphere: dust/mist  
Method: Calculation method

Acute dermal toxicity : Symptoms: Redness, Local irritation

##### Components:

##### **trizinc bis(orthophosphate):**

Acute oral toxicity : LD50 (Rat): > 5.000 mg/kg

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Method: OECD Test Guideline 401

### disodium sebacate:

Acute oral toxicity : LD50 (Rat): > 5.000 mg/kg  
Method: OECD Test Guideline 401  
GLP: no

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

Reaction mass of tris(dipentylthiocarbamate-S,S')antimony and [bis(2-ethylhexyl)dithiocarbamate-S,S']bis(dipentylthiocarbamate-S,S')antimony and bis[bis(2-ethylhexyl)dithiocarbamate-S,S'] (dipentylthiocarbamate-S,S')antimony and tris[bis(2-ethylhexyl)dithiocarbamate-S,S']antimony

:  
Acute oral toxicity : Assessment: The component/mixture is moderately toxic after single ingestion.

Acute inhalation toxicity : Assessment: The component/mixture is moderately toxic after short term inhalation.

### 1,3,4-Thiadiazolidine-2,5-dithione, reaction products with hydrogen peroxide and tert-dodecanethiol:

Acute oral toxicity : LD50 (Rat): > 5.000 mg/kg

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

### 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

### Condensation products of fatty acids, tall oil with 2-amino-2-ethylpropanediol:

Acute oral toxicity : LD50 (Rat): > 2.000 mg/kg  
Method: OECD Test Guideline 425  
Assessment: The substance or mixture has no acute oral

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toxicity

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

### **zinc oxide:**

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

Acute inhalation toxicity : LC50 (Rat): > 5,7 mg/l  
Exposure time: 4 h  
Test atmosphere: dust/mist  
Method: OECD Test Guideline 403  
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

### **2-(2-heptadec-8-enyl-2-imidazolin-1-yl)ethanol:**

Acute oral toxicity : LD50 (Rat): 1.265 mg/kg  
Method: OECD Test Guideline 401  
GLP: yes

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

N,N-bis(2-ethylhexyl)-5-methyl-1H-benzotriazole-1-methylamine, N,N-bis(2-ethylhexyl)-4-methyl-1H-benzotriazole-1-methylamine, 2H-Benzotriazole-2-methanamine, N,N-bis(2-ethylhexyl)-4-methyl-, 2H-Benzotriazole-2-methanamine, N,N-bis(2-ethylhexyl)-5-methyl-, 1H-Benzotriazole-1-methanamine, N,N-bis(2-ethylhexyl)-6-methyl-(Mixture)

:

Acute oral toxicity : LD50 (Rat): 3.313 mg/kg  
Method: OECD Test Guideline 401

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



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### **titanium dioxide; [in powder form containing <1 % of particles with aerodynamic diameter ≤ 10 µm]:**

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

Acute inhalation toxicity : (Rat): > 5,09 mg/l  
Method: OECD Test Guideline 403  
GLP: no

### **Ethylene, tetrafluoro-, polymer:**

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

### **Distillates (petroleum), hydrotreated heavy naphthenic; Baseoil — unspecified:**

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

Acute inhalation toxicity : LC50 (Rat): > 5,53 mg/l  
Exposure time: 4 h  
Test atmosphere: dust/mist  
Method: OECD Test Guideline 403  
GLP: yes  
Assessment: The substance or mixture has no acute inhalation toxicity

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

### **Skin corrosion/irritation**

#### **Product:**

Remarks : This information is not available.

#### **Components:**

##### **trizinc bis(orthophosphate):**

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

##### **disodium sebacate:**

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

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Result : No skin irritation  
GLP : no

Reaction mass of tris(dipentylthiocarbamato-S,S')antimony and [bis(2-ethylhexyl)dithiocarbamato-S,S']bis(dipentylthiocarbamato-S,S')antimony and bis[bis(2-ethylhexyl)dithiocarbamato-S,S'](dipentylthiocarbamato-S,S')antimony and tris[bis(2-ethylhexyl)dithiocarbamato-S,S']antimony

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

### 1,3,4-Thiadiazolidine-2,5-dithione, reaction products with hydrogen peroxide and tert-dodecanethiol:

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

### dilithium azelate:

Assessment : No skin irritation  
Result : No skin irritation

### Condensation products of fatty acids, tall oil with 2-amino-2-ethylpropanediol:

Species : reconstructed human epidermis (RhE)  
Assessment : No skin irritation  
Result : No skin irritation

### zinc oxide:

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

### 2-(2-heptadec-8-enyl-2-imidazolin-1-yl)ethanol:

Species : Rabbit  
Method : OECD Test Guideline 404  
Result : Corrosive, category 1C - where responses occur after exposures between 1 hour and 4 hours and observations up to 14 days.  
GLP : yes

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N,N-bis(2-ethylhexyl)-5-methyl-1H-benzotriazole-1-methylamine, N,N-bis(2-ethylhexyl)-4-methyl-1H-benzotriazole-1-methylamine, 2H-Benzotriazole-2-methanamine, N,N-bis(2-ethylhexyl)-4-methyl-, 2H-Benzotriazole-2-methanamine, N,N-bis(2-ethylhexyl)-5-methyl-, 1H-Benzotriazole-1-methanamine, N,N-bis(2-ethylhexyl)-6-methyl-(Mixture)

:

Species : Rabbit  
Assessment : Irritating to skin.  
Method : Draize Test  
Result : Irritating to skin.

**titanium dioxide; [in powder form containing <1 % of particles with aerodynamic diameter ≤ 10 µm]:**

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

**Ethylene, tetrafluoro-, polymer:**

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

**Distillates (petroleum), hydrotreated heavy naphthenic; Baseoil — unspecified:**

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

**Serious eye damage/eye irritation**

**Product:**

Remarks : This information is not available.

**Components:**

**trizinc bis(orthophosphate):**

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

**disodium sebacate:**

Species : Rabbit  
Assessment : Irritating to eyes.

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Method : OECD Test Guideline 437  
Result : Irritating to eyes.  
GLP : yes

Reaction mass of tris(dipentylidithiocarbamato-S,S')antimony and [bis(2-ethylhexyl)dithiocarbamato-S,S']bis(dipentylidithiocarbamato-S,S')antimony and bis[bis(2-ethylhexyl)dithiocarbamato-S,S'](dipentylidithiocarbamato-S,S')antimony and tris[bis(2-ethylhexyl)dithiocarbamato-S,S']antimony

:

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

### 1,3,4-Thiadiazolidine-2,5-dithione, reaction products with hydrogen peroxide and tert-dodecanethiol:

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

### dilithium azelate:

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

### Condensation products of fatty acids, tall oil with 2-amino-2-ethylpropanediol:

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

### zinc oxide:

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

### 2-(2-heptadec-8-enyl-2-imidazolin-1-yl)ethanol:

Species : Rabbit  
Assessment : Corrosive  
Method : OECD Test Guideline 405  
Result : Corrosive

N,N-bis(2-ethylhexyl)-5-methyl-1H-benzotriazole-1-methylamine, N,N-bis(2-ethylhexyl)-4-methyl-1H-benzotriazole-1-methylamine, 2H-Benzotriazole-2-methanamine, N,N-bis(2-ethylhexyl)-4-

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methyl-, 2H-Benzotriazole-2-methanamine, N,N-bis(2-ethylhexyl)-5-methyl-, 1H-Benzotriazole-1-methanamine, N,N-bis(2-ethylhexyl)-6-methyl-(Mixture)

:

Species	:	Rabbit
Assessment	:	No eye irritation
Method	:	Draize Test
Result	:	No eye irritation

**titanium dioxide; [in powder form containing <1 % of particles with aerodynamic diameter  $\leq 10 \mu\text{m}$ ]:**

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

**Ethylene, tetrafluoro-, polymer:**

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

**Distillates (petroleum), hydrotreated heavy naphthenic; Baseoil — unspecified:**

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

**Respiratory or skin sensitisation**

**Product:**

Remarks : This information is not available.

**Components:**

**trizinc bis(orthophosphate):**

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

**disodium sebacate:**

Species	:	Guinea pig
Assessment	:	Did not cause sensitisation on laboratory animals.
Result	:	Did not cause sensitisation on laboratory animals.

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### **1,3,4-Thiadiazolidine-2,5-dithione, reaction products with hydrogen peroxide and tert-dodecanethiol:**

Species : Guinea pig  
Assessment : Does not cause skin sensitisation.  
Result : Does not cause skin sensitisation.

### **dilithium azelate:**

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

### **Condensation products of fatty acids, tall oil with 2-amino-2-ethylpropanediol:**

Assessment : May cause sensitisation by skin contact.  
Result : May cause sensitisation by skin contact.

### **zinc oxide:**

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

### **2-(2-heptadec-8-enyl-2-imidazolin-1-yl)ethanol:**

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

N,N-bis(2-ethylhexyl)-5-methyl-1H-benzotriazole-1-methylamine, N,N-bis(2-ethylhexyl)-4-methyl-1H-benzotriazole-1-methylamine, 2H-Benzotriazole-2-methanamine, N,N-bis(2-ethylhexyl)-4-methyl-, 2H-Benzotriazole-2-methanamine, N,N-bis(2-ethylhexyl)-5-methyl-, 1H-Benzotriazole-1-methanamine, N,N-bis(2-ethylhexyl)-6-methyl-(Mixture)

:

Test Type : Maximisation Test  
Species : Guinea pig  
Assessment : The product is a skin sensitiser, sub-category 1B.  
Method : OECD Test Guideline 406  
Result : The product is a skin sensitiser, sub-category 1B.

### **titanium dioxide; [in powder form containing <1 % of particles with aerodynamic diameter ≤ 10 µm]:**

Species : Mouse  
Assessment : Does not cause skin sensitisation.

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Method : OECD Test Guideline 429  
Result : Does not cause skin sensitisation.

### Ethylene, tetrafluoro-, polymer:

Assessment : Did not cause sensitisation on laboratory animals.  
Result : Did not cause sensitisation on laboratory animals.

### Distillates (petroleum), hydrotreated heavy naphthenic; Baseoil — unspecified:

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

### Germ cell mutagenicity

#### Product:

Genotoxicity in vitro : Remarks: No data available

Genotoxicity in vivo : Remarks: No data available

#### Components:

##### trizinc bis(orthophosphate):

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

##### disodium sebacate:

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

##### Condensation products of fatty acids, tall oil with 2-amino-2-ethylpropanediol:

Genotoxicity in vitro : Remarks: In vitro tests did not show mutagenic effects

##### zinc oxide:

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

##### 2-(2-heptadec-8-enyl-2-imidazolin-1-yl)ethanol:

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

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:

Genotoxicity in vitro : Test Type: Ames test  
Method: OECD Test Guideline 471  
Result: negative

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

**titanium dioxide; [in powder form containing <1 % of particles with aerodynamic diameter ≤ 10 µm]:**

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

**Distillates (petroleum), hydrotreated heavy naphthenic; Baseoil — unspecified:**

Genotoxicity in vitro : 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 473  
Result: negative

Genotoxicity in vivo : Test Type: Micronucleus test  
Species: Mouse  
Cell type: Bone marrow  
Application Route: Intraperitoneal injection  
Method: OECD Test Guideline 474  
Result: negative

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

### Carcinogenicity

#### Product:

Remarks : No data available

#### Components:

##### **trizinc bis(orthophosphate):**

Carcinogenicity - Assessment : Not classifiable as a human carcinogen.

##### **zinc oxide:**



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Carcinogenicity - Assessment : Not classifiable as a human carcinogen.

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:  
Carcinogenicity - Assessment : Carcinogenicity classification not possible from current data.

**titanium dioxide; [in powder form containing <1 % of particles with aerodynamic diameter ≤ 10 µm]:**

Carcinogenicity - Assessment : No evidence of carcinogenicity in animal studies.

**Ethylene, tetrafluoro-, polymer:**

Carcinogenicity - Assessment : Not classifiable as a human carcinogen.

**Distillates (petroleum), hydrotreated heavy naphthenic; Baseoil — unspecified:**

Carcinogenicity - Assessment : Not classifiable as a human carcinogen.

### Reproductive toxicity

#### Product:

Effects on fertility : Remarks: No data available

Effects on foetal development : Remarks: No data available

#### Components:

**trizinc bis(orthophosphate):**

Reproductive toxicity - Assessment : - Fertility -  
No toxicity to reproduction  
- Teratogenicity -  
No effects on or via lactation

**disodium sebacate:**

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

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- Teratogenicity -  
No effects on or via lactation

### Condensation products of fatty acids, tall oil with 2-amino-2-ethylpropanediol:

Reproductive toxicity - Assessment : - Fertility -  
Animal testing did not show any effects on fertility.

### zinc oxide:

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

### 2-(2-heptadec-8-enyl-2-imidazolin-1-yl)ethanol:

Reproductive toxicity - Assessment : - Fertility -  
Animal testing did not show any effects on fertility.  
- Teratogenicity -  
Did not show teratogenic effects in animal experiments.

N,N-bis(2-ethylhexyl)-5-methyl-1H-benzotriazole-1-methylamine, N,N-bis(2-ethylhexyl)-4-methyl-1H-benzotriazole-1-methylamine, 2H-Benzotriazole-2-methanamine, N,N-bis(2-ethylhexyl)-4-methyl-, 2H-Benzotriazole-2-methanamine, N,N-bis(2-ethylhexyl)-5-methyl-, 1H-Benzotriazole-1-methanamine, N,N-bis(2-ethylhexyl)-6-methyl-(Mixture)

:  
Effects on fertility : Species: Rat  
Application Route: Oral  
General Toxicity - Parent: NOAEL: 45 mg/kg body weight  
General Toxicity F1: NOAEL: 45 mg/kg body weight  
Fertility: NOAEL: 150 mg/kg body weight  
Method: OECD Test Guideline 422

Effects on foetal development : Species: Rat  
Application Route: Oral  
Duration of Single Treatment: 28 h  
General Toxicity Maternal: NOAEL: 45 mg/kg body weight  
Developmental Toxicity: NOAEL: 45 mg/kg body weight  
Method: OECD Test Guideline 422

Reproductive toxicity - Assessment : - Fertility -  
No evidence of adverse effects on sexual function and fertility, or on development, based on animal experiments.  
- Teratogenicity -  
No evidence of adverse effects on sexual function and fertility,

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or on development, based on animal experiments.

### **titanium dioxide; [in powder form containing <1 % of particles with aerodynamic diameter ≤ 10 µm]:**

Reproductive toxicity - Assessment : - Fertility -  
No toxicity to reproduction  
- Teratogenicity -  
No effects on or via lactation

### **Distillates (petroleum), hydrotreated heavy naphthenic; Baseoil — unspecified:**

Effects on foetal development : Species: Rat  
Application Route: Dermal  
General Toxicity Maternal: LOAEL: 125 mg/kg body weight  
Teratogenicity: NOAEL: >= 2.000 mg/kg body weight  
Developmental Toxicity: NOAEL: >= 2.000 mg/kg body weight  
Embryo-foetal toxicity: NOAEL: >= 2.000 mg/kg body weight  
Method: OECD Test Guideline 414  
Result: No effects on fertility and early embryonic development were detected.

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

### **STOT - single exposure**

#### **Product:**

Remarks : No data available

#### **Components:**

##### **dilithium azelate:**

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

##### **zinc oxide:**

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

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N,N-bis(2-ethylhexyl)-5-methyl-1H-benzotriazole-1-methylamine, N,N-bis(2-ethylhexyl)-4-methyl-1H-benzotriazole-1-methylamine, 2H-Benzotriazole-2-methanamine, N,N-bis(2-ethylhexyl)-4-methyl-, 2H-Benzotriazole-2-methanamine, N,N-bis(2-ethylhexyl)-5-methyl-, 1H-Benzotriazole-1-methanamine, N,N-bis(2-ethylhexyl)-6-methyl-(Mixture)

:

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

**titanium dioxide; [in powder form containing <1 % of particles with aerodynamic diameter ≤ 10 µm]:**

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

**Ethylene, tetrafluoro-, polymer:**

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

**Distillates (petroleum), hydrotreated heavy naphthenic; Baseoil — unspecified:**

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

**STOT - repeated exposure**

**Product:**

Remarks : No data available

**Components:**

**dilithium azelate:**

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

**zinc oxide:**

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

**2-(2-heptadec-8-enyl-2-imidazolin-1-yl)ethanol:**

Exposure routes : Ingestion  
Target Organs : Digestive organs, thymus gland  
Assessment : May cause damage to organs through prolonged or repeated exposure.

N,N-bis(2-ethylhexyl)-5-methyl-1H-benzotriazole-1-methylamine, N,N-bis(2-ethylhexyl)-4-methyl-1H-benzotriazole-1-methylamine, 2H-Benzotriazole-2-methanamine, N,N-bis(2-ethylhexyl)-4-

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:

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

**titanium dioxide; [in powder form containing <1 % of particles with aerodynamic diameter ≤ 10 µm]:**

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

**Ethylene, tetrafluoro-, polymer:**

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

**Distillates (petroleum), hydrotreated heavy naphthenic; Baseoil — unspecified:**

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:

##### **2-(2-heptadec-8-enyl-2-imidazolin-1-yl)ethanol:**

Species : Rat  
: 100 mg/kg  
NOAEL : 20 mg/kg  
Application Route : Oral

N,N-bis(2-ethylhexyl)-5-methyl-1H-benzotriazole-1-methylamine, N,N-bis(2-ethylhexyl)-4-methyl-1H-benzotriazole-1-methylamine, 2H-Benzotriazole-2-methanamine, N,N-bis(2-ethylhexyl)-4-methyl-, 2H-Benzotriazole-2-methanamine, N,N-bis(2-ethylhexyl)-5-methyl-, 1H-Benzotriazole-1-methanamine, N,N-bis(2-ethylhexyl)-6-methyl-(Mixture)

:

Species : Rat  
NOAEL : 45 mg/kg  
Application Route : Oral  
Exposure time : 28  
Method : OECD Test Guideline 422

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### Aspiration toxicity

#### Product:

This information is not available.

#### Components:

##### **trizinc bis(orthophosphate):**

No aspiration toxicity classification

##### **disodium sebacate:**

No aspiration toxicity classification

##### **dilithium azelate:**

No aspiration toxicity classification

##### **zinc oxide:**

No aspiration toxicity classification

N,N-bis(2-ethylhexyl)-5-methyl-1H-benzotriazole-1-methylamine, N,N-bis(2-ethylhexyl)-4-methyl-1H-benzotriazole-1-methylamine, 2H-Benzotriazole-2-methanamine, N,N-bis(2-ethylhexyl)-4-methyl-, 2H-Benzotriazole-2-methanamine, N,N-bis(2-ethylhexyl)-5-methyl-, 1H-Benzotriazole-1-methanamine, N,N-bis(2-ethylhexyl)-6-methyl-(Mixture)

:

No aspiration toxicity classification

##### **titanium dioxide; [in powder form containing <1 % of particles with aerodynamic diameter ≤ 10 µm]:**

No aspiration toxicity classification

##### **Ethylene, tetrafluoro-, polymer:**

No aspiration toxicity classification

##### **Distillates (petroleum), hydrotreated heavy naphthenic; Baseoil — unspecified:**

No aspiration toxicity classification

## 11.2 Information on other hazards

### 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

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(EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

### 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: Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

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:

##### **trizinc bis(orthophosphate):**

Toxicity to fish : LC50 (Oncorhynchus mykiss (rainbow trout)): > 0,14 mg/l  
Exposure time: 96 h

Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna (Water flea)): > 1,08 mg/l  
Exposure time: 48 h  
Test Type: static test  
Method: OECD Test Guideline 202  
GLP: yes

Toxicity to algae/aquatic plants : EC50 (Pseudokirchneriella subcapitata (green algae)): > 0,136 mg/l  
Exposure time: 72 h  
Method: OECD Test Guideline 201

M-Factor (Acute aquatic toxicity) : 1

M-Factor (Chronic aquatic toxicity) : 1

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toxicity)

### disodium sebacate:

- Toxicity to fish : LC50 (Danio rerio (zebra fish)): > 100 mg/l  
Exposure time: 96 h  
Test Type: semi-static test  
Method: OECD Test Guideline 203  
GLP: yes
- Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna (Water flea)): > 100 mg/l  
Exposure time: 48 h  
Test Type: semi-static test  
Method: OECD Test Guideline 202  
GLP: yes
- Toxicity to algae/aquatic plants : EL50 (Skeletonema costatum (marine diatom)): 38,7 mg/l  
Exposure time: 72 h  
Test Type: static test  
Method: ISO 10253  
GLP: yes

Reaction mass of tris(dipentylthiocarbamate-S,S')antimony and [bis(2-ethylhexyl)dithiocarbamate-S,S']bis(dipentylthiocarbamate-S,S')antimony and bis[bis(2-ethylhexyl)dithiocarbamate-S,S'](dipentylthiocarbamate-S,S')antimony and tris[bis(2-ethylhexyl)dithiocarbamate-S,S']antimony

:

### Ecotoxicology Assessment

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

### 1,3,4-Thiadiazolidine-2,5-dithione, reaction products with hydrogen peroxide and tert-dodecanethiol:

- Toxicity to fish : LC50 (Pimephales promelas (fathead minnow)): > 1.000 mg/l  
Exposure time: 96 h
- Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna (Water flea)): 41 mg/l  
Exposure time: 48 h
- Toxicity to algae/aquatic plants : EC50 (Pseudokirchneriella subcapitata (microalgae)): > 100 mg/l  
Exposure time: 72 h
- Toxicity to microorganisms : EC50 (Pseudomonas putida): > 8.000 mg/l  
Exposure time: 16 h



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### dilithium azelate:

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

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

### zinc oxide:

Toxicity to fish : LC50 (Danio rerio (zebra fish)): 1,55 mg/l  
Exposure time: 96 h  
Test Type: static test

Toxicity to daphnia and other : EC50 (Daphnia magna (Water flea)): 1 mg/l  
aquatic invertebrates Exposure time: 48 h  
Test Type: static test  
Method: OECD Test Guideline 202

Toxicity to algae/aquatic : EC50 (Pseudokirchneriella subcapitata (green algae)): 0,136  
plants mg/l  
Exposure time: 72 h  
Test Type: static test  
Method: OECD Test Guideline 201  
GLP: yes

M-Factor (Acute aquatic : 1  
toxicity)

Toxicity to microorganisms : EC50 (activated sludge): > 1.000 mg/l  
Exposure time: 3 h  
Method: OECD Test Guideline 209  
GLP: yes

Toxicity to daphnia and other : 0,04 mg/l  
aquatic invertebrates Exposure time: 21 d  
(Chronic toxicity) Species: Daphnia magna (Water flea)  
Test Type: semi-static test  
Method: OECD Test Guideline 211

M-Factor (Chronic aquatic : 1  
toxicity)

### 2-(2-heptadec-8-enyl-2-imidazolin-1-yl)ethanol:

Toxicity to fish : LC50 (Danio rerio (zebra fish)): 0,3 mg/l  
Exposure time: 96 h  
Test Type: static test  
Method: OECD Test Guideline 203

Toxicity to daphnia and other : EC50 (Daphnia magna (Water flea)): 0,163 mg/l  
aquatic invertebrates Exposure time: 48 h

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Test Type: Immobilization  
Method: OECD Test Guideline 202  
GLP: yes

Toxicity to algae/aquatic plants : ErC50 (Desmodesmus subspicatus (green algae)): 0,03 mg/l  
Exposure time: 72 h  
Test Type: Growth inhibition  
Method: OECD Test Guideline 201

M-Factor (Acute aquatic toxicity) : 10

Toxicity to microorganisms : EC50 (activated sludge): 26 mg/l  
Exposure time: 3 h  
Test Type: Respiration inhibition  
Method: OECD Test Guideline 209

M-Factor (Chronic aquatic toxicity) : 1

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:

Toxicity to fish : LC50 (Brachydanio rerio (zebrafish)): 1,3 mg/l  
Exposure time: 96 h  
Test Type: static test  
Method: OECD Test Guideline 203

Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna (Water flea)): 2,05 mg/l  
Exposure time: 48 h  
Test Type: static test  
Method: OECD Test Guideline 202

Toxicity to algae/aquatic plants : EC50 (Desmodesmus subspicatus (green algae)): 0,762 mg/l  
Exposure time: 72 h  
Test Type: static test  
Method: OECD Test Guideline 201

M-Factor (Acute aquatic toxicity) : 1

Toxicity to microorganisms : EC20 (activated sludge): 15 mg/l  
Exposure time: 3 h  
Test Type: Respiration inhibition  
Method: OECD Test Guideline 209

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### Ecotoxicology Assessment

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

### titanium dioxide; [in powder form containing <1 % of particles with aerodynamic diameter ≤ 10 µm]:

Toxicity to fish : LC50 (Oncorhynchus mykiss (rainbow trout)): > 100 mg/l  
Exposure time: 96 h  
Test Type: static test  
Method: OECD Test Guideline 203

Toxicity to daphnia and other aquatic invertebrates : LC50 (Daphnia magna (Water flea)): > 100 mg/l  
Exposure time: 48 h  
Test Type: static test  
Method: OECD Test Guideline 202

### Distillates (petroleum), hydrotreated heavy naphthenic; Baseoil — unspecified:

Toxicity to fish : LC50 (Pimephales promelas (fathead minnow)): > 100 mg/l  
Exposure time: 96 h  
Test Type: static test  
Method: OECD Test Guideline 203  
GLP: yes

Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna (Water flea)): > 10.000 mg/l  
Exposure time: 48 h  
Test Type: static test  
Method: OECD Test Guideline 202

Toxicity to algae/aquatic plants : LC50 (Pseudokirchneriella subcapitata (green algae)): > 100 mg/l  
Exposure time: 72 h  
Method: OECD Test Guideline 201

Toxicity to fish (Chronic toxicity) : NOELR: >= 1.000 mg/l  
Exposure time: 28 d  
Species: Oncorhynchus mykiss (rainbow trout)  
Remarks: The value is calculated

Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) : NOELR: 10 mg/l  
Exposure time: 21 d  
Species: Daphnia magna (Water flea)  
Test Type: Reproduction Test  
Method: OECD Test Guideline 211

## 12.2 Persistence and degradability

### Product:

Biodegradability : Remarks: No data available

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Physico-chemical  
removability : Remarks: No data available

### Components:

#### **trizinc bis(orthophosphate):**

Biodegradability : Remarks: The methods for determining biodegradability are not applicable to inorganic substances.

#### **disodium sebacate:**

Biodegradability : Result: Biodegradable  
Biodegradation: 89 %  
Exposure time: 28 d

Reaction mass of tris(dipentylidithiocarbamato-S,S')antimony and [bis(2-ethylhexyl)dithiocarbamato-S,S']bis(dipentylidithiocarbamato-S,S')antimony and bis[bis(2-ethylhexyl)dithiocarbamato-S,S'](dipentylidithiocarbamato-S,S')antimony and tris[bis(2-ethylhexyl)dithiocarbamato-S,S']antimony

:  
Biodegradability : Result: Not rapidly biodegradable  
Biodegradation: 20 %  
Exposure time: 28 d  
Method: OECD Test Guideline 301B

#### **1,3,4-Thiadiazolidine-2,5-dithione, reaction products with hydrogen peroxide and tert-dodecanethiol:**

Biodegradability : Result: Not rapidly biodegradable  
Biodegradation: 0 %  
Exposure time: 28 d

#### **Condensation products of fatty acids, tall oil with 2-amino-2-ethylpropanediol:**

Biodegradability : Result: Not rapidly biodegradable

#### **zinc oxide:**

Biodegradability : Remarks: The methods for determining biodegradability are not applicable to inorganic substances.

#### **2-(2-heptadec-8-enyl-2-imidazolin-1-yl)ethanol:**

Biodegradability : Test Type: Primary biodegradation  
Result: Not rapidly biodegradable  
Method: OECD Test Guideline 301B

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:

Biodegradability : Test Type: Primary biodegradation  
Inoculum: activated sludge  
Result: Not rapidly biodegradable  
Biodegradation: < 10 %  
Exposure time: 28 d  
Method: OECD Test Guideline 301B

### Distillates (petroleum), hydrotreated heavy naphthenic; Baseoil — unspecified:

Biodegradability : Test Type: aerobic  
Inoculum: activated sludge  
Result: Not rapidly biodegradable  
Biodegradation: 3 %  
Exposure time: 28 d  
Method: OECD Test Guideline 301B  
GLP: yes

## 12.3 Bioaccumulative potential

### Product:

Bioaccumulation : Remarks: This mixture contains no substance considered to be persistent, bioaccumulating and toxic (PBT).  
This mixture contains no substance considered to be very persistent and very bioaccumulating (vPvB).

### Components:

#### **disodium sebacate:**

Partition coefficient: n-octanol/water : log Pow: -4,9 (20 °C)  
pH: 7,8

#### **1,3,4-Thiadiazolidine-2,5-dithione, reaction products with hydrogen peroxide and tert-dodecanethiol:**

Bioaccumulation : Bioconcentration factor (BCF): 3,16

Partition coefficient: n-octanol/water : log Pow: 8

#### **dilithium azelate:**

Bioaccumulation : Bioconcentration factor (BCF): 3,0

Partition coefficient: n- : log Pow: -3,56

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octanol/water

### Condensation products of fatty acids, tall oil with 2-amino-2-ethylpropanediol:

Bioaccumulation : Bioconcentration factor (BCF): < 100

Partition coefficient: n-octanol/water : log Pow: 9,01

### 2-(2-heptadec-8-enyl-2-imidazolin-1-yl)ethanol:

Bioaccumulation : Bioconcentration factor (BCF): 371,8  
Remarks: Does not accumulate in organisms.

Partition coefficient: n-octanol/water : log Pow: > 6

N,N-bis(2-ethylhexyl)-5-methyl-1H-benzotriazole-1-methylamine, N,N-bis(2-ethylhexyl)-4-methyl-1H-benzotriazole-1-methylamine, 2H-Benzotriazole-2-methanamine, N,N-bis(2-ethylhexyl)-4-methyl-, 2H-Benzotriazole-2-methanamine, N,N-bis(2-ethylhexyl)-5-methyl-, 1H-Benzotriazole-1-methanamine, N,N-bis(2-ethylhexyl)-6-methyl-(Mixture)

:  
Bioaccumulation : Bioconcentration factor (BCF): 1.676

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

## 12.4 Mobility in soil

### Product:

Mobility : Remarks: No data available

Distribution among environmental compartments : Remarks: No data available

## 12.5 Results of PBT and vPvB assessment

### Product:

Assessment : This mixture contains no substance considered to be persistent, bioaccumulating and toxic (PBT).. This mixture contains no substance considered to be very persistent and very bioaccumulating (vPvB).

: 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.

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### Components:

#### **trizinc bis(orthophosphate):**

Assessment : Remarks: Not applicable

#### **zinc oxide:**

Assessment : Remarks: Not applicable

#### **titanium dioxide; [in powder form containing <1 % of particles with aerodynamic diameter ≤ 10 µm]:**

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

#### **Ethylene, tetrafluoro-, polymer:**

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

#### **Distillates (petroleum), hydrotreated heavy naphthenic; Baseoil — unspecified:**

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 : Toxic to aquatic life with long lasting effects.

---

## SECTION 13: Disposal considerations

### 13.1 Waste treatment methods

Product : 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.

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

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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 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 : UN 3077  
ADR : UN 3077  
RID : UN 3077  
IMDG : UN 3077  
IATA : UN 3077

### 14.2 UN proper shipping name

ADN : ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S.  
(Zinc Phosphate)  
ADR : ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S.  
(Zinc Phosphate)  
RID : ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S.  
(Zinc Phosphate)  
IMDG : ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S.  
(Zinc Phosphate)  
IATA : Environmentally hazardous substance, solid, n.o.s.  
(Zinc Phosphate)

### 14.3 Transport hazard class(es)

ADN : 9



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**ADR** : 9  
**RID** : 9  
**IMDG** : 9  
**IATA** : 9

### 14.4 Packing group

#### ADN

Packing group : III  
Classification Code : M7  
Hazard Identification Number : 90  
Labels : 9

#### ADR

Packing group : III  
Classification Code : M7  
Hazard Identification Number : 90  
Labels : 9  
Tunnel restriction code : (-)

#### RID

Packing group : III  
Classification Code : M7  
Hazard Identification Number : 90  
Labels : 9

#### IMDG

Packing group : III  
Labels : 9  
EmS Code : F-A, S-F

#### IATA (Cargo)

Packing instruction (cargo aircraft) : 956  
Packing instruction (LQ) : Y956  
Packing group : III  
Labels : Miscellaneous Dangerous Goods

#### IATA (Passenger)

Packing instruction (passenger aircraft) : 956  
Packing instruction (LQ) : Y956  
Packing group : III  
Labels : Miscellaneous Dangerous Goods

### 14.5 Environmental hazards

#### ADN

Environmentally hazardous : yes

#### ADR

Environmentally hazardous : yes

#### RID

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Environmentally hazardous : yes

### IMDG

Marine pollutant : yes

### IATA (Passenger)

Environmentally hazardous : yes

### IATA (Cargo)

Environmentally hazardous : yes

### 14.6 Special precautions for user

The transport classification(s) provided herein are for informational purposes only, and solely based upon the properties of the unpackaged material as it is described within this Safety Data Sheet. Transportation classifications may vary by mode of transportation, package sizes, and variations in regional or country regulations.

### 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) : Not applicable

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 (EC) No 1005/2009 on substances that deplete the ozone layer (EC 1005/2009) : Not applicable

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

Regulation (EC) No 649/2012 of the European Parliament and the Council concerning the export and import of dangerous chemicals (EU PIC) : Not applicable

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

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Seveso III: Directive 2012/18/EU of the European Parliament and of the Council on the control of major-accident hazards involving dangerous substances. E2 ENVIRONMENTAL HAZARDS

34 Petroleum products: (a) gasolines and naphthas, (b) kerosenes (including jet fuels), (c) gas oils (including diesel fuels, home heating oils and gas oil blending streams),(d) heavy fuel oils (e) alternative fuels serving the same purposes and with similar properties as regards flammability and environmental hazards as the products referred to in points (a) to (d)

Water hazard class (Germany) : WGK 3 highly hazardous to water  
Classification according to AwSV, Annex 1 (5.2)

TA Luft List (Germany) : 5.2.1: Total dust:  
others: 38,25 %  
5.2.2: Inorganic substances in powdered form:  
Not applicable  
5.2.4: Inorganic substances in gaseous form:  
Not applicable  
5.2.5: Organic Substances:  
Class 1: 2,82 %  
5.2.7.1.1: Carcinogenic substance:  
Not applicable  
5.2.7.1.1: Quartz fine dust PM4:  
Not applicable  
5.2.7.1.1: Formaldehyde:  
Not applicable  
5.2.7.1.1: fibres:  
Not applicable  
5.2.7.1.2: Germ cell mutagens:  
Not applicable  
5.2.7.1.3: Substances toxic to reproduction:  
Not applicable  
5.2.7.2: Poorly degradable, easily enrichable and highly toxic organic substances:  
Not applicable

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Volatile organic compounds : Directive 2010/75/EU of 24 November 2010 on industrial emissions (integrated pollution prevention and control)  
Volatile organic compounds (VOC) content: 1,12 %

### Other regulations:

Take note of Directive 94/33/EC on the protection of young people at work or stricter national regulations, where applicable.

### 15.2 Chemical safety assessment

This information is not available.

## SECTION 16: Other information

### Full text of H-Statements

H302 : Harmful if swallowed.  
H314 : Causes severe skin burns and eye damage.  
H315 : Causes skin irritation.  
H317 : May cause an allergic skin reaction.  
H318 : Causes serious eye damage.  
H319 : Causes serious eye irritation.  
H332 : Harmful if inhaled.  
H373 : May cause damage to organs through prolonged or repeated exposure if swallowed.  
H400 : Very toxic to aquatic life.  
H410 : Very toxic to aquatic life with long lasting effects.  
H411 : Toxic to aquatic life with long lasting effects.  
H412 : Harmful to aquatic life with long lasting effects.

### Full text of other abbreviations

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

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according to Regulation (EC) No. 1907/2006 - DE  
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Petroleum, London), in which case a classification in accordance with Title II of this Regulation shall be performed also for that hazard class.

DE TRGS 527	:	Germany. TRGS 527 - Activities with nanomaterials
DE TRGS 900	:	Germany. TRGS 900 - Occupational exposure limit values.
DE TRGS 527 / BM	:	Assessment scale
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; TECI - 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

### Further information

#### Classification of the mixture:

Skin Sens. 1	H317
Aquatic Chronic 2	H411

#### Classification procedure:

Calculation method
Calculation method

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