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

1.1 Product identifier

Product name : OKS 2501

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

Use of the : Lubricant spray

Substance/Mixture

Recommended restrictions

on use

Restricted to professional users.

1.3 Details of the supplier of the safety data sheet

Company : OKS Spezialschmierstoffe GmbH

Ganghoferstr. 47

82216 Maisach-Gernlinden

Deutschland

Tel.: +49 8142 3051 500 Fax: +49 8142 3051 599 info@oks-germany.com

E-mail address of person

responsible for the SDS

mcm@oks-germany.com

National contact

1.4 Emergency telephone number

Emergency telephone

: +49 8142 3051 517

number

## **SECTION 2: Hazards identification**

### 2.1 Classification of the substance or mixture

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

Aerosols, Category 1 H222: Extremely flammable aerosol.

H229: Pressurised container: May burst if heated.

Skin irritation, Category 2 H315: Causes skin irritation.

Serious eye damage, Category 1 H318: Causes serious eye damage.

Specific target organ toxicity - single exposure, Category 3, Central nervous

system

H336: May cause drowsiness or dizziness.



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Aspiration hazard, Category 1 H304: May be fatal if swallowed and enters

airways.

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 : Danger

Hazard statements : H222 Extremely flammable aerosol.

H229 Pressurised container: May burst if heated.H304 May be fatal if swallowed and enters airways.

H315 Causes skin irritation.

H318 Causes serious eye damage.H336 May cause drowsiness or dizziness.

H411 Toxic to aquatic life with long lasting effects.

Precautionary statements : Prevention:

P210 Keep away from heat, hot surfaces, sparks, open

flames and other ignition sources. No smoking.

P211 Do not spray on an open flame or other ignition

source.

P251 Do not pierce or burn, even after use. P273 Avoid release to the environment.

P280 Wear protective gloves/ eye protection/ face

protection.

## Response:

P301 + P310 IF SWALLOWED: Immediately call a POISON

CENTER/ doctor.

P305 + P351 + P338 + P310 IF IN EYES: Rinse cautiously

with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER/

doctor.

P331 Do NOT induce vomiting.

#### Storage:

P410 + P412 Protect from sunlight. Do not expose to temperatures exceeding 50 °C/ 122 °F.



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# Hazardous components which must be listed on the label:

Hydrocarbons, C6-C7, n-alkanes, isoalkanes, cyclics, <5% n-hexane

calcium dihydroxide

## **Additional Labelling**

EUH208 Contains Molybdenum trioxide, reaction products with bis[O,O-bis(2-ethylhexyl)]

hydrogen dithiophosphate. May produce an allergic reaction.

#### 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 : Active substance with propellant

Synthetic hydrocarbon oil

solid lubricant

Components

Chemical name	CAS-No.	Classification	specific	Concentration
	EC-No.		concentration	(% w/w)
			limit	
	Index-No.		M-Factor	
	Registration number		Notes	
			Acute toxicity	
			estimate	
Hydrocarbons, C6-C7,		Flam. Liq. 2; H225		>= 30 - < 50
n-alkanes, isoalkanes,	921-024-6	Skin Irrit. 2; H315		
cyclics, <5% n-hexane		STOT SE 3; H336		
		(Central nervous		
	01-2119475514-35-	system)		
	XXXX	Asp. Tox. 1; H304		
		Aquatic Chronic 2;		



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1	1	1	1	1
		H411		
calcium dihydroxide	1305-62-0	Skin Irrit. 2; H315		>= 3 - < 10
	215-137-3	Eye Dam. 1; H318		
		STOT SE 3; H335		
	01-2119475151-45-	(Respiratory		
	XXXX	system)		
Amines, N-C16-C18-		Skin Irrit. 2; H315		>= 1 - < 2,5
alkyl-(evennumbered,	800-362-7	Eye Irrit. 2; H319	M-Factor: 10/1	
C18 unsaturated)		STOT RE 2; H373		
propane-1,3-		Aquatic Acute 1;		
diaminium di[(9Z)-	01-2119974117-33-	H400		
octadec-9-enoate]	XXXX	Aquatic Chronic 2;		
1		H411		
Molybdenum trioxide,		Skin Irrit. 2; H315		>= 0,1 - < 0,25
reaction products with	947-946-9	Skin Sens. 1B;		,
bis[O,O-bis(2-		H317		
ethylhexyl)] hydrogen		Aquatic Chronic 4;		
dithiophosphate	01-2120772600-59-	H413		
	XXXX			
Substances with a work				
butane	106-97-8	Flam. Gas 1;		>= 20 - < 30
	203-448-7	H220		
		Press. Gas	Note U (Table	
	601-004-00-0	Compr. Gas;	3), Note C, Note	
	01-2119474691-32-	H280	S	
	XXXX			
	70000			
propane	74-98-6	Flam. Gas 1A;		>= 10 - < 20
[ '	200-827-9	H220		-
		Press. Gas	Note U (Table 3)	
	601-003-00-5	Compr. Gas;	(. 3.3.3 0)	
	01-2119486944-21-	H280		
	XXXX	55		
titanium dioxide; [in	13463-67-7	Not classified		>= 1 - < 10
powder form	236-675-5			
containing <1 % of				
particles with	01-2119489379-17-			
aerodynamic diameter	XXXX			
≤ 10 µm]	,,,,,,			
• Miii]	1		1	

For explanation of abbreviations see section 16.

## **SECTION 4: First aid measures**

# 4.1 Description of first aid measures

If inhaled : Call a physician or poison control centre immediately.

Remove person to fresh air. If signs/symptoms continue, get

medical attention.

Keep patient warm and at rest.



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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.

Get medical attention immediately.

If swallowed : Move the victim to fresh air.

If accidentally swallowed obtain immediate medical attention.

Keep respiratory tract clear. Do NOT induce vomiting. Rinse mouth with water.

Aspiration hazard if swallowed - can enter lungs and cause

damage.

4.2 Most important symptoms and effects, both acute and delayed

Symptoms : Aspiration may cause pulmonary oedema and pneumonitis.

Inhalation may provoke the following symptoms:

Unconsciousness

Dizziness Drowsiness Headache Nausea Tiredness

Skin contact may provoke the following symptoms:

Erythema

Risks : May be fatal if swallowed and enters airways.

Causes skin irritation.

Causes serious eye damage. May cause drowsiness or dizziness.

Central nervous system depression

Risk of product entering the lungs on vomiting after ingestion.

Health injuries may be delayed.

4.3 Indication of any immediate medical attention and special treatment needed

Treatment : Treat symptomatically.

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# **SECTION 5: Firefighting measures**

5.1 Extinguishing media

Suitable extinguishing media : ABC powder

Unsuitable extinguishing

media

High volume water jet

5.2 Special hazards arising from the substance or mixture

Specific hazards during : Fire Hazard

firefighting Do not let product enter drains.

Contains gas under pressure; may explode if heated. Beware of vapours accumulating to form explosive concentrations. Vapours can accumulate in low areas.

Hazardous combustion

products

Carbon oxides

Nitrogen oxides (NOx) Oxides of phosphorus

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. Cool containers/tanks with water spray.

### **SECTION 6: Accidental release measures**

# 6.1 Personal precautions, protective equipment and emergency procedures

Personal precautions : Evacuate personnel to safe areas.

Ensure adequate ventilation.
Remove all sources of ignition.
Do not breathe vapours or spray mist.

Do not breathe dust/ fume/ gas/ mist/ vapours/ spray. Refer to protective measures listed in sections 7 and 8. Only qualified personnel equipped with suitable protective

equipment may intervene.



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#### 6.2 Environmental precautions

Environmental precautions : Do not allow contact with soil, surface or ground water.

Prevent further leakage or spillage if safe to do so.

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 : Contain spillage, and then collect with non-combustible

absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and place in container for disposal according to

local / national regulations (see section 13). Keep in suitable, closed containers for disposal.

Non-sparking tools should be used.

#### 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 : Do not use in areas without adequate ventilation.

Do not breathe vapours or spray mist.

In case of insufficient ventilation, wear suitable respiratory

equipment.

Avoid contact with skin and eyes. For personal protection see section 8.

Keep away from fire, sparks and heated surfaces. 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 use sparking tools.

These safety instructions also apply to empty packaging which

may still contain product residues.

Pressurized container: protect from sunlight and do not expose to temperatures exceeding 50 °C. Do not pierce or

burn, even after 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

BEWARE: Aerosol is pressurized. Keep away from direct sun exposure and temperatures over 50 °C. Do not open by force



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or throw into fire even after use. Do not spray on flames or red-hot objects. Store in accordance with the particular

national regulations.

Storage class (TRGS 510) : 2B, Aerosol cans and lighters

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
butane	106-97-8	AGW	1.000 ppm 2.400 mg/m3	DE TRGS 900 (2006-01-01)
	Peak-limit: ex	cursion factor (categ	ory): 4;(II)	
		MAK	1.000 ppm 2.400 mg/m3	DE DFG MAK (2023-07-01)
	Peak-limit: ex	cursion factor (categ	ory): 4; II	
	Further information: Either there are no data for an assessment of damage to the embryo or foetus, including developmental neurotoxicity, or the currently available data are not sufficient for classification in one of the groups A - C			
propane	74-98-6	MAK	1.000 ppm 1.800 mg/m3	DE DFG MAK (2023-07-01)
	Peak-limit: excursion factor (category): 4; II			
	Further information: Either there are no data for an assessment of damage to the embryo or foetus, including developmental neurotoxicity, or the currently available data are not sufficient for classification in one of the groups A - C			
		AGW	1.000 ppm 1.800 mg/m3	DE TRGS 900 (2006-01-01)
	Peak-limit: excursion factor (category): 4;(II)			
titanium dioxide; [in powder form containing <1 % of particles with aerodynamic diameter ≤ 10 µm]	13463-67-7	MAK (measured as the alveolate fraction)	0,3 mg/m3	DE DFG MAK (2023-07-01)
· •	Peak-limit: excursion factor (category): 8; II			
	that are consi can be derive	dered to be carcinog	nat cause cancer in humans genic for humans and for whic mbryo or foetus is unlikely wh d	ch a MAK value



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		AGW (Inhalable fraction)	10 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 valu	tolerance values, there is no risk of harming the unborn child				
		AGW (Alveolate fraction)	1,25 mg/m3 (Titanium dioxide)	DE TRGS 900 (2014-04-02)		
	Peak-limit: ev	cursion factor (categ	  oryl: 2:(II)	(2014-04-02)		
			s compliance with the OEL a	nd hiological		
			of harming the unborn child	ia biologicai		
		BM (Alveolar dust fraction)	0,5 mg/m3	DE TRGS 527 (2020-02-19)		
calcium	1305-62-0	TWA (Respirable	1 mg/m3	2017/164/EU		
dihydroxide	1000 02 0	fraction)	1 mg/me	(2017-02-01)		
	Further inforn	Further information: Indicative				
		STEL	4 mg/m3	2017/164/EU		
		(Respirable fraction)		(2017-02-01)		
	Further inforn	Further information: Indicative				
		MAK (inhalable fraction)	1 mg/m3	DE DFG MAK (2023-07-01)		
	Peak-limit: excursion factor (category): 2; I					
	Further information: Damage to the embryo or foetus is unlikely when the MAK value or the BAT value is observed					
		AGW (Inhalable fraction)	1 mg/m3	DE TRGS 900 (2014-12-08)		
	Peak-limit: ex	Peak-limit: excursion factor (category): 2;(I)				
	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
Hydrocarbons, C6- C7, n-alkanes, isoalkanes, cyclics, <5% n-hexane	Workers	Skin contact	Long-term systemic effects	773 mg/kg bw/day
	Workers	Inhalation	Long-term systemic effects	2035 mg/m3
Benzene, mono-C10- 13-alkyl derivs., distn. residues	Workers	Inhalation	Long-term systemic effects	2,2 mg/m3
	Workers	Skin contact	Long-term systemic effects	3,15 mg/kg bw/day
calcium dihydroxide	Workers	Inhalation	Long-term local effects	1 mg/m3



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	Workers	Inhalation	Acute local effects	4 mg/m3
Amines, N-C16-C18- alkyl-(evennumbered, C18 unsaturated) propane-1,3- diaminium di[(9Z)- octadec-9-enoate]	Workers	Skin contact	Long-term systemic effects	0,04 mg/kg
	Workers	Inhalation	Long-term systemic effects	0,29 mg/m3
Molybdenum trioxide, reaction products with bis[O,O-bis(2-ethylhexyl)] hydrogen dithiophosphate	Workers	Inhalation	Long-term systemic effects	4,93 mg/m3
	Workers	Dermal	Long-term systemic effects	1,4 mg/kg bw/day

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

Substance name	Environmental Compartment	Value
Benzene, mono-C10-13-alkyl derivs., distn. residues	Fresh water	0,001 mg/l
,	Intermittent use/release	0,001 mg/l
	Marine water	0 mg/l
	Microbiological Activity in Sewage Treatment Systems	2 mg/l
	Fresh water sediment	16,5 mg/kg
	Marine sediment	1,65 mg/kg
	Soil	3,7 mg/kg
calcium dihydroxide	Fresh water	0,49 mg/l
	Marine water	0,32 mg/l
	Intermittent use/release	0,49 mg/l
	Microbiological Activity in Sewage Treatment Systems	3 mg/l
	Soil	1080 mg/kg
Amines, N-C16-C18-alkyl- (evennumbered, C18 unsaturated) propane-1,3- diaminium di[(9Z)-octadec-9- enoate]	Fresh water	0,00638 mg/l
	Marine water	0,000638 mg/l
	Intermittent use/release	0,00509 mg/l
	Microbiological Activity in Sewage Treatment Systems	98,6 mg/l
	Fresh water sediment	204 mg/kg
	Marine sediment	20,4 mg/kg
	Soil	9,93 mg/kg

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#### 8.2 Exposure controls

## **Engineering measures**

Use only in an area equipped with explosion proof exhaust ventilation.

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

Personal protective equipment

Eye/face protection : Tightly fitting safety goggles

Hand protection

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

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 : Use respiratory protection unless adequate local exhaust

ventilation is provided or exposure assessment demonstrates that exposures are within recommended exposure guidelines.

Short term only

Filter type : Filter type A-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 : Should not be released into the environment.

Soil : Do not allow contact with soil, surface or ground water.

The product should not be allowed to enter drains, water

courses or the soil.

Water : Do not allow contact with soil, surface or ground water.

The product should not be allowed to enter drains, water

courses or the soil.

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# **SECTION 9: Physical and chemical properties**

9.1 Information on basic physical and chemical properties

Physical state : aerosol

Colour : white

Odour : solvent-like

Odour Threshold : No data available

Melting point/ range : No data available

Boiling point/boiling range : -20 °C (1.013 hPa)

Flammability : Flammability (solid, gas):

Not applicable

Upper explosion limit / Upper

flammability limit

: 15 %(V)

Lower explosion limit / Lower :

flammability limit

0,6 %(V)

Flash point : -20 °C

Method: Abel-Pensky, closed cup

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

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Viscosity, kinematic : < 20,5 mm2/s (40 °C)

Solubility(ies)

Water solubility : insoluble

Solubility in other solvents : No data available

Partition coefficient: n-

octanol/water

No data available

Vapour pressure : 2.860 hPa (20 °C)

Relative density : 0,775 (20 °C)

Reference substance: Water The value is calculated

Density : 0,78 g/cm3

(20 °C)

Bulk density : No data available

Relative vapour density : No data available

9.2 Other information

Explosives : Not explosive

Oxidizing properties : No data available

Self-ignition : not auto-flammable

Metal corrosion rate : Not corrosive to metals

Evaporation rate : No data available

Sublimation point : No data available

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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 : Heat, flames and sparks.

Strong sunlight for prolonged periods.

Risk of receptacle bursting.

10.5 Incompatible materials

Materials to avoid : Oxidizing agents

## 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 : Remarks: Effects due to ingestion may include:

Symptoms: Central nervous system depression

Acute inhalation toxicity : Remarks: Respiration of solvent vapour may cause dizziness.

Symptoms: Inhalation may provoke the following symptoms:, Respiratory disorder, Dizziness, Drowsiness, Vomiting, Fatigue, Vertigo, Central nervous system depression

Acute dermal toxicity : Symptoms: Redness, Local irritation

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**Components:** 

Hydrocarbons, C6-C7, n-alkanes, isoalkanes, cyclics, <5% n-hexane:

Acute oral toxicity : LD50 (Rat): > 5.840 mg/kg

Assessment: The substance or mixture has no acute oral

toxicity

Acute inhalation toxicity : LC50 (Rat): > 25,2 mg/l

Exposure time: 4 h
Test atmosphere: vapour

Assessment: The substance or mixture has no acute

inhalation toxicity

Acute dermal toxicity : LD50 (Rat): > 2,8 g/kg

Assessment: The substance or mixture has no acute dermal

toxicity

calcium dihydroxide:

Acute oral toxicity : LD50 (Rat, female): > 2.000 mg/kg

Method: OECD Test Guideline 425

GLP: yes

Assessment: The substance or mixture has no acute oral

toxicity

Acute inhalation toxicity : LC50 (Rat, male and female): > 6,04 mg/l

Exposure time: 4 h

Test atmosphere: dust/mist

Method: OECD Test Guideline 436

GLP: yes

Acute dermal toxicity : LD50 (Rabbit, male and female): > 2.500 mg/kg

Method: OECD Test Guideline 402

Assessment: The substance or mixture has no acute dermal

toxicity

Amines, N-C16-C18-alkyl-(evennumbered, C18 unsaturated) propane-1,3-diaminium di[(9Z)-octadec-9-enoate]:

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

Acute dermal toxicity : LD50 (Rabbit): > 2.000 mg/kg

Assessment: The substance or mixture has no acute dermal

toxicity

Molybdenum trioxide, reaction products with bis[O,O-bis(2-ethylhexyl)] hydrogen dithiophosphate:

Acute dermal toxicity : Symptoms: Redness, Local irritation

butane:



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Acute inhalation toxicity : LC50 (Rat): 658 mg/l

Exposure time: 4 h
Test atmosphere: gas

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

Skin corrosion/irritation

Causes skin irritation.

**Product:** 

Remarks : This information is not available.

**Components:** 

Hydrocarbons, C6-C7, n-alkanes, isoalkanes, cyclics, <5% n-hexane:

Species : Rabbit

Assessment : Irritating to skin.

Method : OECD Test Guideline 404

Result : Irritating to skin.

calcium dihydroxide:

Species : human skin
Assessment : Irritating to skin.

Method : OECD Test Guideline 431

Result : Irritating to skin.

GLP : yes

Species : Rabbit

Assessment : Irritating to skin.

Method : OECD Test Guideline 404

Result : Irritating to skin.

GLP : yes

Amines, N-C16-C18-alkyl-(evennumbered, C18 unsaturated) propane-1,3-diaminium di[(9Z)-octadec-9-enoate]:

Species : Rabbit

Assessment : Irritating to skin. Result : Irritating to skin.



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



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# Molybdenum trioxide, reaction products with bis[O,O-bis(2-ethylhexyl)] hydrogen dithiophosphate:

Species : reconstructed human epidermis (RhE)

Exposure time : 15 min

Assessment : Irritating to skin.

Method : OECD Test Guideline 439

Result : Irritating to skin.

GLP : yes

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

Species : Rabbit

Assessment : No skin irritation

Method : OECD Test Guideline 404

Result : No skin irritation

GLP : no

## Serious eye damage/eye irritation

Causes serious eye damage.

**Product:** 

Remarks : This information is not available.

## **Components:**

## Hydrocarbons, C6-C7, n-alkanes, isoalkanes, cyclics, <5% n-hexane:

Species : Rabbit

Assessment : No eye irritation Result : No eye irritation

## calcium dihydroxide:

Species : Rabbit

Assessment : Risk of serious damage to eyes.

Method : OECD Test Guideline 405

Result : Risk of serious damage to eyes.

GLP : yes

# Amines, N-C16-C18-alkyl-(evennumbered, C18 unsaturated) propane-1,3-diaminium di[(9Z)-octadec-9-enoate]:

Species : Rabbit

Assessment : Irritating to eyes.

Method : OECD Test Guideline 405

Result : Irritating to eyes.



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



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# Molybdenum trioxide, reaction products with bis[O,O-bis(2-ethylhexyl)] hydrogen dithiophosphate:

Species : Bovine cornea

Exposure time : 10 min

Assessment : No eye irritation

Method : OECD Test Guideline 437

Result : No eye irritation

GLP : yes

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

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:**

## Hydrocarbons, C6-C7, n-alkanes, isoalkanes, cyclics, <5% n-hexane:

Test Type : Maximisation Test

Exposure routes : Dermal Species : Guinea pig

Assessment : Does not cause skin sensitisation.

Method : OECD Test Guideline 406

Result : Did not cause sensitisation on laboratory animals.

## calcium dihydroxide:

Test Type : Local lymph node assay (LLNA)

Species : Mouse

Assessment : Does not cause skin sensitisation.

Method : OECD Test Guideline 429

Result : Does not cause skin sensitisation.

GLP : yes



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Amines, N-C16-C18-alkyl-(evennumbered, C18 unsaturated) propane-1,3-diaminium di[(9Z)-octadec-9-enoate]:

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

Molybdenum trioxide, reaction products with bis[O,O-bis(2-ethylhexyl)] hydrogen dithiophosphate:

Test Type : Local lymph node assay (LLNA)

Species : Mouse

Assessment : The product is a skin sensitiser, sub-category 1B.

Method : OECD Test Guideline 429

Result : The product is a skin sensitiser, sub-category 1B.

GLP : yes

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

Species : Mouse

Assessment : Does not cause skin sensitisation.

Method : OECD Test Guideline 429

Result : Does not cause skin 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:** 

Hydrocarbons, C6-C7, n-alkanes, isoalkanes, cyclics, <5% n-hexane:

Genotoxicity in vitro : Test Type: Chromosome aberration test in vitro

Test system: Rodent cell line Method: OECD Test Guideline 473

Result: negative

calcium dihydroxide:

Genotoxicity in vitro : Test Type: Ames test

Method: OECD Test Guideline 471

Result: negative GLP: yes

Test Type: Chromosome aberration test in vitro

Method: OECD Test Guideline 473

Result: negative



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



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GLP: yes

Test Type: In vitro mammalian cell gene mutation test

Method: OECD Test Guideline 476

Result: negative

GLP: yes

Amines, N-C16-C18-alkyl-(evennumbered, C18 unsaturated) propane-1,3-diaminium di[(9Z)-octadec-9-enoate]:

Genotoxicity in vitro : Test Type: Ames test

Result: negative

Germ cell mutagenicity-

Assessment

Tests on bacterial or mammalian cell cultures did not show

mutagenic effects.

Molybdenum trioxide, reaction products with bis[O,O-bis(2-ethylhexyl)] hydrogen dithiophosphate:

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 micronucleus test Test system: Human lymphocytes

Metabolic activation: with and without metabolic activation

Method: OECD Test Guideline 487

Result: negative

GLP: yes

Test Type: In vitro mammalian cell gene mutation test

Test system: mouse lymphoma cells

Metabolic activation: with and without metabolic activation

Method: OECD Test Guideline 490

Result: negative

GLP: yes

Germ cell mutagenicity-

Assessment

Weight of evidence does not support classification as a germ

cell mutagen.

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

Germ cell mutagenicity-

: Tests on bacterial or mammalian cell cultures did not show

Assessment

mutagenic effects.

Carcinogenicity

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



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



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**Product:** 

Remarks : No data available

**Components:** 

calcium dihydroxide:

Carcinogenicity - Assessment

: No evidence of carcinogenicity in animal studies.

Amines, N-C16-C18-alkyl-(evennumbered, C18 unsaturated) propane-1,3-diaminium di[(9Z)-octadec-9-enoate]:

Carcinogenicity -

No evidence of carcinogenicity in animal studies.

Assessment

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

Carcinogenicity - : No evidence of carcinogenicity in animal studies.

Assessment

Reproductive toxicity

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

**Product:** 

Effects on fertility : Remarks: No data available

Effects on foetal : Remarks: No data available development

Components:

calcium dihydroxide:

Reproductive toxicity - : - Fertility -

Assessment

No toxicity to reproduction

- Teratogenicity -

No effects on or via lactation

Amines, N-C16-C18-alkyl-(evennumbered, C18 unsaturated) propane-1,3-diaminium di[(9Z)-octadec-9-enoate]:

Reproductive toxicity - : - Fertility -

Assessment No toxicity to reproduction

- Teratogenicity -

No toxicity to reproduction



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Molybdenum trioxide, reaction products with bis[O,O-bis(2-ethylhexyl)] hydrogen dithiophosphate:

Reproductive toxicity - : - Fertility -

Assessment Animal testing did not show any effects on fertility.

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

Reproductive toxicity - : - Fertility -

Assessment

No toxicity to reproduction

- Teratogenicity -

No effects on or via lactation

STOT - single exposure

May cause drowsiness or dizziness.

**Product:** 

Remarks : No data available

**Components:** 

Hydrocarbons, C6-C7, n-alkanes, isoalkanes, cyclics, <5% n-hexane:

Assessment : May cause drowsiness or dizziness.

calcium dihydroxide:

Assessment : May cause respiratory irritation.

Amines, N-C16-C18-alkyl-(evennumbered, C18 unsaturated) propane-1,3-diaminium di[(9Z)-octadec-9-enoate]:

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.

STOT - repeated exposure

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

**Product:** 

Remarks : No data available



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#### Components:

Hydrocarbons, C6-C7, n-alkanes, isoalkanes, cyclics, <5% n-hexane:

Exposure routes : inhalation (vapour)

Assessment : No significant health effects observed in animals at

concentrations of 1 mg/l/6h/d or less.

Amines, N-C16-C18-alkyl-(evennumbered, C18 unsaturated) propane-1,3-diaminium di[(9Z)-octadec-9-enoate]:

Exposure routes : Ingestion

Assessment : May cause damage to organs through prolonged or 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.

Repeated dose toxicity

**Product:** 

Remarks : This information is not available.

#### **Components:**

Molybdenum trioxide, reaction products with bis[O,O-bis(2-ethylhexyl)] hydrogen dithiophosphate:

Species : Rat, male and female

NOAEL : 100 mg/kg Application Route : oral (gavage)

Exposure time : 28 d Number of exposures : daily

Method : OECD Test Guideline 422

GLP : ves

Remarks : Not classified due to data which are conclusive although

insufficient for classification.

## **Aspiration toxicity**

May be fatal if swallowed and enters airways.

#### Product:

May be fatal if swallowed and enters airways.

## **Components:**

Hydrocarbons, C6-C7, n-alkanes, isoalkanes, cyclics, <5% n-hexane:

May be fatal if swallowed and enters airways.



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



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

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.

**Further information** 

**Product:** 

Remarks : Risks of irreversible effects after a single exposure.

Ingestion causes irritation of upper respiratory system and

gastrointestinal disturbance.

**Components:** 

Molybdenum trioxide, reaction products with bis[O,O-bis(2-ethylhexyl)] hydrogen dithiophosphate:

Remarks : Ingestion causes irritation of upper respiratory system and

gastrointestinal disturbance.

## **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

a brand of

FREUDENBERG

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



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Remarks: No data available

Components:

Hydrocarbons, C6-C7, n-alkanes, isoalkanes, cyclics, <5% n-hexane:

Toxicity to fish : LC50 (Oncorhynchus mykiss (rainbow trout)): > 22 mg/l

Exposure time: 96 h

Method: OECD Test Guideline 203

GLP: yes

Toxicity to daphnia and other :

aquatic invertebrates

EL50 (Daphnia magna (Water flea)): 3 mg/l

Exposure time: 48 h

Method: OECD Test Guideline 202

GLP: yes

Toxicity to algae/aquatic

plants

EbC50 (Pseudokirchneriella subcapitata (green algae)): 26

mg/l

Exposure time: 72 h

Method: OECD Test Guideline 201

**Ecotoxicology Assessment** 

Acute aquatic toxicity : Toxic to aquatic life.

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

calcium dihydroxide:

Toxicity to fish : LC50 (Oncorhynchus mykiss (rainbow trout)): 50,6 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)): 49,1 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)): 184,57

mg/l

Exposure time: 72 h Test Type: static test

Method: OECD Test Guideline 201

GLP: yes

**Ecotoxicology Assessment** 

Acute aquatic toxicity : This product has no known ecotoxicological effects.

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



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Chronic aquatic toxicity : This product has no known ecotoxicological effects.

Amines, N-C16-C18-alkyl-(evennumbered, C18 unsaturated) propane-1,3-diaminium di[(9Z)-octadec-9-enoate]:

Toxicity to fish : LC50 (Danio rerio (zebra fish)): > 0,1 - 1 mg/l

Exposure time: 96 h

Method: OECD Test Guideline 203

Toxicity to daphnia and other :

aquatic invertebrates

EC50 (Daphnia magna (Water flea)): > 0,1 - 1 mg/l

Exposure time: 48 h

Toxicity to algae/aquatic

plants

EC50 (Pseudokirchneriella subcapitata (green algae)): > 0,01

- 0,1 mg/l

Exposure time: 72 h

Method: OECD Test Guideline 201

M-Factor (Acute aquatic

toxicity)

10

Toxicity to daphnia and other :

aquatic invertebrates

(Chronic toxicity)

EC50: 1,41 mg/l Exposure time: 21 d

Species: Daphnia magna (Water flea)

Test Type: semi-static test

Method: OECD Test Guideline 211

M-Factor (Chronic aquatic

toxicity)

1

**Ecotoxicology Assessment** 

Acute aquatic toxicity : Very toxic to aquatic life.

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

Molybdenum trioxide, reaction products with bis[O,O-bis(2-ethylhexyl)] hydrogen dithiophosphate:

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

Exposure time: 96 h Test Type: semi-static test

Method: OECD Test Guideline 203

GLP: yes

Remarks: May cause long-term adverse effects in the aquatic

environment.

Toxicity to daphnia and other :

aquatic invertebrates

EC50 (Daphnia magna (Water flea)): > 100 mg/l

Exposure time: 48 h Test Type: static test

Method: OECD Test Guideline 202

GLP: yes

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Toxicity to algae/aquatic

plants

EC50 (Pseudokirchneriella subcapitata (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): > 1.000 mg/l

Exposure time: 3 h

Test Type: Respiration inhibition Analytical monitoring: no

Method: OECD Test Guideline 209

GLP: yes

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

## 12.2 Persistence and degradability

**Product:** 

Biodegradability Remarks: No data available

Physico-chemical

removability

Remarks: No data available

# **Components:**

Hydrocarbons, C6-C7, n-alkanes, isoalkanes, cyclics, <5% n-hexane:

Biodegradability Result: Readily biodegradable.

calcium dihydroxide:

Biodegradability Remarks: The methods for determining the biological

degradability are not applicable to inorganic substances.

Amines, N-C16-C18-alkyl-(evennumbered, C18 unsaturated) propane-1,3-diaminium di[(9Z)octadec-9-enoate]:

Biodegradability Test Type: aerobic

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



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Inoculum: activated sludge Result: rapidly biodegradable Biodegradation: 65 %

Method: OECD Test Guideline 301D

GLP: yes

Molybdenum trioxide, reaction products with bis[O,O-bis(2-ethylhexyl)] hydrogen dithiophosphate:

Exposure time: 28 d

Biodegradability : Result: Not rapidly biodegradable

Biodegradation: 11 % Exposure time: 28 d

Method: OECD Test Guideline 301B

12.3 Bioaccumulative potential

**Product:** 

Bioaccumulation : Remarks: No data available

**Components:** 

calcium dihydroxide:

Partition coefficient: n-

octanol/water

log Pow: 0,05

Amines, N-C16-C18-alkyl-(evennumbered, C18 unsaturated) propane-1,3-diaminium di[(9Z)-octadec-9-enoate]:

Bioaccumulation : Remarks: Bioaccumulation is unlikely.

Molybdenum trioxide, reaction products with bis[O,O-bis(2-ethylhexyl)] hydrogen dithiophosphate:

Partition coefficient: n-

octanol/water

log Pow: > 4

butane:

Partition coefficient: n- : log Pow: 2,89

octanol/water Method: OECD Test Guideline 107

propane:

Partition coefficient: n-

octanol/water

log Pow: 2,36

12.4 Mobility in soil

Product:



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



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Mobility : Remarks: No data available

Distribution among : Remarks: No data available

environmental compartments

#### 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:** 

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

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

### Components:

Molybdenum trioxide, reaction products with bis[O,O-bis(2-ethylhexyl)] hydrogen dithiophosphate:

Additional ecological

information

May cause long lasting harmful effects to aquatic life.

## **SECTION 13: Disposal considerations**

### 13.1 Waste treatment methods

Product : Do not dispose of with domestic refuse.

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



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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.

Contaminated packaging : Packaging that is not properly emptied must be disposed of as

the unused product.

Offer empty spray cans to an established disposal company. Pressurized container: Do not pierce or burn, even after use.

The following Waste Codes are only suggestions:

Waste Code : unused product, packagings not completely emptied

16 05 04\*, gases in pressure containers (including halons)

containing hazardous substances

## **SECTION 14: Transport information**

#### 14.1 UN number or ID number

ADN : UN 1950
ADR : UN 1950
RID : UN 1950
IMDG : UN 1950
IATA : UN 1950

## 14.2 UN proper shipping name

ADN : AEROSOLS
ADR : AEROSOLS
RID : AEROSOLS
IMDG : AEROSOLS

(naphtha (petroleum), hydrotreated light, fatty amine

derivative)

IATA : Aerosols, flammable

## 14.3 Transport hazard class(es)

Class Subsidiary risks

**ADN** : 2 2.1 **ADR** : 2 2.1



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



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**RID** : 2 2.1

IMDG : 2.1
IATA : 2.1

14.4 Packing group

ADN

Packing group : Not assigned by regulation

Classification Code : 5F Labels : 2.1

**ADR** 

Packing group : Not assigned by regulation

Classification Code : 5F Labels : 2.1 Tunnel restriction code : (D)

**RID** 

Packing group : Not assigned by regulation

Classification Code : 5F Hazard Identification Number : 23 Labels : 2.1

**IMDG** 

Packing group : Not assigned by regulation

Labels : 2.1 EmS Code : F-D, S-U

IATA (Cargo)

Packing instruction (cargo : 203

aircraft)

Packing instruction (LQ) : Y203

Packing group : Not assigned by regulation

Labels : Flammable Gas

IATA (Passenger)

Packing instruction : 203

(passenger aircraft)

Packing instruction (LQ) : Y203

Packing group : Not assigned by regulation

Labels : Flammable Gas

14.5 Environmental hazards

ADN

Environmentally hazardous : yes

**ADR** 

Environmentally hazardous : yes

rid

Environmentally hazardous : yes

**IMDG** 

Marine pollutant : yes

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



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#### 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) 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

import of dangerous chemicals

(EU PIC)

Not applicable

REACH - List of substances subject to authorisation

(Annex XIV)

(EU. REACH-Annex XIV)

: Not applicable

Regulation (EU) 2019/1148 on the marketing and use of

Not applicable



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



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explosives precursors

P2

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

P3a FLAMMABLE AEROSOLS

E2 ENVIRONMENTAL HAZARDS

18 Liquefied flammable gases (including LPG) and natural gas

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: 15,81 %

5.2.5: Organic Substances:

Class 1: 3,16 %

Volatile organic compounds : Directive 2010/75/EU of 24 November 2010 on industrial and

livestock rearing emissions (integrated pollution prevention and

control)

Volatile organic compounds (VOC) content: 69,63 %

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



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## 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**

H220 : Extremely flammable gas.

H225 : Highly flammable liquid and vapour.

H280 : Contains gas under pressure; may explode if heated.

H304 : May be fatal if swallowed and enters airways.

H315 : Causes skin irritation.

H317 : May cause an allergic skin reaction.
H318 : Causes serious eye damage.
H319 : Causes serious eye irritation.
H335 : May cause respiratory irritation.
H336 : May cause drowsiness or dizziness.

H373 : May cause damage to organs through prolonged or repeated

exposure if swallowed.

H400 : Very toxic to aquatic life.

H411 : Toxic to aquatic life with long lasting effects.

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

#### Full text of other abbreviations

Aquatic Acute : Short-term (acute) aquatic hazard Aquatic Chronic : Long-term (chronic) aquatic hazard

Asp. Tox. : Aspiration hazard
Eye Dam. : Serious eye damage
Eye Irrit. : Eye irritation
Flam. Gas : Flammable gases
Flam. Liq. : Flammable liquids

Note C : Some organic substances may be marketed either in a

specific isomeric form or as a mixture of several isomers. In this case the supplier must state on the label whether the substance is a specific isomer or a mixture of isomers.

Note S : This substance may not require a label according to Article 17

(see Section 1.3 of Annex I) (Table 3).

Note U (Table 3) : When put on the market gases have to be classified as

"Gases under pressure", in one of the groups compressed gas, liquefied gas, refrigerated liquefied gas or dissolved gas. The group depends on the physical state in which the gas is

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



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packaged and therefore has to be assigned case by case. The following codes are assigned: Press. Gas (Comp.) Press. Gas (Liq.) Press. Gas (Ref. Liq.) Press. Gas (Diss.) Aerosols shall not be classified as gases under pressure (See Annex I, Part

2, Section 2.3.2.1, Note 2).

Press. Gas : Gases under pressure

Skin Irrit. : Skin irritation
Skin Sens. : Skin sensitisation

STOT RE : Specific target organ toxicity - repeated exposure STOT SE : Specific target organ toxicity - single exposure

2017/164/EU : Europe. Commission Directive 2017/164/EU establishing a

fourth list of indicative occupational exposure limit values

DE DFG MAK : Germany. MAK BAT Annex IIa

DE TRGS 527 : Germany. TRGS 527 - Activities with nanomaterials
DE TRGS 900 : Germany. TRGS 900 - Occupational exposure limit values.

2017/164/EU / STEL : Short term exposure limit 2017/164/EU / TWA : Limit Value - eight hours

DE DFG MAK / MAK : MAK value
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

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



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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: Classification procedure:

Aerosol 1	H222, H229	Calculation method
Skin Irrit. 2	H315	Calculation method
Eye Dam. 1	H318	Calculation method
STOT SE 3	H336	Calculation method

Asp. Tox. 1 H304 Based on product data or assessment

Aquatic Chronic 2 H411 Calculation method

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

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