

# SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006 - ES



## OKS 235

Version	Revision Date:	Date of last issue: 07.11.2019	Print Date:
2.0	16.04.2021	Date of first issue: 23.06.2016	16.04.2021

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

#### 1.1 Product identifier

Product name : OKS 235

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

Use of the Sub-  
stance/Mixture : Lubricant

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  
D-82216 Maisach-Gernlinden  
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  
Material Compliance Management

National contact :

#### 1.4 Emergency telephone number

Emergency telephone num-  
ber : +34 91 562 04 20

### SECTION 2: Hazards identification

#### 2.1 Classification of the substance or mixture

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

Not a hazardous substance or mixture.

#### 2.2 Label elements

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

Not a hazardous substance or mixture.

#### Additional Labelling

EUH210 Safety data sheet available on request.  
EUH208 Contains calcium bis(dinonylnaphthalenesulphonate);

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Benzenesulfonic acid, mono-C16-24-alkyl derivs., calcium salts. May produce an allergic reaction.

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

### 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.

## SECTION 3: Composition/information on ingredients

### 3.2 Mixtures

Chemical nature : Synthetic hydrocarbon oil  
Metal powder

#### Components

Chemical name	CAS-No. EC-No.  Index-No. Registration number	Classification	Concentration limits M-Factor Notes	Concentration (% w/w)
calcium bis(dinonylnaphthalen esulphonate)	57855-77-3 260-991-2	Skin Irrit.2; H315 Eye Irrit.2; H319 Skin Sens.1; H317		$\geq 0,1 - < 1$
Benzenesulfonic acid, mono-C16-24-alkyl derivs., calcium salts	70024-69-0 274-263-7  01-2119492616-28-XXXX	Skin Sens.1B; H317	$\geq 10\%$ Skin Sens.1B,	$\geq 0,1 - < 1$
Substances with a workplace exposure limit :				
aluminium powder (stabilised)	7429-90-5 231-072-3  013-002-00-1 01-2119529243-45-XXXX	Flam. Sol.1; H228		$\geq 1 - < 10$
silicon dioxide	7631-86-9 231-545-4  01-2119379499-16-XXXX	Not classified		$\geq 1 - < 10$
titanium dioxide; [in	13463-67-7	Not classified		$\geq 1 - < 10$

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powder form containing 1 % or more of particles with aerodynamic diameter $\leq 10 \mu\text{m}$	236-675-5 022-006-00-2 01-2119489379-17-XXXX		Note 10, Note V, Note W	
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For explanation of abbreviations see section 16.

## SECTION 4: First aid measures

### 4.1 Description of first aid measures

- 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 : 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.

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>)  
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.

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

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

Methods for cleaning up : 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.

#### 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
aluminium powder (stabilised)	7429-90-5	VLA-ED (Dust)	10 mg/m <sup>3</sup>	ES VLA (2013-02-22)
silicon dioxide	7631-86-9	TWA (Respirable dust)	0,1 mg/m <sup>3</sup>	2004/37/EC (2017-12-27)
Further information	Carcinogens or mutagens			
titanium dioxide; [in	13463-67-7	VLA-ED	10 mg/m <sup>3</sup>	ES VLA

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powder form containing 1 % or more of particles with aerodynamic diameter $\leq 10 \mu\text{m}$				(2006-01-01)
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### Derived No Effect Level (DNEL) according to Regulation (EC) No. 1907/2006:

Substance name	End Use	Exposure routes	Potential health effects	Value
Benzene, mono-C10-13-alkyl derivs., distn. residues	Workers	Inhalation	Long-term systemic effects	3,2 mg/m <sup>3</sup>
	Workers	Skin contact	Long-term systemic effects	4,3 mg/kg bw/day
aluminium powder (stabilised)	Workers	Inhalation	Long-term systemic effects	3,72 mg/m <sup>3</sup>
	Workers	Inhalation	Long-term local effects	3,72 mg/m <sup>3</sup>
silicon dioxide	Workers	Inhalation		4 mg/m <sup>3</sup>
titanium dioxide; [in powder form containing 1 % or more of particles with aerodynamic diameter $\leq 10 \mu\text{m}$ ]	Workers	Inhalation	Long-term local effects	10 mg/m <sup>3</sup>
White mineral oil (petroleum)	Workers	Inhalation	Long-term systemic effects	160 mg/m <sup>3</sup>
	Workers	Skin contact	Long-term systemic effects	220 mg/kg
calcium bis(dinonylnaphthalen esulphonate)	Workers	Inhalation	Long-term systemic effects	2,23 mg/m <sup>3</sup>
	Workers	Skin contact	Long-term systemic effects	0,32 mg/kg

### 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	1,65 mg/kg
	Marine sediment	0,165 mg/kg
	Soil	0,329 mg/kg
aluminium powder (stabilised)	Fresh water	0,0749 mg/l
	Sewage treatment plant	20 mg/l
titanium dioxide; [in powder form containing 1 % or more of particles with aerodynamic diameter $\leq 10 \mu\text{m}$ ]	Fresh water	0,184 mg/l

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	Intermittent use/release	0,193 mg/l
	Marine water	0,0184 mg/l
	Sewage treatment plant	100 mg/l
	Marine sediment	100 mg/l
	Fresh water sediment	1000 mg/l
	Soil	100 mg/l
calcium bis(dinonylnaphthalenesulphonate)	Fresh water	0,27 mg/l
	Marine water	0,027 mg/l
	Intermittent use/release	2,7 mg/l
	Microbiological Activity in Sewage Treatment Systems	10 mg/l
	Fresh water sediment	4,69 mg/kg
	Marine sediment	0,469 mg/kg
	Soil	0,936 mg/kg

### 8.2 Exposure controls

#### Engineering measures

none

#### Personal protective equipment

Eye protection : Safety glasses with side-shields

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.

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

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

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### SECTION 9: Physical and chemical properties

#### 9.1 Information on basic physical and chemical properties

Appearance	:	paste
Colour	:	grey
Odour	:	characteristic
Odour Threshold	:	No data available
pH	:	substance/mixture is non-soluble (in water)
Melting point/range	:	No data available
Boiling point/boiling range	:	No data available
Flash point	:	Not applicable
Evaporation rate	:	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
Vapour pressure	:	< 0,001 hPa (20 °C)
Relative vapour density	:	No data available
Relative density	:	0,98 (20 °C) Reference substance: Water The value is calculated
Density	:	0,98 g/cm <sup>3</sup> (20 °C)
Bulk density	:	No data available
Solubility(ies)	:	
Water solubility	:	insoluble
Solubility in other solvents	:	No data available
Partition coefficient: n-octanol/water	:	No data available



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Auto-ignition temperature : No data available

Decomposition temperature : No data available

### Viscosity

Viscosity, dynamic : No data available

Viscosity, kinematic : No data available

Explosive properties : Not explosive

Oxidizing properties : No data available

### 9.2 Other information

Sublimation point : No data available

Metal corrosion rate : Not corrosive to metals

Self-ignition : not auto-flammable

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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

No decomposition if stored and applied as directed.

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### SECTION 11: Toxicological information

#### 11.1 Information on toxicological effects

##### Acute toxicity

###### Product:

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

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

Acute dermal toxicity : Symptoms: Redness, Local irritation

###### Components:

###### **calcium bis(dinonylnaphthalenesulphonate):**

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

Acute dermal toxicity : LD50 (Rabbit): > 20.000 mg/kg

###### **Benzenesulfonic acid, mono-C16-24-alkyl derivs., calcium salts:**

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

Acute inhalation toxicity : LC50 (Rat): > 1,9 mg/l  
Exposure time: 4 h  
Test atmosphere: dust/mist  
Assessment: The substance or mixture has no acute inhalation toxicity

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

###### **aluminium powder (stabilised):**

Acute inhalation toxicity : LC50 (Rat): > 5,09 mg/l  
Exposure time: 4 h  
Test atmosphere: dust/mist  
Assessment: The substance or mixture has no acute inhalation toxicity

###### **silicon dioxide:**

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

Acute dermal toxicity : LD50 (Rabbit): > 5.000 mg/kg

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

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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

#### Product:

Remarks : This information is not available.

#### Components:

##### **calcium bis(dinonylnaphthalenesulphonate):**

Species : Rabbit  
Assessment : Irritating to skin.  
Result : Irritating to skin.

##### **Benzenesulfonic acid, mono-C16-24-alkyl derivs., calcium salts:**

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

##### **aluminium powder (stabilised):**

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

##### **silicon dioxide:**

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

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

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

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### Serious eye damage/eye irritation

#### Product:

Remarks : This information is not available.

#### Components:

##### calcium bis(dinonylnaphthalenesulphonate):

Species : Rabbit  
Assessment : Irritating to eyes.  
Result : Irritating to eyes.

##### Benzenesulfonic acid, mono-C16-24-alkyl derivs., calcium salts:

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

##### aluminium powder (stabilised):

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

##### silicon dioxide:

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

##### titanium dioxide; [in powder form containing 1 % or more 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

### Respiratory or skin sensitisation

#### Product:

Remarks : This information is not available.

#### Components:

##### calcium bis(dinonylnaphthalenesulphonate):

Species : Guinea pig  
Assessment : May cause sensitisation by skin contact.  
Result : May cause sensitisation by skin contact.

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### **Benzenesulfonic acid, mono-C16-24-alkyl derivs., calcium salts:**

Test Type : Buehler Test  
Species : Guinea pig  
Assessment : The product is a skin sensitiser, sub-category 1B.  
Result : The product is a skin sensitiser, sub-category 1B.

### **aluminium powder (stabilised):**

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

### **silicon dioxide:**

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

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

Species : Mouse  
Assessment : Does not cause skin sensitisation.  
Method : OECD Test Guideline 429  
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:**

### **Benzenesulfonic acid, mono-C16-24-alkyl derivs., calcium salts:**

Genotoxicity in vitro : Test Type: In vitro mammalian cell gene mutation test  
Method: OECD Test Guideline 476  
Result: negative

Genotoxicity in vivo : Test Type: Micronucleus test  
Species: Mouse  
Application Route: Oral  
Method: OECD Test Guideline 474  
Result: negative

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

### **silicon dioxide:**

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

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assessment mutagenic effects.

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

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

### **Carcinogenicity**

#### **Product:**

Remarks : No data available

#### **Components:**

##### **Benzenesulfonic acid, mono-C16-24-alkyl derivs., calcium salts:**

Carcinogenicity - Assessment : Not classifiable as a human carcinogen.

##### **silicon dioxide:**

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

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

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

### **Reproductive toxicity**

#### **Product:**

Effects on fertility : Remarks: No data available

Effects on foetal development : Remarks: No data available

#### **Components:**

##### **calcium bis(dinonylnaphthalenesulphonate):**

Reproductive toxicity - Assessment : No toxicity to reproduction

##### **Benzenesulfonic acid, mono-C16-24-alkyl derivs., calcium salts:**

Effects on fertility : Test Type: reproductive and developmental toxicity study  
Species: Rat  
Application Route: Oral  
General Toxicity - Parent: NOAEL: > 500 mg/kg body weight  
General Toxicity F1: NOAEL: > 500 mg/kg body weight

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Method: OECD Test Guideline 415

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

### silicon dioxide:

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

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

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

### STOT - single exposure

#### Components:

#### calcium bis(dinonylnaphthalenesulphonate):

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

#### Benzenesulfonic acid, mono-C16-24-alkyl derivs., calcium salts:

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

#### silicon dioxide:

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

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

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

### STOT - repeated exposure

#### Components:

#### calcium bis(dinonylnaphthalenesulphonate):

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

#### Benzenesulfonic acid, mono-C16-24-alkyl derivs., calcium salts:

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

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### silicon dioxide:

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

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

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:

##### **Benzenesulfonic acid, mono-C16-24-alkyl derivs., calcium salts:**

Species : Rat  
NOAEL : 500 mg/kg  
NOAEL : 500 mg/kg  
Application Route : Oral  
Exposure time : 28  
Method : OECD Test Guideline 407

Species : Rat  
NOAEL : 0,05 mg/l  
NOAEL : 0,05 mg/l  
Application Route : Inhalation  
Test atmosphere : dust/mist  
Exposure time : 28  
Method : OECD Test Guideline 412

Species : Rat  
NOAEL : > 1000 mg/kg  
NOAEL : > 1.000 mg/kg  
Application Route : Dermal  
Exposure time : 28  
Method : OECD Test Guideline 410

### Aspiration toxicity

#### Product:

This information is not available.

#### Components:

##### **calcium bis(dinonylnaphthalenesulphonate):**

No aspiration toxicity classification



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### silicon dioxide:

No aspiration toxicity classification

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

No aspiration toxicity classification

### Further information

#### Product:

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

## SECTION 12: Ecological information

### 12.1 Toxicity

#### Product:

Toxicity to fish : Remarks: No data available

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

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

Toxicity to microorganisms : Remarks: No data available

#### Components:

#### **calcium bis(dinonylnaphthalenesulphonate):**

Toxicity to fish : LC50 (Cyprinus carpio (Carp)): > 0,28 mg/l  
Exposure time: 96 h  
Test Type: static test  
Method: OECD Test Guideline 203  
Remarks: No toxicity at the limit of solubility

Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna (Water flea)): > 0,27 mg/l  
Exposure time: 48 h  
Test Type: static test  
Method: OECD Test Guideline 202  
Remarks: No toxicity at the limit of solubility

#### **Ecotoxicology Assessment**

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

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### **Benzenesulfonic acid, mono-C16-24-alkyl derivs., calcium salts:**

- Toxicity to fish : LC50 (Pimephales promelas (fathead minnow)): > 10.000 mg/l  
Exposure time: 96 h  
Test Type: static test  
Method: OECD Test Guideline 203  
Remarks: No toxicity at the limit of solubility
- Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna (Water flea)): > 1.000 mg/l  
Exposure time: 48 h  
Test Type: static test  
Method: OECD Test Guideline 202  
Remarks: No toxicity at the limit of solubility
- Toxicity to algae/aquatic plants : EC50 (Pseudokirchneriella subcapitata (green algae)): > 1.500 mg/l  
Exposure time: 72 h  
Test Type: Growth inhibition  
Remarks: No toxicity at the limit of solubility
- Toxicity to microorganisms : LC50 (activated sludge): > 10.000 mg/l  
Exposure time: 3 h  
Test Type: Respiration inhibition  
Method: OECD Test Guideline 209

### **Ecotoxicology Assessment**

- Chronic aquatic toxicity : This product has no known ecotoxicological effects., No toxicity at the limit of solubility

### **aluminium powder (stabilised):**

- Toxicity to fish : LC50 (Oncorhynchus mykiss (rainbow trout)): 0,12 mg/l  
Exposure time: 96 h  
Test Type: static test  
Remarks: No toxicity at the limit of solubility

### **Ecotoxicology Assessment**

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

### **silicon dioxide:**

- Toxicity to fish : LC50 (Brachydanio rerio (zebrafish)): > 10.000 mg/l  
Exposure time: 96 h  
Method: OECD Test Guideline 203

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

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

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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:

##### **calcium bis(dinonylnaphthalenesulphonate):**

Biodegradability : Result: Not readily biodegradable.

##### **Benzenesulfonic acid, mono-C16-24-alkyl derivs., calcium salts:**

Biodegradability : Test Type: aerobic  
Inoculum: activated sludge  
Result: Not rapidly biodegradable  
Biodegradation: 8 %  
Exposure time: 28 d  
Method: OECD Test Guideline 301D  
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:

##### **calcium bis(dinonylnaphthalenesulphonate):**

Partition coefficient: n-octanol/water : log Pow: 10,96

##### **Benzenesulfonic acid, mono-C16-24-alkyl derivs., calcium salts:**

Bioaccumulation : Remarks: Due to the distribution coefficient n-octanol/water, accumulation in organisms is possible.

Partition coefficient: n-octanol/water : log Pow: 16,09 (25 °C)

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### 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 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:**

**calcium bis(dinonylnaphthalenesulphonate):**

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

**silicon dioxide:**

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

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

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

### 12.6 Other adverse effects

**Product:**

Endocrine disrupting potential : 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.

Additional ecological information : No information on ecology is available.

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## SECTION 13: Disposal considerations

### 13.1 Waste treatment methods

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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.

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 : unused product  
13 02 06\*, synthetic engine, gear and lubricating oils  
  
uncleaned packagings  
15 01 10, packaging containing residues of or contaminated by hazardous substances

## SECTION 14: Transport information

### 14.1 UN number

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

### 14.2 UN proper shipping name

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

### 14.3 Transport hazard class(es)

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

### 14.4 Packing group

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**ADR** : Not regulated as a dangerous good  
**RID** : Not regulated as a dangerous good  
**IMDG** : Not regulated as a dangerous good  
**IATA (Cargo)** : Not regulated as a dangerous good  
**IATA (Passenger)** : Not regulated as a dangerous good

### 14.5 Environmental hazards

**ADR** : Not regulated as a dangerous good  
**RID** : Not regulated as a dangerous good  
**IMDG** : Not regulated as a dangerous good  
**IATA (Passenger)** : Not regulated as a dangerous good  
**IATA (Cargo)** : Not regulated as a dangerous good

### 14.6 Special precautions for user

Not applicable

### 14.7 Transport in bulk according to Annex II of Marpol and the IBC Code

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

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

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

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

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

REACH - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, preparations and articles (Annex XVII) : Not applicable

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

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Acquisition, introduction, possession or use of the explosive precursor by the general public is subject to reporting obligations. aluminium powder (stabilised) (ANNEX II)

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

Not applicable

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

### 15.2 Chemical safety assessment

This information is not available.

## SECTION 16: Other information

### Full text of H-Statements

H228 : Flammable solid.  
H315 : Causes skin irritation.  
H317 : May cause an allergic skin reaction.  
H319 : Causes serious eye irritation.

### Full text of other abbreviations

Note 10 : The classification as a carcinogen by inhalation applies only to mixtures in powder form containing 1 % or more of titanium dioxide which is in the form of or incorporated in particles with aerodynamic diameter  $\leq 10 \mu\text{m}$ .

Note V : If the substance is to be placed on the market as fibres (with diameter  $< 3 \mu\text{m}$ , length  $> 5 \mu\text{m}$  and aspect ratio  $\geq 3:1$ ) or particles of the substance fulfilling the WHO fibre criteria or as particles with modified surface chemistry, their hazardous properties must be evaluated in accordance with Title II of this Regulation, to assess whether a higher category (Carc. 1B or 1A) and/or additional routes of exposure (oral or dermal) should be applied.

Note W : It has been observed that the carcinogenic hazard of this substance arises when respirable dust is inhaled in quantities leading to significant impairment of particle clearance mechanisms in the lung. This note aims to describe the particular toxicity of the substance; it does not constitute a criterion for classification according to this Regulation.

2004/37/EC : Europe. Directive 2004/37/EC on the protection of workers from the risks related to exposure to carcinogens or mutagens

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ES VLA : at work  
: Spain. Environmental Limits for exposure to Chemical agents  
- Table 1: Occupational Exposure Values  
2004/37/EC / TWA : Long term exposure limit  
ES VLA / VLA-ED : Environmental Daily Limit Value

ADN - European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways; ADR - European Agreement concerning the International Carriage of Dangerous Goods by Road; AIIIC - 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; TRGS - Technical Rule for Hazardous Substances; TSCA - Toxic Substances Control Act (United States); UN - United Nations; vPvB - Very Persistent and Very Bioaccumulative

### Further information

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