

**OKS 250**

Version	Revision Date:	Date of last issue: 10.08.2021	Print Date:
1.9	20.06.2022	Date of first issue: 08.04.2014	20.06.2022

**1. IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING**

Product name : OKS 250

**Manufacturer or supplier's details**

Company name of supplier : 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

Emergency telephone number : +7 495 628 1687  
+49 8142 3051 517

**Recommended use of the chemical and restrictions on use**

Recommended use : Lubricant

Restrictions on use : Restricted to professional users.

**2. HAZARDS IDENTIFICATION**

**GHS Classification (According to GOST 32423, GOST 32424 and GOST 32425)**

Skin irritation : Category 2

Serious eye damage : Category 1

Skin sensitisation : Category 1

Short-term (acute) aquatic hazard : Category 1

Long-term (chronic) aquatic hazard : Category 3

**GHS-Labeling (According to GOST 31340)**

Hazard pictograms :   

Signal word : Danger

Hazard statements : H315 Causes skin irritation.

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H317 May cause an allergic skin reaction.  
H318 Causes serious eye damage.  
H400 Very toxic to aquatic life.  
H412 Harmful to aquatic life with long lasting effects.

Precautionary statements :

**Prevention:**

P264 Wash skin thoroughly after handling.  
P273 Avoid release to the environment.  
P280 Wear protective gloves/ eye protection/ face protection.

**Response:**

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.  
P333 + P313 If skin irritation or rash occurs: Get medical advice/ attention.  
P391 Collect spillage.

**Other hazards which do not result in classification**

None known.

**3. COMPOSITION/INFORMATION ON INGREDIENTS**

Pure substance/mixture : Mixture

Chemical nature : Synthetic hydrocarbon oil  
solid lubricant  
polyurea

**Components**

Chemical name	Concentration (% w/w)	Occupational Exposure Limits		CAS-No.	EC-No.
		MAC value mg/m3 / TSEL value	Hazard Class		
titanium dioxide; [in powder form containing <1 % of particles with aerodynamic diameter ≤ 10 µm]	>= 20 - < 30	MPC-TWA: 10 mg/m3 Data Source: RU OEL	f, 4	13463-67-7	236-675-5
calcium dihydroxide	>= 10 - < 20	MPC-STEL: 2 mg/m3 Data Source: RU OEL	3, +	1305-62-0	215-137-3

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Amines, N-C16-C18-alkyl-(evennumbered, C18 unsaturated) propane-1,3-diaminium di[(9Z)-octadec-9-enoate]	>= 2,5 - < 10	No data available			800-362-7
distillates (petroleum), solvent-refined heavy paraffinic	>= 1 - < 10	No data available		64741-88-4	265-090-8
Molybdenum trioxide, reaction products with bis[O,O-bis(2-ethylhexyl)] hydrogen dithiophosphate	>= 0,25 - < 1	No data available			947-946-9

**4. 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.  
Get medical attention immediately.
- If swallowed : Move the victim to fresh air.  
If unconscious, place in recovery position and seek medical advice.  
Keep respiratory tract clear.  
Do not induce vomiting without medical advice.  
Obtain medical attention.  
Never give anything by mouth to an unconscious person.
- Most important symptoms and effects, both acute and delayed : Causes skin irritation.  
May cause an allergic skin reaction.  
Skin contact may provoke the following symptoms:  
Erythema  
Allergic appearance
- Notes to physician : The first aid procedure should be established in consultation

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with the doctor responsible for industrial medicine.  
Treat symptomatically.

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**5. FIREFIGHTING MEASURES**

**Flammable properties**

- Flash point : Not applicable  
Ignition temperature : No data available
- Upper explosion limit / Upper flammability limit : No data available
- Lower explosion limit / Lower flammability limit : No data available
- Flammability (solid, gas) : Combustible Solids
- Suitable extinguishing media : Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.
- Unsuitable extinguishing media : High volume water jet
- Hazardous combustion products : Carbon oxides  
Nitrogen oxides (NO<sub>x</sub>)  
Oxides of phosphorus  
Metal oxides
- Further information : Standard procedure for chemical fires.  
Collect contaminated fire extinguishing water separately. This must not be discharged into drains.
- 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.

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**6. ACCIDENTAL RELEASE MEASURES**

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

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

**7. HANDLING AND STORAGE**

Advice on safe handling : Do not use in areas without adequate ventilation.  
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.

Conditions for safe storage : 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.

**8. EXPOSURE CONTROLS/PERSONAL PROTECTION**

**Components with workplace control parameters**

Components	CAS-No.	Value type (Form of exposure)	Control parameters / Permissible concentration	Data Source
titanium dioxide; [in powder form containing <1 % of particles with aerodynamic diameter ≤ 10 µm]	13463-67-7	MPC-TWA (aerosol)	10 mg/m3	RU OEL (2021-02-03)
Further information: aerosols of predominantly fibrogenic action, Class 4 - Low hazard				
calcium dihydroxide	1305-62-0	TWA (Respirable)	1 mg/m3	2017/164/EU (2017-02-01)



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		fraction)		
		STEL (Respirable fraction)	4 mg/m <sup>3</sup>	2017/164/EU (2017-02-01)
		MPC-STEL (aerosol)	2 mg/m <sup>3</sup>	RU OEL (2021-02-03)
Further information: Class 3 - Moderately dangerous, Substances which require special skin and eye protection				

**Engineering measures** : none

**Personal protective equipment**

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

Filter type : Filter type A-P

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.

Eye protection : Tightly fitting safety goggles

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.

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

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

**9. PHYSICAL AND CHEMICAL PROPERTIES**

Appearance : paste

Colour : white

Odour : characteristic

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Odour Threshold : No data available

pH : Not applicable  
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

Self-ignition : not auto-flammable

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 : 1,29 (20 °C)  
Reference substance: Water  
The value is calculated

Density : 1,29 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

Auto-ignition temperature : No data available

Decomposition temperature : No data available

Viscosity  
Viscosity, dynamic : No data available

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Viscosity, kinematic : Not applicable

Explosive properties : Not explosive

Oxidizing properties : No data available

Sublimation point : No data available

Metal corrosion rate : Not corrosive to metals

**10. STABILITY AND REACTIVITY**

Reactivity : No hazards to be specially mentioned.

Chemical stability : Stable under normal conditions.

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

Conditions to avoid : No conditions to be specially mentioned.

Incompatible materials : No materials to be especially mentioned.

Hazardous decomposition products : No decomposition if stored and applied as directed.

**11. TOXICOLOGICAL INFORMATION**

**Acute toxicity**

**Product:**

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

Acute inhalation toxicity : Acute toxicity estimate: > 10 mg/l  
Exposure time: 4 h  
Test atmosphere: dust/mist  
Method: Calculation method

Acute dermal toxicity : Symptoms: Redness, Local irritation

**Components:**

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

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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

**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

**distillates (petroleum), solvent-refined heavy paraffinic:**

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

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

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Acute dermal toxicity : Symptoms: Redness, Local irritation

**Skin corrosion/irritation**

**Product:**

Remarks : Irritating to skin.

**Components:**

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

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

**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.

**distillates (petroleum), solvent-refined heavy paraffinic:**

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

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

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

Remarks : Irritating to skin.

**Serious eye damage/eye irritation**

**Product:**

Remarks : Risk of serious damage to eyes.

**Components:**

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

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

**calcium dihydroxide:**

Species : Rabbit  
Result : Risk of serious damage to eyes.  
Assessment : Risk of serious damage to eyes.  
Method : OECD Test Guideline 405  
GLP : yes

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

Species : Rabbit  
Result : Irritating to eyes.  
Assessment : Irritating to eyes.  
Method : OECD Test Guideline 405

**distillates (petroleum), solvent-refined heavy paraffinic:**

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

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

Result : No eye irritation  
Assessment : No eye irritation

**Respiratory or skin sensitisation**

**Product:**

Remarks : This information is not available.

**Components:**

**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.

**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

**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.

**distillates (petroleum), solvent-refined heavy paraffinic:**

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

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

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

**Germ cell mutagenicity**

**Product:**

Genotoxicity in vitro : Remarks: No data available

Genotoxicity in vivo : Remarks: No data available

**Components:**

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

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

**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  
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.

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**distillates (petroleum), solvent-refined heavy paraffinic:**

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

Germ cell mutagenicity - Assessment : Animal testing did not show any mutagenic effects.

**Carcinogenicity**

**Product:**

Remarks : No data available

**Components:**

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

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

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

**distillates (petroleum), solvent-refined heavy paraffinic:**

Carcinogenicity - Assessment : Animal testing did not show any carcinogenic effects.

**Reproductive toxicity**

**Product:**

Effects on fertility : Remarks: No data available

Effects on foetal development : Remarks: No data available

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**Components:**

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

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

**calcium dihydroxide:**

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

**STOT - single exposure**

**Components:**

**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.

**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.

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**STOT - repeated exposure**

**Components:**

**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.

**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.

**Repeated dose toxicity**

**Product:**

Remarks : This information is not available.

**Aspiration toxicity**

**Product:**

This information is not available.

**Components:**

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

No aspiration toxicity classification

**distillates (petroleum), solvent-refined heavy paraffinic:**

May be fatal if swallowed and enters airways.

**Further information**

**Product:**

Remarks : Ingestion causes irritation of upper respiratory system and gastrointestinal disturbance.

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**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.

**12. ECOLOGICAL INFORMATION**

**Ecotoxicity**

**Product:**

Toxicity to fish : Remarks: Very toxic to aquatic organisms.

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:**

**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

**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

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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.

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 (Daphnia magna (Water flea)): 1,41 mg/l  
Exposure time: 21 d  
Test Type: semi-static test  
Method: OECD Test Guideline 211

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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.

**distillates (petroleum), solvent-refined heavy paraffinic:**

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

**Ecotoxicology Assessment**

Chronic aquatic toxicity : This product has no known ecotoxicological 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

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

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**Persistence and degradability**

**Product:**

Biodegradability : Remarks: No data available

Physico-chemical  
removability : Remarks: No data available

**Components:**

**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 : aerobic  
Inoculum: activated sludge  
Result: rapidly biodegradable  
Biodegradation: 65 %  
Exposure time: 28 d  
Method: OECD Test Guideline 301D  
GLP: yes

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

Biodegradability : Result: Not rapidly biodegradable  
Biodegradation: 11 %  
Exposure time: 28 d  
Method: OECD Test Guideline 301B

**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:**

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

Bioaccumulation : Remarks: Bioaccumulation is unlikely.



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**distillates (petroleum), solvent-refined heavy paraffinic:**

Partition coefficient: n-octanol/water : log Pow: > 4 (20 °C)

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

Partition coefficient: n-octanol/water : log Pow: > 4

**Mobility in soil**

**Product:**

Mobility : Remarks: No data available

Distribution among environmental compartments : Remarks: No data available

**Other adverse effects**

**Product:**

Additional ecological information : Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

**Components:**

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

Results of PBT and vPvB assessment : Non-classified vPvB substance Non-classified PBT substance

**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.

**Hygienic standards:**

**(Allowable concentration in air, water, including fishery waters, soil)**

Components	Air	Water	Soil	Data Source
titanium dioxide; [in powder form containing <1 % of particles with aerodynamic diameter ≤ 10 µm]	TSEL value: 0,5 mg/m <sup>3</sup>	Maximum Permissible Concentration 1 Milligrams per cubed decimeter (the substance) Limiting health hazard indicator: toxic		List 5

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		<p>Hazard class: 4 Maximum Permissible Concentration 0,06 Milligrams per cubed decimeter (Titanium) Limiting health hazard indicator: toxic Hazard class: 4</p>		
calcium dihydroxide	<p>Concentration that prevents irritation, reflex reactions, odors when exposed to 20-30 minutes - maximum one-time: 0,03 mg/m<sup>3</sup> Limiting health hazard indicator: resorptive Class 3 - moderately dangerous Concentration that provides admissible (acceptable) levels of risk when exposed to at least 24 hours - average daily: 0,01 mg/m<sup>3</sup> Limiting health hazard indicator: resorptive Class 3 - moderately dangerous</p>			
distillates (petroleum), solvent-refined heavy paraffinic		<p>Maximum Permissible Concentration 0,05 Milligrams per cubed decimeter Limiting health hazard indicator: toxic Hazard class: 3</p>		List 5

List 5: Order of the Russian Federal Fisheries Agency "Standards of maximum permissible concentrations of harmful substances in fishery water bodies"

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**13. DISPOSAL CONSIDERATIONS**

**Disposal methods**

- Waste from residues : The product should not be allowed to enter drains, water courses or the soil.  
Do not dispose of with domestic refuse.  
Dispose of as hazardous waste in compliance with local and national regulations.
- Contaminated packaging : Packaging that is not properly emptied must be disposed of as the unused product.  
Dispose of waste product or used containers according to local regulations.
- The following Waste Codes are only suggestions:
- Waste Code : used product, unused product  
12 01 12\*, spent waxes and fats
- uncleaned packagings  
15 01 10, packaging containing residues of or contaminated by hazardous substances

**14. TRANSPORT INFORMATION**

**ADR**

- UN number : UN 3077  
Proper shipping name : ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S.  
(fatty amine derivative)  
Class : 9  
Packing group : III  
Labels : 9  
Hazard Identification Number : 90  
Tunnel restriction code : (-)  
Environmentally hazardous : yes

**IATA-DGR**

- UN/ID No. : UN 3077  
Proper shipping name : Environmentally hazardous substance, solid, n.o.s.  
(fatty amine derivative)  
Class : 9  
Packing group : III  
Labels : Miscellaneous Dangerous Goods  
Packing instruction (cargo aircraft) : 956  
Packing instruction (passenger aircraft) : 956  
Environmentally hazardous : yes

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**IMDG-Code**

UN number : UN 3077  
Proper shipping name : ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID,  
N.O.S.  
(fatty amine derivative)  
Class : 9  
Packing group : III  
Labels : 9  
EmS Code : F-A, S-F  
Marine pollutant : yes

**Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code**

Not applicable for product as supplied.

**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.

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**15. REGULATORY INFORMATION**

**National regulatory information**

Federal Law of 10.01.2002 No. 184-FZ "On Technical Regulation".  
Federal Law of 10.01.2002 No. 7-FZ "On Environmental Protection".  
Federal Law of 21.07.1997 No. 116-FZ (amended on 11.06.2021) "On industrial safety of hazardous production facilities".  
Federal Law of 24.06.1998 No. 89-FZ (amended on 02.07.2021) "On production and consumption waste".  
Federal Law of 10.01.2002 No. 7-FZ (amended on 02.07.2021) "On environmental protection".  
Federal Law of 04.05.1999 No. 96-FZ "On the protection of atmospheric air" (as amended on December 8, 2020).  
Federal Law of 30.03.1999 No. 52-FZ (amended on 02.07.2021) "On the Sanitary and Epidemiological Well-Being of the Population" (amended and supplemented, entered into force on 31.10.2021).  
Federal Law of 27.12.2002 No. 184-FZ (amended on 02.07.2021) "On Technical Regulation" (amended and supplemented, entered into force on 01.09.2021).  
TECHNICAL REGULATIONS OF THE CUSTOMS UNION TR CU 030/2012 On requirements for lubricants, oils and special fluids (amended on 03.03.2017).

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**16. OTHER INFORMATION**

**List of data sources used in the preparation of the Safety Data Sheet**

GOST 30333-2007. Interstate standard. Safety data sheet for chemical products. Primary requirements.

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GOST 12.1.007-76 Occupational safety standards system. Noxious substances. Classification and general safety requirements  
GOST 12.1.044-89 Occupational safety standards system. Fire and explosion hazard of substances and materials. Nomenclature of indices and methods of their determination  
GOST 14192-96. Interstate standard. Cargo marking. Minsk, 1998.  
GOST 31340-2013. Interstate standard. Precautionary labeling of chemical products. General requirements.  
GOST 32419-2013 Classification of the hazard of chemical products. General requirements.  
GOST 32421-2013 Classification of chemical products, the hazard of which is due to physical and chemical properties. Test methods for explosive chemical products.  
GOST 32423-2013 Hazard classification of mixed chemical products by their effects on the body.  
GOST 32424-2013 Classification of the hazard of chemical products by their impact on the environment. Basic provisions.  
GOST 32425-2013 Hazard classification of mixed chemical products in terms of environmental impact.  
GOST R 53264-2009 Fire fighting equipment. Special protective clothing for firefighters. General technical requirements. Test methods.  
GOST R 53265-2009 Fire fighting equipment. Personal protective equipment for the feet of the firefighter. General technical requirements. Test methods.  
GOST R 53268-2009 Fire fighting equipment. Fire rescue belts. General technical requirements. Test methods.  
GOST R 53269-2009 Fire fighting equipment. Firefighters helmets. General technical requirements. Test methods.  
SanPiN 1.2.3685-21 "Hygienic standards and requirements for ensuring the safety and (or) harmlessness to humans of environmental factors" dated 28.01.2021.  
SanPiN 2.1.3684-21 "Sanitary and epidemiological requirements for the maintenance of the territories of urban and rural settlements, for water bodies, drinking water and drinking water supply, atmospheric air, soils, living quarters, the operation of industrial, public premises, the organization and implementation of sanitary and anti-epidemic (preventive) measures".  
European Agreement concerning the International Carriage of Dangerous Goods by Road (ADR). United Nations. New York and Geneva, 20.  
International Maritime Dangerous Goods Code (IMDG-Code).  
Water quality standards for fishery water bodies, including standards for maximum permissible concentrations of harmful substances in the waters of fishery water bodies (approved by order of the Ministry of Agriculture of Russia dated December 13, 2016 No. 552).  
Regulations for the carriage of dangerous goods (Appendix 1 and 2) to the Agreement on International Goods Transport by Rail (SMGS), 2009.  
UN Recommendations on the Transport of Dangerous Goods. Typical rules. Twenty-first revised edition. United Nations, New York and Geneva, 2019.

**Full text of other abbreviations**

Acute Tox.	:	Acute toxicity
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
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

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RU OEL : SanPiN 1.2.3685-21 Table 2.1, Table 2.8, Table 2.16 & Table 2.17 Maximum permissible concentrations (MPC) in the air of the working area

2017/164/EU / STEL : Short term exposure limit

2017/164/EU / TWA : Limit Value - eight hours

RU OEL / MPC-STEEL : Maximum Permissible Concentration - Short Term Exposure

RU OEL / MPC-TWA : Maximum Permissible Concentration - 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; AIIIC - Australian Inventory of Industrial Chemicals; ASTM - American Society for the Testing of Materials; bw - Body weight; CMR - Carcinogen, Mutagen or Reproductive Toxicant; DIN - Standard of the German Institute for Standardisation; DSL - Domestic Substances List (Canada); 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; TCSI - Taiwan Chemical Substance Inventory; TECI - Thailand Existing Chemicals Inventory; TSCA - Toxic Substances Control Act (United States); UN - United Nations; UNRTDG - United Nations Recommendations on the Transport of Dangerous Goods; vPvB - Very Persistent and Very Bioaccumulative

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