

# SAFETY DATA SHEET

according to GB/T 16483 and GB/T 17519  
CN



## OKS 2501

Version 2.1      Revision Date: 2021-09-07      Date of last issue: 2018-07-11  
Date of first issue: 2014-04-08      Print Date: 2021-09-07

### 1. PRODUCT AND COMPANY IDENTIFICATION

Product name : OKS 2501  
Chemical nature : Active substance with propellant  
Synthetic hydrocarbon oil  
solid lubricant

#### Manufacturer or supplier's details

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 :  
Emergency telephone number : +86 532 8388 9090 (NRCC, only for hazardous chemicals)  
+86 21 69225521

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

Recommended use : Lubricant spray  
Restrictions on use : Restricted to professional users.

### 2. HAZARDS IDENTIFICATION

#### Emergency Overview

|                   |                |
|-------------------|----------------|
| <b>Appearance</b> | : aerosol      |
| <b>Colour</b>     | : white        |
| <b>Odour</b>      | : solvent-like |

Extremely flammable aerosol. Pressurised container: May burst if heated. May be fatal if swallowed and enters airways. Causes skin irritation. Causes serious eye damage. May cause drowsiness or dizziness. Toxic to aquatic life with long lasting effects.

#### GHS Classification

Aerosols : Category 1  
Skin irritation : Category 2

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Serious eye damage : Category 1  
Specific target organ toxicity - single exposure : Category 3 (Narcotic effects)  
Aspiration hazard : Category 1  
Short-term (acute) aquatic hazard : Category 2  
Long-term (chronic) aquatic hazard : Category 2

### GHS label elements

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/ sparks/ open flames/ hot surfaces.  
No smoking.  
P211 Do not spray on an open flame or other ignition source.  
P251 Do not pierce or burn, even after use.  
P261 Avoid breathing mist.  
P264 Wash skin thoroughly after handling.  
P271 Use only outdoors or in a well-ventilated area.  
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.  
P302 + P352 IF ON SKIN: Wash with plenty of water.  
P304 + P340 + P312 IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER/ doctor if you feel unwell.  
P305 + P351 + P338 + P310 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present

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and easy to do. Continue rinsing. Immediately call a POISON CENTER/ doctor.  
P331 Do NOT induce vomiting.  
P332 + P313 If skin irritation occurs: Get medical advice/ attention.  
P362 + P364 Take off contaminated clothing and wash it before reuse.  
P391 Collect spillage.

### Storage:

P403 + P233 Store in a well-ventilated place. Keep container tightly closed.  
P405 Store locked up.  
P410 + P412 Protect from sunlight. Do not expose to temperatures exceeding 50 °C/ 122 °F.

### Disposal:

P501 Dispose of contents/containers according the local government requirements.

### Physical and chemical hazards

Extremely flammable aerosol.Pressurised container: May burst if heated.

### Health hazards

Causes skin irritation. Causes serious eye damage. May cause drowsiness or dizziness. May be fatal if swallowed and enters airways.

### Environmental hazards

Toxic to aquatic life. Toxic to aquatic life with long lasting effects.

### Other hazards which do not result in classification

None known.

## 3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance / Mixture : Mixture

### Hazardous components

| Chemical name                                  | CAS-No.    | Concentration (% w/w) |
|--|------------|-----------------------|
| Naphtha (petroleum), hydrotreated light        | 64742-49-0 | >= 25 -< 30           |
| Butane   | 106-97-8   | >= 20 -< 30           |
| propane  | 74-98-6    | >= 10 -< 20           |
| Titanium dioxide                               | 13463-67-7 | >= 1 -< 10            |
| calcium dihydroxide                            | 1305-62-0  | >= 3 -< 10            |
| n-hexane                                       | 110-54-3   | >= 1 -< 2.5           |
| N,N'-ethylenedi(stearamide)                    | 110-30-5   | >= 1 -< 10            |
| Amines, N-tallow alkyltrimethylenedi-, oleates | 61791-53-5 | >= 1 -< 2.5           |
| Molybdenum, bis[O,O-bis(2-ethylhexyl) phos-    | 72030-25-2 | >= 0.1 -< 0.25        |

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|   |  |  |
|---|--|--|
| phorodithioato-.kappa.S,.kappa.S']dioxodi-.mu.-<br>thioxodi-, (Mo-Mo) |  |  |
|---|--|--|

### 4. 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.  
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.
- Most important symptoms and effects, both acute and delayed : Central nervous system depression  
Risk of product entering the lungs on vomiting after ingestion.  
Health injuries may be delayed.  
Causes skin irritation.  
May cause an allergic skin reaction.  
Inhalation may provoke the following symptoms:  
Unconsciousness  
Dizziness  
Drowsiness  
Headache  
Nausea  
Tiredness  
Skin contact may provoke the following symptoms:  
Erythema  
Allergic appearance

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Aspiration may cause pulmonary oedema and pneumonitis.

Notes to physician : The first aid procedure should be established in consultation with the doctor responsible for industrial medicine.  
Treat symptomatically.

### 5. FIREFIGHTING MEASURES

Suitable extinguishing media : ABC powder

Unsuitable extinguishing media : High volume water jet

Specific hazards during fire-fighting : Fire Hazard  
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 (NO<sub>x</sub>)  
Oxides of phosphorus  
Metal oxides

Specific extinguishing methods : Standard procedure for chemical fires.  
Collect contaminated fire extinguishing water separately. This must not be discharged into drains.  
Cool containers/tanks with water spray.

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.

### 6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures : 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.

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.

Methods and materials for : Contain spillage, and then collect with non-combustible ab-

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- containment and cleaning up    sorbent 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.
- Prevention of secondary hazards    :    Only qualified personnel equipped with suitable protective equipment may intervene.

## 7. HANDLING AND STORAGE

### 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.  
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 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.

- Avoidance of contact    :    Oxidizing agents

### Storage

- Conditions for safe storage    :    BEWARE: Aerosol is pressurized. Keep away from direct sun exposure and temperatures over 50 °C. Do not open by force or throw into fire even after use. Do not spray on flames or red-hot objects.  
Store in accordance with the particular national regulations.

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### 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

#### Components with workplace control parameters

| Components                  | CAS-No.  | Value type<br>(Form of exposure)    | Control parameters / Permissible concentration | Basis  |
|-----------------------------|--|-------------------------------------|--|--------|
| Butane                      | 106-97-8   | STEL                                | 1,000 ppm                                      | ACGIH  |
| Titanium dioxide            | 13463-67-7   | PC-TWA<br>(Total dust)              | 8 mg/m <sup>3</sup>                            | CN OEL |
|                             | Further information: G2B - Possibly carcinogenic to humans |                                     |  |        |
|                             |  | TWA                                 | 10 mg/m <sup>3</sup>                           | ACGIH  |
|                             |  | TWA<br>(Titanium dioxide)           | 10 mg/m <sup>3</sup>                           | ACGIH  |
| calcium dihydroxide         | 1305-62-0  | TWA                                 | 5 mg/m <sup>3</sup>                            | ACGIH  |
| n-hexane                    | 110-54-3   | PC-TWA                              | 100 mg/m <sup>3</sup>                          | CN OEL |
|                             | Further information: Skin                                  |                                     |  |        |
|                             |  | PC-STEL                             | 180 mg/m <sup>3</sup>                          | CN OEL |
|                             | Further information: Skin                                  |                                     |  |        |
|                             |  | TWA                                 | 50 ppm   | ACGIH  |
| N,N'-ethylenedi(stearamide) | 110-30-5   | TWA (Inhalable particulate matter)  | 10 mg/m <sup>3</sup>                           | ACGIH  |
|                             |  | TWA (Respirable particulate matter) | 3 mg/m <sup>3</sup>                            | ACGIH  |

#### Biological occupational exposure limits

| Components | CAS-No.  | Control parameters | Biological specimen | Sampling time | Permissible concentration | Basis     |
|------------|----------|--------------------|---------------------|---------------|---------------------------|-----------|
| n-hexane   | 110-54-3 | 2,5-hexanedi-one   | Urine               | After shift   | 4 mg/l                    | CN BEI    |
|            |          | 2,5-hexanedi-one   | Urine               | After shift   | 35 micromol per litre     | CN BEI    |
|            |          | 2,5-Hexanedi-one   | Urine               | End of shift  | 0.5 mg/l                  | ACGIH BEI |

**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).

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### Personal protective equipment

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

## 9. PHYSICAL AND CHEMICAL PROPERTIES

- Appearance : aerosol
- Colour : white
- Odour : solvent-like
- 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 : -20 °C



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|--|--|
|  | (1,013 hPa)  |
| Flash point                                      | : -20 °C   |
|  | Method: Abel-Pensky, closed cup  |
| Evaporation rate                                 | : No data available  |
| Flammability (solid, gas)                        | : Not applicable   |
| Self-ignition                                    | : not auto-flammable   |
| Upper explosion limit / Upper flammability limit | : 15 %(V)  |
| Lower explosion limit / Lower flammability limit | : 0.6 %(V)   |
| Vapour pressure                                  | : 2,860 hPa (20 °C)  |
| Relative vapour density                          | : No data available  |
| Relative density                                 | : 0.775 (20 °C)<br>Reference substance: Water<br>The value is calculated |
| Density  | : 0.78 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  |
| Viscosity, kinematic                             | : < 20.5 mm <sup>2</sup> /s ( 40 °C)                                     |
| Explosive properties                             | : Not explosive  |
| Oxidizing properties                             | : No data available  |

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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 : Heat, flames and sparks.  
Incompatible materials : Oxidizing agents  
Hazardous decomposition products : No decomposition if stored and applied as directed.

### 11. TOXICOLOGICAL INFORMATION

#### Acute toxicity

##### Product:

Acute oral toxicity : Remarks: Effects due to ingestion may include:  
Symptoms: Central nervous system depression  
Acute inhalation toxicity : Acute toxicity estimate: > 10 mg/l  
Exposure time: 4 h  
Test atmosphere: dust/mist  
Method: Calculation method  
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

##### Components:

#### **Naphtha (petroleum), hydrotreated light:**

Acute oral toxicity : LD50 (Rat): > 5,000 mg/kg  
Method: OECD Test Guideline 401

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GLP: yes

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 (Rabbit): > 2,000 mg/kg  
Method: OECD Test Guideline 402  
GLP: yes  
Assessment: The substance or mixture has no acute dermal toxicity

### Butane:

Acute inhalation toxicity : LC50 (Rat): 658 mg/l  
Exposure time: 4 h  
Test atmosphere: gas

### Titanium dioxide:

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

### n-hexane:

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Acute oral toxicity : LD50 (Rat): > 5,000 mg/kg  
Method: OECD Test Guideline 401

Acute inhalation toxicity : LC50 (Rat): 259.35 mg/l  
Exposure time: 4 h  
Test atmosphere: vapour  
Method: OECD Test Guideline 403

Acute dermal toxicity : LD50 (Rabbit): 3,350 mg/kg  
Method: OECD Test Guideline 402  
Assessment: The substance or mixture has no acute dermal toxicity

### **N,N'-ethylenedi(stearamide):**

Acute oral toxicity : LD50 (Mouse): > 20,000 mg/kg

### **Amines, N-tallow alkyltrimethylenedi-, oleates:**

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, bis[O,O-bis(2-ethylhexyl) phosphorodithioato-.kappa.S,.kappa.S']dioxodi-.mu.-thioxodi-, (Mo-Mo):**

Acute dermal toxicity : Symptoms: Redness, Local irritation

### **Skin corrosion/irritation**

#### **Product:**

Remarks : Irritating to skin.

#### **Components:**

##### **Naphtha (petroleum), hydrotreated light:**

Species : Rabbit  
Assessment : Irritating to skin.  
Method : OECD Test Guideline 404  
Result : Irritating to skin.  
GLP : yes

##### **Titanium dioxide:**

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

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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

### n-hexane:

Species : Rabbit  
Assessment : Irritating to skin.  
Method : OECD Test Guideline 404  
Result : Irritating to skin.

### Amines, N-tallow alkyltrimethylenedi-, oleates:

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

### Molybdenum, bis[O,O-bis(2-ethylhexyl) phosphorodithioato-.kappa.S,.kappa.S']dioxodi-.mu.-thioxodi-, (Mo-Mo):

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:

### Naphtha (petroleum), hydrotreated light:

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

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### Titanium dioxide:

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

### n-hexane:

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

### Amines, N-tallow alkyltrimethylenedi-, oleates:

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

### Molybdenum, bis[O,O-bis(2-ethylhexyl) phosphorodithioato-.kappa.S,.kappa.S']dioxodi-.mu.-thioxodi-, (Mo-Mo):

Result : No eye irritation  
Assessment : No eye irritation

### Respiratory or skin sensitisation

#### Product:

Remarks : This information is not available.

#### Components:

### Naphtha (petroleum), hydrotreated light:

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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### Titanium dioxide:

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

### n-hexane:

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

### Amines, N-tallow alkyltrimethylenedi-, oleates:

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

### Molybdenum, bis[O,O-bis(2-ethylhexyl) phosphorodithioato-.kappa.S,.kappa.S']dioxodi-.mu.-thioxodi-, (Mo-Mo):

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

### Germ cell mutagenicity

#### Product:

Genotoxicity in vitro : Remarks: No data available

Genotoxicity in vivo : Remarks: No data available

#### Components:

##### Titanium dioxide:

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

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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-tallow alkyltrimethylenedi-, oleates:**

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.

### **Carcinogenicity**

#### **Product:**

Remarks : No data available

#### **Components:**

##### **Titanium dioxide:**

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

##### **calcium dihydroxide:**

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

### **Amines, N-tallow alkyltrimethylenedi-, oleates:**

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

### **Reproductive toxicity**

#### **Product:**

Effects on fertility : Remarks: No data available

Effects on foetal develop- : Remarks: No data available



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### Components:

#### **Titanium dioxide:**

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

#### **n-hexane:**

Reproductive toxicity - Assessment : - Fertility -  
Suspected human reproductive toxicant

#### **Amines, N-tallow alkyltrimethylenedi-, oleates:**

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

### **STOT - single exposure**

### Components:

#### **Naphtha (petroleum), hydrotreated light:**

Exposure routes : Inhalation  
Target Organs : Central nervous system  
Assessment : May cause drowsiness or dizziness.

#### **Titanium dioxide:**

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

#### **calcium dihydroxide:**

Assessment : May cause respiratory irritation.

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### **n-hexane:**

Exposure routes : Inhalation  
Target Organs : Central nervous system  
Assessment : The substance or mixture is classified as specific target organ toxicant, single exposure, category 3 with narcotic effects.

### **Amines, N-tallow alkyltrimethylenedi-, oleates:**

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

### **STOT - repeated exposure**

#### **Components:**

##### **Titanium dioxide:**

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

### **n-hexane:**

Exposure routes : Inhalation  
Target Organs : Central nervous system  
Assessment : The substance or mixture is classified as specific target organ toxicant, repeated exposure, category 2.

### **Amines, N-tallow alkyltrimethylenedi-, oleates:**

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:**

May be fatal if swallowed and enters airways.

May be fatal if swallowed and enters airways.

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### Components:

#### **Naphtha (petroleum), hydrotreated light:**

May be fatal if swallowed and enters airways.

#### **Titanium dioxide:**

No aspiration toxicity classification

#### **n-hexane:**

May be fatal if swallowed and enters airways.

### **Further information**

#### Product:

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

### Components:

#### **Molybdenum, bis[O,O-bis(2-ethylhexyl) phosphorodithioato- $\kappa$ .S, $\kappa$ .S']dioxodi- $\mu$ -thioxodi-, (Mo-Mo):**

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

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## 12. ECOLOGICAL INFORMATION

### **Ecotoxicity**

#### 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 : Remarks: No data available

Toxicity to microorganisms : Remarks: No data available

### Components:

#### **Naphtha (petroleum), hydrotreated light:**

Toxicity to fish : LC50 (Oncorhynchus mykiss (rainbow trout)): 10 mg/l

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Exposure time: 96 h  
Test Type: semi-static test  
Method: OECD Test Guideline 203  
GLP: yes

Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna (Water flea)): 4.5 mg/l  
Exposure time: 48 h  
Test Type: static test  
Method: OECD Test Guideline 202

Toxicity to algae : EC50 (Pseudokirchneriella subcapitata (green algae)): 3.1 mg/l  
Exposure time: 72 h  
Test Type: static test

### Ecotoxicology Assessment

Acute aquatic toxicity : Toxic to aquatic life.

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

### Titanium dioxide:

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  
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 : EC50 (Pseudokirchneriella subcapitata (green algae)): 184.57 mg/l  
Exposure time: 72 h  
Test Type: static test

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Method: OECD Test Guideline 201  
GLP: yes

Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) : NOEC (Crangon crangon (shrimp)): 32 mg/l  
Exposure time: 14 d  
Test Type: semi-static test

### **n-hexane:**

Toxicity to fish : LC50 (Oncorhynchus mykiss (rainbow trout)): 12.51 mg/l  
Exposure time: 96 h

Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna (Water flea)): 21.85 mg/l  
Exposure time: 48 h

Toxicity to algae : ErC50 (Pseudokirchneriella subcapitata (green algae)): 9.285 mg/l  
Exposure time: 72 h

### **N,N'-ethylenedi(stearamide):**

Toxicity to fish : LC50 (Danio rerio (zebra fish)): > 10,000 mg/l  
Exposure time: 96 h  
Method: OECD Test Guideline 203

Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna (Water flea)): > 10,000 mg/l  
Exposure time: 48 h  
Method: OECD Test Guideline 202

### **Amines, N-tallow alkyltrimethylenedi-, oleates:**

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 : 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.

### Molybdenum, bis[O,O-bis(2-ethylhexyl) phosphorodithioato-.kappa.S,.kappa.S']dioxodi-.mu.-thioxodi-, (Mo-Mo):

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 : EC50 (Pseudokirchneriella subcapitata (green algae)): > 100 mg/l  
Exposure time: 72 h  
Test Type: static test  
Method: OECD Test Guideline 201  
GLP: yes

### Persistence and degradability

#### Product:

Biodegradability : Remarks: No data available

Physico-chemical removability : Remarks: No data available

#### Components:

#### **Naphtha (petroleum), hydrotreated light:**

Biodegradability : aerobic  
Inoculum: activated sludge  
Result: rapidly biodegradable  
Biodegradation: 90.35 %

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Exposure time: 28 d

### calcium dihydroxide:

Biodegradability : Remarks: The methods for determining the biological degradability are not applicable to inorganic substances.

### n-hexane:

Biodegradability : aerobic  
Inoculum: activated sludge  
Result: rapidly biodegradable  
Biodegradation: 21 %  
Exposure time: 28 d  
GLP: yes

### Amines, N-tallow alkyltrimethylenedi-, oleates:

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

### Molybdenum, bis[O,O-bis(2-ethylhexyl) phosphorodithioato-.kappa.S,.kappa.S']dioxodi-.mu.-thioxodi-, (Mo-Mo):

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:

#### Naphtha (petroleum), hydrotreated light:

Partition coefficient: n-octanol/water : log Pow: 3.4 - 5.2

#### Butane:

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Partition coefficient: n-octanol/water : log Pow: 2.89  
Method: OECD Test Guideline 107

### propane:

Partition coefficient: n-octanol/water : log Pow: 2.36

### n-hexane:

Bioaccumulation : Bioconcentration factor (BCF): 501.19

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

### Amines, N-tallow alkyltrimethylenedi-, oleates:

Bioaccumulation : Remarks: Bioaccumulation is unlikely.

### Molybdenum, bis[O,O-bis(2-ethylhexyl) phosphorodithioato-.kappa.S,.kappa.S']dioxodi-.mu.-thioxodi-, (Mo-Mo):

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 : Toxic to aquatic life with long lasting effects.

#### Components:

##### Titanium dioxide:

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

### Molybdenum, bis[O,O-bis(2-ethylhexyl) phosphorodithioato-.kappa.S,.kappa.S']dioxodi-.mu.-thioxodi-, (Mo-Mo):

Additional ecological information : May cause long lasting harmful effects to aquatic life.



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### 13. DISPOSAL CONSIDERATIONS

#### Disposal methods

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

### 14. TRANSPORT INFORMATION

#### International Regulations

##### UNRTDG

- UN number : UN 1950  
Proper shipping name : AEROSOLS  
Class : 2.1  
Packing group : Not assigned by regulation  
Labels : 2.1

##### IATA-DGR

- UN/ID No. : UN 1950  
Proper shipping name : Aerosols, flammable  
Class : 2.1  
Packing group : Not assigned by regulation  
Labels : Flammable Gas  
Packing instruction (cargo aircraft) : 203  
Packing instruction (passenger aircraft) : 203

##### IMDG-Code

- UN number : UN 1950  
Proper shipping name : AEROSOLS  
(naphtha (petroleum), hydrotreated light, fatty amine derivative)  
Class : 2.1  
Packing group : Not assigned by regulation  
Labels : 2.1  
EmS Code : F-D, S-U  
Marine pollutant : yes

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

Not applicable for product as supplied.

### National Regulations

#### GB 6944/12268

UN number : UN 1950  
Proper shipping name : AEROSOLS  
Class : 2.1  
Packing group : Not assigned by regulation  
Labels : 2.1

### 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.

## 15. REGULATORY INFORMATION

### National regulatory information

#### Law on the Prevention and Control of Occupational Diseases

#### Regulations on Safety Management of Hazardous Chemicals

Catalogue of Hazardous Chemicals

| Product name | Status | Reference number |
|--------------|--------|------------------|
| OKS 2501     | Listed | 2828             |

| List of ingredients                      | CAS-No.  | Status | Reference number |
|--|----------|--------|------------------|
| Butane                                   | 106-97-8 | Listed | 2778             |
| propane                                  | 74-98-6  | Listed | 139              |
| n-hexane                                 | 110-54-3 | Listed | 2789             |
| Methyl methacrylate                      | 80-62-6  | Listed | 1105             |
| 2-Propenoic acid, 2-methyl-, butyl ester | 97-88-1  | Listed | 1110             |

Identification of Major Hazard Installations for Hazardous Chemicals (GB 18218)

Category  
Aerosols

Threshold quantity  
150 t

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Hazardous Chemicals for Priority Management under SAWS : Not applicable

### Regulations on Labour Protection in Workplaces where Toxic Substances are Used

Catalogue of Highly Toxic Chemicals : Not applicable

### Regulation of Environmental Management on the First Import of Chemicals and the Import and Export of Toxic Chemicals

China Severely Restricted Toxic Chemicals for Import and Export : Not applicable

### The components of this product are reported in the following inventories:

IECSC : On the inventory, or in compliance with the inventory

## 16. OTHER INFORMATION

Date format : yyyy/mm/dd

### Full text of other abbreviations

ACGIH : USA. ACGIH Threshold Limit Values (TLV)  
ACGIH BEI : ACGIH - Biological Exposure Indices (BEI)  
CN BEI : China. Biological Occupational Exposure Indices  
CN OEL : Occupational exposure limits for hazardous agents in the workplace - Chemical hazardous agents.

ACGIH / TWA : 8-hour, time-weighted average  
ACGIH / STEL : Short-term exposure limit  
CN OEL / PC-TWA : Permissible concentration - time weighted average  
CN OEL / PC-STEEL : Permissible concentration - short term exposure limit

AIIC - Australian Inventory of Industrial Chemicals; ANTT - National Agency for Transport by Land of Brazil; 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; ERG - Emergency Response Guide; 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 con-

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centration; 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; Nch - Chilean Norm; NO(A)EC - No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NOELR - No Observable Effect Loading Rate; NOM - Official Mexican Norm; NTP - National Toxicology Program; 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; SADT - Self-Accelerating Decomposition Temperature; SDS - Safety Data Sheet; TCSI - Taiwan Chemical Substance Inventory; TDG - Transportation of Dangerous Goods; 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; WHMIS - Workplace Hazardous Materials Information System

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