

# SAFETY DATA SHEET

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



## OKS 221

|         |                |                                 |             |
|---------|----------------|---------------------------------|-------------|
| Version | Revision Date: | Date of last issue: 26.03.2018  | Print Date: |
| 3.0     | 13.08.2018     | Date of first issue: 30.03.2013 | 13.08.2018  |

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

#### 1.1 Product identifier

Product name : OKS 221

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

Use of the Sub-stance/Mixture : Lubricant spray

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

E-mail address of person responsible for the SDS : mcm@oks-germany.com  
National contact :

#### 1.4 Emergency telephone number

Emergency telephone number : +49 8142 3051 517

### SECTION 2: Hazards identification

#### 2.1 Classification of the substance or mixture

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

Aerosols, Category 1 H222: Extremely flammable aerosol.  
H229: Pressurised container: May burst if heated.

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

Specific target organ toxicity - single exposure, Category 3, Central nervous system H336: May cause drowsiness or dizziness.

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

Chronic aquatic toxicity, Category 2 H411: Toxic to aquatic life with long lasting effects.

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### 2.2 Label elements

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

|                                |   |   |
|--------------------------------|---|---|
| Hazard pictograms              | : |       |
| Signal word                    | : | Danger  |
| Hazard statements              | : | H222 Extremely flammable aerosol.<br>H229 Pressurised container: May burst if heated.<br>H304 May be fatal if swallowed and enters airways.<br>H318 Causes serious eye damage.<br>H336 May cause drowsiness or dizziness.<br>H411 Toxic to aquatic life with long lasting effects.  |
| Supplemental Hazard Statements | : | EUH066 Repeated exposure may cause skin dryness or cracking.  |
| Precautionary statements       | : | <b>Prevention:</b><br>P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.<br>P211 Do not spray on an open flame or other ignition source.<br>P251 Do not pierce or burn, even after use.<br>P273 Avoid release to the environment.<br>P280 Wear eye protection/ face protection.<br><b>Response:</b><br>P301 + P310 IF SWALLOWED: Immediately call a POISON CENTER/doctor.<br>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.<br>P331 Do NOT induce vomiting.<br>P391 Collect spillage.<br><b>Storage:</b><br>P410 + P412 Protect from sunlight. Do not expose to temperatures exceeding 50 °C/ 122 °F. |

Hazardous components which must be listed on the label:

pentane  
calcium dihydroxide

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### 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 : Active substance with propellant

#### Hazardous components

| Chemical name                                | CAS-No.<br>EC-No.<br><br>Index-No.<br>Registration number              | Classification   | Concentration limits<br>M-Factor<br>Notes | Concentration<br>(% w/w) |
|--|--|--|---|--------------------------|
| pentane                                      | 109-66-0<br><br>203-692-4<br><br>601-006-00-1<br>01-2119459286-30-XXXX | Flam. Liq.2; H225<br>STOT SE3; H336<br>Asp. Tox.1; H304<br>Aquatic Chronic2;<br>H411 | Note C                                    | $\geq 30 - < 50$         |
| propane                                      | 74-98-6<br><br>200-827-9<br><br>601-003-00-5<br>01-2119486944-21-XXXX  | Flam. Gas1; H220<br>Press. GasCompr.<br>Gas; H280                                    | Note U (table<br>3.1)                     | $\geq 10 - < 20$         |
| calcium dihydroxide                          | 1305-62-0<br><br>215-137-3<br><br>01-2119475151-45-XXXX                | Skin Irrit.2; H315<br>Eye Dam.1; H318<br>STOT SE3; H335                              |   | $\geq 3 - < 10$          |
| isobutane                                    | 75-28-5<br><br>200-857-2<br><br>601-004-00-0<br>01-2119485395-27-XXXX  | Flam. Gas1; H220<br>Press. GasCompr.<br>Gas; H280                                    | Note U (table<br>3.1), Note C             | $\geq 1 - < 10$          |
| Substances with a workplace exposure limit : |  |  |   |                          |
| butane                                       | 106-97-8   | Flam. Gas1; H220   |   | $\geq 10 - < 20$         |

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|                       |                           |                               |                               |                 |
|-----------------------|---------------------------|-------------------------------|-------------------------------|-----------------|
|                       | 203-448-7<br>601-004-00-0 | Press. GasCompr.<br>Gas; H280 | Note U (table<br>3.1), Note C |                 |
| molybdenum disulphide | 1317-33-5<br>215-263-9    |                               |                               | $\geq 1 - < 10$ |
| Graphite              | 7782-42-5<br>231-955-3    |                               |                               | $\geq 1 - < 10$ |

For explanation of abbreviations see section 16.

## SECTION 4: First aid measures

### 4.1 Description of first aid measures

- If inhaled : Call a physician or poison control centre immediately.  
Remove person to fresh air. If signs/symptoms continue, get medical attention.  
Keep patient warm and at rest.  
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 skin thoroughly with soap and water or use recognized skin cleanser.
- In case of eye contact : Rinse immediately with plenty of water, also under the eyelids, for at least 10 minutes.  
If easy to do, remove contact lens, if worn.  
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.

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Rinse mouth with water.  
Aspiration hazard if swallowed - can enter lungs and cause damage.

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

Symptoms : Inhalation may provoke the following symptoms:  
Unconsciousness  
Dizziness  
Drowsiness  
Headache  
Nausea  
Tiredness  
Skin contact may provoke the following symptoms:  
Erythema

Aspiration may cause pulmonary oedema and pneumonitis.

Risks : Central nervous system depression  
Can be absorbed through skin.  
Risk of product entering the lungs on vomiting after ingestion.  
Health injuries may be delayed.

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

Treatment : Treat symptomatically.

## SECTION 5: Firefighting measures

### 5.1 Extinguishing media

Suitable extinguishing media : ABC powder

Unsuitable extinguishing media : High volume water jet

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

Specific hazards during fire-fighting : Fire may cause evolution of:  
Carbon oxides  
Metal oxides  
Sulphur oxides

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.

### 5.3 Advice for firefighters

Special protective equipment : In the event of fire, wear self-contained breathing apparatus.

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for firefighters Use personal protective equipment. In the case of respirable dust and/or fumes, use self-contained breathing apparatus. Exposure to decomposition products may be a hazard to health.

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

## SECTION 6: Accidental release measures

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

Personal precautions : Evacuate personnel to safe areas.  
Ensure adequate ventilation.  
Remove all sources of ignition.  
Do not breathe vapours or spray mist.  
Do not breathe dust/ fume/ gas/ mist/ vapours/ spray.  
Refer to protective measures listed in sections 7 and 8.  
Only qualified personnel equipped with suitable protective equipment may intervene.

### 6.2 Environmental precautions

Environmental precautions : Do not allow contact with soil, surface or ground water.  
Prevent further leakage or spillage if safe to do so.  
If the product contaminates rivers and lakes or drains inform respective authorities.

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

Methods for cleaning up : Contain spillage, and then collect with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and place in container for disposal according to local / national regulations (see section 13).  
Keep in suitable, closed containers for disposal.  
Non-sparking tools should be used.

### 6.4 Reference to other sections

For personal protection see section 8.

## SECTION 7: Handling and storage

### 7.1 Precautions for safe handling

Advice on safe handling : Do not use in areas without adequate ventilation.  
Do not breathe vapours or spray mist.  
In case of insufficient ventilation, wear suitable respiratory equipment.

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Avoid contact with skin and eyes.  
For personal protection see section 8.  
Keep away from fire, sparks and heated surfaces.  
Smoking, eating and drinking should be prohibited in the application area.  
Wash hands and face before breaks and immediately after handling the product.  
Do not get in eyes or mouth or on skin.  
Do not get on skin or clothing.  
Do not ingest.  
Do not use sparking tools.  
These safety instructions also apply to empty packaging which may still contain product residues.  
Pressurized container: protect from sunlight and do not expose to temperatures exceeding 50 °C. Do not pierce or burn, even after use.

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

### 7.2 Conditions for safe storage, including any incompatibilities

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

### 7.3 Specific end use(s)

Specific use(s) : Consult the technical guidelines for the use of this substance/mixture.

## SECTION 8: Exposure controls/personal protection

### 8.1 Control parameters

#### Occupational Exposure Limits

| Components          | CAS-No.   | Value type (Form of exposure) | Control parameters                   | Basis                      |
|---------------------|---|-------------------------------|--------------------------------------|----------------------------|
| pentane             | 109-66-0  | TWA                           | 1,000 ppm<br>3,000 mg/m <sup>3</sup> | 2006/15/EC<br>(2006-02-09) |
| Further information | Indicative  | TWA                           | 600 ppm<br>1,800 mg/m <sup>3</sup>   | GB EH40<br>(2007-08-01)    |
| Further information | Where no specific short-term exposure limit is listed, a figure three times the long-term exposure should be used |                               |                                      |                            |
| butane              | 106-97-8  | STEL                          | 750 ppm<br>1,810 mg/m <sup>3</sup>   | GB EH40<br>(2007-08-01)    |
| Further information | Capable of causing cancer and/or heritable genetic damage. The identified   |                               |                                      |                            |

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|                       | substances include those which: - are assigned the risk phrases 'R45: May cause cancer'; 'R46: may cause heritable genetic damage'; 'R49: May cause cancer by inhalation' or - a substance or process listed in Schedule 1 of COSHH., Carcinogenic only applies if butane contains more than 0.1% of buta-1,3-diene   |                            |                                      |                             |
|                       |   | TWA                        | 600 ppm<br>1,450 mg/m <sup>3</sup>   | GB EH40<br>(2007-08-01)     |
| Further information   | Capable of causing cancer and/or heritable genetic damage. The identified substances include those which: - are assigned the risk phrases 'R45: May cause cancer'; 'R46: may cause heritable genetic damage'; 'R49: May cause cancer by inhalation' or - a substance or process listed in Schedule 1 of COSHH., Carcinogenic only applies if butane contains more than 0.1% of buta-1,3-diene   |                            |                                      |                             |
| molybdenum disulphide | 1317-33-5   | TWA                        | 10 mg/m <sup>3</sup><br>(Molybdenum) | GB EH40<br>(2005-04-06)     |
|                       |   | STEL                       | 20 mg/m <sup>3</sup><br>(Molybdenum) | GB EH40<br>(2005-04-06)     |
| calcium dihydroxide   | 1305-62-0   | TWA                        | 5 mg/m <sup>3</sup>                  | 91/322/EEC<br>(1991-07-05)  |
| Further information   | Indicative, Existing scientific data on health effects appear to be particularly limited, In the Annex to Directive 91/322/EEC, the references to acetic acid, calcium dihydroxide, lithium hydride and nitrogen monoxide are deleted with effect from 21 August 2018   |                            |                                      |                             |
|                       |   | TWA                        | 5 mg/m <sup>3</sup>                  | GB EH40<br>(2005-04-06)     |
| Further information   | Where no specific short-term exposure limit is listed, a figure three times the long-term exposure should be used   |                            |                                      |                             |
|                       |   | TWA (Respirable fraction)  | 1 mg/m <sup>3</sup>                  | 2017/164/EU<br>(2017-02-01) |
| Further information   | Indicative  |                            |                                      |                             |
|                       |   | STEL (Respirable fraction) | 4 mg/m <sup>3</sup>                  | 2017/164/EU<br>(2017-02-01) |
| Further information   | Indicative  |                            |                                      |                             |
| Graphite              | 7782-42-5   | TWA (inhalable dust)       | 10 mg/m <sup>3</sup>                 | GB EH40<br>(2011-12-01)     |
| Further information   | For the purposes of these limits, respirable dust and inhalable dust are those fractions of airborne dust which will be collected when sampling is undertaken in accordance with the methods described in MDHS14/3 General methods for sampling and gravimetric analysis of respirable and inhalable dust, The COSHH definition of a substance hazardous to health includes dust of any kind when present at a concentration in air equal to or greater than 10 mg.m <sup>-3</sup> 8-hour TWA of inhalable dust or 4 mg.m <sup>-3</sup> 8-hour TWA of respirable dust. This means that any dust will be subject to COSHH if people are exposed above these levels. Some dusts have been assigned specific WELs and exposure to these must comply with the appropriate limit., Most industrial dusts contain particles of a wide range of sizes. The behaviour, deposition and fate of any particular particle after entry into the human respiratory system and the body response that it elicits, depend on the nature and size of the particle. HSE distinguishes two size fractions for limit-setting purposes termed 'inhalable' and 'respirable'. Inhalable dust approximates to the fraction of airborne material that enters the nose and mouth during breathing and is therefore available for deposition in the respiratory tract. Respirable dust approx- |                            |                                      |                             |



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|                     | imates to the fraction that penetrates to the gas exchange region of the lung. Fuller definitions and explanatory material are given in MDHS14/3., Where dusts contain components that have their own assigned WEL, all the relevant limits should be complied with., Where no specific short-term exposure limit is listed, a figure three times the long-term exposure should be used   |
|                     | TWA (Respirable dust)      4 mg/m <sup>3</sup> GB EH40 (2011-12-01)   |
| Further information | For the purposes of these limits, respirable dust and inhalable dust are those fractions of airborne dust which will be collected when sampling is undertaken in accordance with the methods described in MDHS14/3 General methods for sampling and gravimetric analysis of respirable and inhalable dust, The COSHH definition of a substance hazardous to health includes dust of any kind when present at a concentration in air equal to or greater than 10 mg.m <sup>-3</sup> 8-hour TWA of inhalable dust or 4 mg.m <sup>-3</sup> 8-hour TWA of respirable dust. This means that any dust will be subject to COSHH if people are exposed above these levels. Some dusts have been assigned specific WELs and exposure to these must comply with the appropriate limit., Most industrial dusts contain particles of a wide range of sizes. The behaviour, deposition and fate of any particular particle after entry into the human respiratory system and the body response that it elicits, depend on the nature and size of the particle. HSE distinguishes two size fractions for limit-setting purposes termed 'inhalable' and 'respirable'. Inhalable dust approximates to the fraction of airborne material that enters the nose and mouth during breathing and is therefore available for deposition in the respiratory tract. Respirable dust approximates to the fraction that penetrates to the gas exchange region of the lung. Fuller definitions and explanatory material are given in MDHS14/3., Where dusts contain components that have their own assigned WEL, all the relevant limits should be complied with., Where no specific short-term exposure limit is listed, a figure three times the long-term exposure should be used |

### 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      |
| calcium dihydroxide                                 | Workers | Inhalation      | Long-term local effects    | 1 mg/m <sup>3</sup>   |
|   | Workers | Inhalation      | Acute local effects        | 4 mg/m <sup>3</sup>   |

### 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     |

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|                     | Fresh water sediment                                 | 1.65 mg/kg  |
|                     | Marine sediment                                      | 0.165 mg/kg |
|                     | Soil   | 0.329 mg/kg |
| calcium dihydroxide | Fresh water  | 0.49 mg/l   |
|                     | Marine water   | 0.32 mg/l   |
|                     | Intermittent use/release                             | 0.49 mg/l   |
|                     | Microbiological Activity in Sewage Treatment Systems | 3 mg/l      |
|                     | Soil   | 1080 mg/kg  |

### 8.2 Exposure controls

#### Engineering measures

Use only in an area equipped with explosion proof exhaust ventilation.  
Handle only in a place equipped with local exhaust (or other appropriate exhaust).

#### Personal protective equipment

Eye protection : Safety glasses with side-shields conforming to EN166

#### Hand protection

Material : Fluorinated rubber  
Protective index : Class 1

Remarks : Wear protective gloves. The selected protective gloves have to satisfy the specifications of EU Directive 89/686/EEC and the standard EN 374 derived from it. 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.

Respiratory protection : Use respiratory protection unless adequate local exhaust ventilation is provided or exposure assessment demonstrates that exposures are within recommended exposure guidelines.

Filter type : Recommended Filter type:  
Organic gas and low boiling vapour type (AX)

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.

## SECTION 9: Physical and chemical properties

### 9.1 Information on basic physical and chemical properties

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Appearance : aerosol

Colour : black

Odour : characteristic

Odour Threshold : No data available

pH : Not applicable

Melting point/range : No data available

Boiling point/boiling range : -161 °C  
(1,013 hPa)

Flash point : -60 °C  
Method: Abel-Pensky

Evaporation rate : No data available

Flammability (solid, gas) : Extremely flammable aerosol.

Upper explosion limit : 10.9 %(V)

Lower explosion limit : 1.4 %(V)

Vapour pressure : 3,700 hPa (20 °C)

Relative vapour density : No data available

Density : 0.68 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)

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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 : No data available

## SECTION 10: Stability and reactivity

### 10.1 Reactivity

No hazards to be specially mentioned.

### 10.2 Chemical stability

Stable under normal conditions.

### 10.3 Possibility of hazardous reactions

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

### 10.4 Conditions to avoid

Conditions to avoid : Heat, flames and sparks.

### 10.5 Incompatible materials

Materials to avoid : Oxidizing agents

### 10.6 Hazardous decomposition products

No decomposition if stored and applied as directed.

## SECTION 11: Toxicological information

### 11.1 Information on toxicological effects

#### Acute toxicity

#### Product:

Acute oral toxicity : Remarks: Effects due to ingestion may include:  
Symptoms: Central nervous system depression  
Acute inhalation toxicity : Remarks: Respiration of solvent vapour may cause dizziness.  
Symptoms: Inhalation may provoke the following symptoms:;

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Respiratory disorder, Local irritation, Respiratory disorders, Dizziness, Drowsiness, Vomiting, Fatigue, Vertigo, Central nervous system depression

Acute dermal toxicity : Remarks: Prolonged or repeated skin contact with liquid may cause defatting resulting in drying, redness and possible blistering.

Symptoms: Skin disorders

### Components:

#### **calcium dihydroxide:**

Acute oral toxicity : LD50 (Rat, female): > 2,000 mg/kg  
Method: OECD Test Guideline 425  
Assessment: The substance or mixture has no acute oral toxicity

Acute dermal toxicity : LD50 (Rabbit): > 2,500 mg/kg  
Method: OECD Test Guideline 402  
Assessment: The substance or mixture has no acute dermal toxicity

#### **isobutane:**

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

#### **butane:**

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

#### **molybdenum disulphide:**

Acute oral toxicity : LD50 (Rat): > 5,000 mg/kg

Acute dermal toxicity : LD50 (Rat): > 16,000 mg/kg

### **Skin corrosion/irritation**

#### Product:

Remarks: This information is not available.

### Components:

#### **calcium dihydroxide:**

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

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Result: Irritating to skin.

### **molybdenum disulphide:**

Assessment: No skin irritation  
Result: No skin irritation

### **Serious eye damage/eye irritation**

#### **Product:**

Remarks: Risk of serious damage to eyes.

#### **Components:**

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

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

##### **molybdenum disulphide:**

Assessment: No eye irritation  
Result: No eye irritation

### **Respiratory or skin sensitisation**

#### **Product:**

Remarks: This information is not available.

#### **Components:**

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

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

##### **molybdenum disulphide:**

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

### **Germ cell mutagenicity**

#### **Product:**

Genotoxicity in vitro : Remarks: No data available

Genotoxicity in vivo : Remarks: No data available

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### Components:

#### **calcium dihydroxide:**

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

: Test Type: Chromosome aberration test in vitro  
Method: OECD Test Guideline 473  
Result: negative

#### **molybdenum disulphide:**

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

### **Carcinogenicity**

#### Product:

Remarks: No data available

### Components:

#### **molybdenum disulphide:**

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

### **STOT - single exposure**

#### Components:

#### **pentane:**

Assessment: May cause drowsiness or dizziness.

#### **calcium dihydroxide:**

Assessment: May cause respiratory irritation.

#### **molybdenum disulphide:**

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

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### STOT - repeated exposure

#### Components:

##### **molybdenum disulphide:**

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.

### Aspiration toxicity

#### Product:

May be fatal if swallowed and enters airways.

#### Components:

##### **pentane:**

May be fatal if swallowed and enters airways.

### Further information

#### Product:

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

#### Components:

##### **molybdenum disulphide:**

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

---

## SECTION 12: Ecological information

### 12.1 Toxicity

#### Product:

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

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

Toxicity to algae : Remarks: No data available



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Toxicity to microorganisms :  
Remarks: No data available

### Components:

#### **pentane:**

#### **Ecotoxicology Assessment**

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

#### **calcium dihydroxide:**

Toxicity to fish : LC50 (Oncorhynchus mykiss (rainbow trout)): 50.6 mg/l  
Exposure time: 96 h

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  
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.

#### **molybdenum disulphide:**

Toxicity to fish : LC50 (Pimephales promelas (fathead minnow)): > 100 mg/l  
Exposure time: 96 h

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

Toxicity to algae : EC50 (Pseudokirchneriella subcapitata (green algae)): > 100 mg/l  
Exposure time: 72 h

## 12.2 Persistence and degradability

### **Product:**

Biodegradability : Remarks: No data available

Physico-chemical removabili- : Remarks: No data available

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ty

### Components:

#### **calcium dihydroxide:**

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

### 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:

#### **propane:**

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

#### **isobutane:**

Partition coefficient: n-octanol/water : log Pow: 2.88  
Method: OECD Test Guideline 107

#### **butane:**

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

### 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..

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### 12.6 Other adverse effects

**Product:**

Additional ecological information : Toxic to aquatic life with long lasting effects.

## SECTION 13: Disposal considerations

### 13.1 Waste treatment methods

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

The following Waste Codes are only suggestions:

## SECTION 14: Transport information

### 14.1 UN number

ADR : UN 1950  
IMDG : UN 1950  
IATA : UN 1950

### 14.2 UN proper shipping name

ADR : AEROSOLS  
IMDG : AEROSOLS  
(pentane)  
IATA : Aerosols, flammable

### 14.3 Transport hazard class(es)

ADR : 2  
IMDG : 2.1  
IATA : 2.1

### 14.4 Packing group

ADR

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Packing group : Not assigned by regulation  
Classification Code : 5F  
Labels : 2.1  
Tunnel restriction code : (D)

### IMDG

Packing group : Not assigned by regulation  
Labels : 2.1  
EmS Code : F-D, S-U

### IATA (Cargo)

Packing instruction (cargo aircraft) : 203  
Packing instruction (LQ) : Y203  
Packing group : Not assigned by regulation  
Labels : Flammable Gas

### IATA (Passenger)

Packing instruction (passenger aircraft) : 203  
Packing instruction (LQ) : Y203  
Packing group : Not assigned by regulation  
Labels : Flammable Gas

## 14.5 Environmental hazards

### ADR

Environmentally hazardous : yes

### IMDG

Marine pollutant : yes

### IATA (Passenger)

Environmentally hazardous : no

### IATA (Cargo)

Environmentally hazardous : no

## 14.6 Special precautions for user

No special precautions required.

## 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

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

Regulation (EC) No 850/2004 on persistent organic pollutants : 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

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

|     |   | Quantity 1 | Quantity 2 |
|-----|---|------------|------------|
| P3a | FLAMMABLE AEROSOLS  | 150 t      | 500 t      |
| E2  | ENVIRONMENTAL HAZARDS   | 200 t      | 500 t      |
| E2  |   |            |            |
| P2  |   |            |            |
| 34  | Petroleum products: (a) gasolines and naphthas, (b) kerosenes (including jet fuels), (c) gas oils (including diesel fuels, home heating oils and gas oil blending streams),(d) heavy fuel oils (e) alternative fuels serving the same purposes and with similar properties as regards flammability and environmental hazards as the products referred to in points (a) to (d) | 2,500 t    | 25,000 t   |

Volatile organic compounds : Directive 2010/75/EU of 24 November 2010 on industrial emissions (integrated pollution prevention and control)  
Volatile organic compounds (VOC) content: 68 %  
Remarks: VOC content excluding water

Other regulations:

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

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### 15.2 Chemical safety assessment

This information is not available.

## SECTION 16: Other information

### Full text of H-Statements

H220 : Extremely flammable gas.  
H225 : Highly flammable liquid and vapour.  
H280 : Contains gas under pressure; may explode if heated.  
H304 : May be fatal if swallowed and enters airways.  
H315 : Causes skin irritation.  
H318 : Causes serious eye damage.  
H335 : May cause respiratory irritation.  
H336 : May cause drowsiness or dizziness.  
H411 : Toxic to aquatic life with long lasting effects.

### Full text of other abbreviations

Note C : Some organic substances may be marketed either in a specific isomeric form or as a mixture of several isomers. In this case the supplier must state on the label whether the substance is a specific isomer or a mixture of isomers.

Note U (table 3.1) : When put on the market gases have to be classified as "Gases under pressure", in one of the groups compressed gas, liquefied gas, refrigerated liquefied gas or dissolved gas. The group depends on the physical state in which the gas is packaged and therefore has to be assigned case by case.

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; AICS - Australian Inventory of Chemical Substances; 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

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Substances in China; IMDG - International Maritime Dangerous Goods; IMO - International Maritime Organization; ISHL - Industrial Safety and Health Law (Japan); ISO - International Organization 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

#### Classification of the mixture:

|                   |            |
|-------------------|------------|
| Aerosol 1         | H222, H229 |
| Eye Dam. 1        | H318       |
| STOT SE 3         | H336       |
| Asp. Tox. 1       | H304       |
| Aquatic Chronic 2 | H411       |

#### Classification procedure:

|                                     |
|-------------------------------------|
| Based on product data or assessment |
| Calculation method                  |
| Calculation method                  |
| Based on product data or assessment |
| Calculation method                  |

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