

# SAFETY DATA SHEET

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



## OKS 481

Version	Revision Date:	Date of last issue: 26.05.2025	Print Date:
3.0	12.06.2026	Date of first issue: 07.06.2016	12.06.2026

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

### 1.1 Product identifier

Product name : OKS 481

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

Use of the Substance/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  
82216 Maisach  
Germany  
Tel.: +49 8142 3051-500  
info@oks-germany.com

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

National contact : Klüber Lubrication GmbH Ibérica S. en C.  
Ctra C17, Km 15.5  
08150 Parets del Vallès (Barcelona)  
Espania  
Telefono: +34 93 57384 00  
Fax: +34 93 573 84 91  
customer.service@es.klueber.com

### 1.4 Emergency telephone number

Emergency telephone number : +34 91 562 04 20

## 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.

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

# SAFETY DATA SHEET

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



## OKS 481

Version	Revision Date:	Date of last issue: 26.05.2025	Print Date:
3.0	12.06.2026	Date of first issue: 07.06.2016	12.06.2026

Aspiration hazard, Category 1

H304: May be fatal if swallowed and enters airways.

Long-term (chronic) aquatic hazard,  
Category 2

H411: Toxic to aquatic life with long lasting effects.

## 2.2 Label elements

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

Hazard pictograms :



Signal word : Danger

Hazard statements : H222 Extremely flammable aerosol.  
H229 Pressurised container: May burst if heated.  
H304 May be fatal if swallowed and enters airways.  
H336 May cause drowsiness or dizziness.  
H411 Toxic to aquatic life with long lasting effects.

Supplemental Hazard Statements : EUH066 Repeated exposure may cause skin dryness or cracking.

Precautionary statements : **Prevention:**  
P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.  
P211 Do not spray on an open flame or other ignition source.  
P251 Do not pierce or burn, even after use.  
P273 Avoid release to the environment.

#### Response:

P301 + P310 IF SWALLOWED: Immediately call a POISON CENTER/ doctor.  
P331 Do NOT induce vomiting.

#### Storage:

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

### Hazardous components which must be listed on the label:

pentane

# SAFETY DATA SHEET

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



## OKS 481

Version	Revision Date:	Date of last issue: 26.05.2025	Print Date:
3.0	12.06.2026	Date of first issue: 07.06.2016	12.06.2026

### 2.3 Other hazards

This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

Ecological information: The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

Toxicological information: The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

## SECTION 3: Composition/information on ingredients

### 3.2 Mixtures

Chemical nature : Propellant  
Synthetic hydrocarbon oil  
Calcium soap  
Solvent(s)

#### Components

Chemical name	CAS-No. EC-No.  Index-No. Registration number	Classification	specific concentration limit M-Factor Notes Acute toxicity estimate	Concentration (% w/w)
pentane	109-66-0 203-692-4  601-006-00-1 01-2119459286-30-XXXX	Flam. Liq. 2; H225 STOT SE 3; H336 (Central nervous system) Asp. Tox. 1; H304 Aquatic Chronic 2; H411 EUH066	Note C	$\geq 50 - < 70$
zinc oxide	1314-13-2 215-222-5  030-013-00-7 01-2119463881-32-XXXX	Aquatic Acute 1; H400 Aquatic Chronic 1; H410	M-Factor: 1/1	$\geq 0,25 - < 1$
O,O,O-triphenyl phosphorothioate	597-82-0 209-909-9	Aquatic Chronic 1; H410 PBT; EUH440	M-Factor: /10	$\geq 0,025 - < 0,1$

# SAFETY DATA SHEET

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



## OKS 481

Version 3.0      Revision Date: 12.06.2026      Date of last issue: 26.05.2025      Print Date: 12.06.2026  
Date of first issue: 07.06.2016

Substances with a workplace exposure limit :				
butane	01-2119979545-21-XXXX 106-97-8 203-448-7 601-004-00-0 01-2119474691-32-XXXX	Flam. Gas 1; H220 Press. Gas Compr. Gas; H280	Note U (Table 3), Note C, Note S	$\geq 10 - < 20$
propane	74-98-6 200-827-9 601-003-00-5 01-2119486944-21-XXXX	Flam. Gas 1; H220 Press. Gas Compr. Gas; H280	Note U (Table 3)	$\geq 1 - < 10$
isobutane	75-28-5 200-857-2 601-004-00-0 01-2119485395-27-XXXX	Flam. Gas 1A; H220 Press. Gas Compr. Gas; H280	Note U (Table 3), Note C	$\geq 1 - < 10$

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.  
Seek medical advice.

# SAFETY DATA SHEET

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



## OKS 481

Version	Revision Date:	Date of last issue: 26.05.2025	Print Date:
3.0	12.06.2026	Date of first issue: 07.06.2016	12.06.2026

If swallowed : Move the victim to fresh air.  
If accidentally swallowed obtain immediate medical attention.  
Keep respiratory tract clear.  
Do NOT induce vomiting.  
Rinse mouth with water.  
Aspiration hazard if swallowed - can enter lungs and cause damage.

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

Symptoms : 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.  
  
May be fatal if swallowed and enters airways.  
May cause drowsiness or dizziness.  
Repeated exposure may cause skin dryness or cracking.

### 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 firefighting : 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.

# SAFETY DATA SHEET

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



## OKS 481

Version	Revision Date:	Date of last issue: 26.05.2025	Print Date:
3.0	12.06.2026	Date of first issue: 07.06.2016	12.06.2026

Hazardous combustion products : Carbon oxides  
Sulphur oxides  
Metal oxides

### 5.3 Advice for firefighters

Special protective equipment for firefighters : In the event of fire, wear self-contained breathing apparatus. Use personal protective equipment. Exposure to decomposition products may be a hazard to health.

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

## SECTION 6: Accidental release measures

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

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

### 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.

# SAFETY DATA SHEET

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



## OKS 481

Version	Revision Date:	Date of last issue: 26.05.2025	Print Date:
3.0	12.06.2026	Date of first issue: 07.06.2016	12.06.2026

## SECTION 7: Handling and storage

### 7.1 Precautions for safe handling

- Advice on safe handling : Do not use in areas without adequate ventilation.  
Do not breathe vapours or spray mist.  
In case of insufficient ventilation, wear suitable respiratory equipment.  
Avoid contact with skin and eyes.  
For personal protection see section 8.  
Keep away from fire, sparks and heated surfaces.  
Smoking, eating and drinking should be prohibited in the application area.  
Wash hands and face before breaks and immediately after handling the product.  
Do not get in eyes or mouth or on skin.  
Do not get on skin or clothing.  
Do not ingest.  
Do not use sparking tools.  
These safety instructions also apply to empty packaging which may still contain product residues.  
Pressurized container: protect from sunlight and do not expose to temperatures exceeding 50 °C. Do not pierce or burn, even after use.
- Hygiene measures : Wash face, hands and any exposed skin thoroughly after handling.

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

- Requirements for storage areas and containers : BEWARE: Aerosol is pressurized. Keep away from direct sun exposure and temperatures over 50 °C. Do not open by force 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) : Specific instructions for handling, not required.

## SECTION 8: Exposure controls/personal protection

### 8.1 Control parameters

#### Occupational Exposure Limits

Components	CAS-No.	Value type (Form of exposure)	Control parameters	Basis
pentane	109-66-0	TWA	1.000 ppm 3.000 mg/m <sup>3</sup>	2006/15/EC (2006-02-09)

# SAFETY DATA SHEET

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



## OKS 481

Version  
3.0

Revision Date:  
12.06.2026

Date of last issue: 26.05.2025  
Date of first issue: 07.06.2016

Print Date:  
12.06.2026

Further information: Indicative				
		VLA-ED	1.000 ppm 3.000 mg/m <sup>3</sup>	ES VLA (2012-01-01)
butane	106-97-8	VLA-ED (gas)	1.000 ppm	ES VLA (2013-02-22)
propane	74-98-6	VLA-ED (gas)	1.000 ppm	ES VLA (2024-01-15)
isobutane	75-28-5	VLA-ED (gas)	1.000 ppm	ES VLA (2013-02-22)
zinc oxide	1314-13-2	VLA-ED (respirable fraction)	2 mg/m <sup>3</sup>	ES VLA (2016-01-01)
		VLA-EC (respirable fraction)	10 mg/m <sup>3</sup>	ES VLA (2016-01-01)

### Derived No Effect Level (DNEL) according to Regulation (EC) No. 1907/2006

Substance name	End Use	Exposure routes	Potential health effects	Value
pentane	Workers	Inhalation	Long-term systemic effects	3000 mg/m <sup>3</sup>
	Workers	Dermal	Long-term systemic effects	432 mg/kg bw/day
O,O,O-triphenyl phosphorothioate	Workers	Inhalation	Long-term systemic effects	1,39 mg/m <sup>3</sup>
	Workers	Skin contact	Long-term systemic effects	0,4 mg/kg

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

Substance name	Environmental Compartment	Value
pentane	Fresh water	0,230 mg/l
	Marine water	0,230 mg/l
	Microbiological Activity in Sewage Treatment Systems	3,6 mg/l
	Fresh water sediment	1,2 mg/kg
	Marine sediment	1,2 mg/kg
zinc oxide	Fresh water	0,0179 mg/l
	Marine water	0,009 mg/l
	Sewage treatment plant	0,1245 mg/l
	Fresh water sediment	182,8 mg/kg
	Marine sediment	201,9 mg/kg
	Soil	103,4 mg/kg
O,O,O-triphenyl phosphorothioate	Fresh water	0,00017 mg/l
	Marine water	0,000017 mg/l
	Fresh water sediment	3,47 mg/kg
	Marine sediment	0,347 mg/kg
	Soil	2,46 mg/kg

# SAFETY DATA SHEET

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



## OKS 481

Version	Revision Date:	Date of last issue: 26.05.2025	Print Date:
3.0	12.06.2026	Date of first issue: 07.06.2016	12.06.2026

### 8.2 Exposure controls

#### Engineering measures

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

#### Personal protective equipment

Eye/face protection : Safety glasses with side-shields

#### Hand protection

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

Remarks : Wear protective gloves. The break through time depends amongst other things on the material, the thickness and the type of glove and therefore has to be measured for each case.  
The selected protective gloves have to satisfy the specifications of Regulation (EU) 2016/425 and the standard EN 374 derived from it.

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

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

Filter type : Filter type A-P

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

#### Environmental exposure controls

Air : Should not be released into the environment.  
Soil : Do not allow contact with soil, surface or ground water.  
The product should not be allowed to enter drains, water courses or the soil.  
Water : Do not allow contact with soil, surface or ground water.  
The product should not be allowed to enter drains, water courses or the soil.

## SECTION 9: Physical and chemical properties

### 9.1 Information on basic physical and chemical properties

# SAFETY DATA SHEET

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



## OKS 481

Version	Revision Date:	Date of last issue: 26.05.2025	Print Date:
3.0	12.06.2026	Date of first issue: 07.06.2016	12.06.2026

Physical state : aerosol

Colour : beige

Odour : characteristic

Odour Threshold : No data available

Melting point/ range : No data available

Boiling point/boiling range : -42 °C (1.013 hPa)

Flammability : Flammability (solid, gas):  
Extremely flammable aerosol.

Upper explosion limit / Upper flammability limit : 10,9 %(V)

Lower explosion limit / Lower flammability limit : 1,4 %(V)

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

Auto-ignition temperature : No data available

Decomposition temperature : No data available

pH : Not applicable  
substance/mixture is non-soluble (in water)

Viscosity  
Viscosity, dynamic : No data available

Viscosity, kinematic : < 20,5 mm<sup>2</sup>/s (40 °C)

Solubility(ies)

# SAFETY DATA SHEET

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



## OKS 481

Version 3.0	Revision Date: 12.06.2026	Date of last issue: 26.05.2025 Date of first issue: 07.06.2016	Print Date: 12.06.2026
----------------	------------------------------	---	---------------------------

Water solubility : insoluble

Solubility in other solvents : No data available

Partition coefficient: n-  
octanol/water : No data available

Vapour pressure : 2.000 hPa (20 °C)

Relative density : 0,65 (20 °C)  
Reference substance: Water  
The value is calculated

Density : 0,65 g/cm<sup>3</sup>  
(20 °C)

Bulk density : No data available

Relative vapour density : No data available

### 9.2 Other information

Explosives : Not explosive

Oxidizing properties : No data available

Self-ignition : not auto-flammable

Metal corrosion rate : Not corrosive to metals

Evaporation rate : No data available

Sublimation point : No data available

# SAFETY DATA SHEET

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



## OKS 481

Version	Revision Date:	Date of last issue: 26.05.2025	Print Date:
3.0	12.06.2026	Date of first issue: 07.06.2016	12.06.2026

### SECTION 10: Stability and reactivity

#### 10.1 Reactivity

No hazards to be specially mentioned.

#### 10.2 Chemical stability

Stable under normal conditions.

#### 10.3 Possibility of hazardous reactions

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

#### 10.4 Conditions to avoid

Conditions to avoid : Heat, flames and sparks.  
Strong sunlight for prolonged periods.  
Risk of receptacle bursting.

#### 10.5 Incompatible materials

Materials to avoid : Oxidizing agents

#### 10.6 Hazardous decomposition products

No decomposition if stored and applied as directed.

### SECTION 11: Toxicological information

#### 11.1 Information on hazard classes as defined in Regulation (EC) No 1272/2008

##### Acute toxicity

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

##### Product:

Acute oral toxicity : Remarks: Effects due to ingestion may include:  
Symptoms: Central nervous system depression

Acute inhalation toxicity : Remarks: Respiration of solvent vapour may cause dizziness.  
Symptoms: Inhalation may provoke the following symptoms:,  
Respiratory disorder, Dizziness, Drowsiness, Vomiting,  
Fatigue, Vertigo, Central nervous system depression

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

# SAFETY DATA SHEET

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



## OKS 481

Version 3.0	Revision Date: 12.06.2026	Date of last issue: 26.05.2025 Date of first issue: 07.06.2016	Print Date: 12.06.2026
----------------	------------------------------	---	---------------------------

### Components:

#### **pentane:**

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

Acute inhalation toxicity : LC50 (Rat): > 25,3 mg/l  
Exposure time: 4 h  
Test atmosphere: vapour  
Assessment: The substance or mixture has no acute inhalation toxicity

#### **zinc oxide:**

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

Acute inhalation toxicity : LC50 (Rat): > 5,7 mg/l  
Exposure time: 4 h  
Test atmosphere: dust/mist  
Method: OECD Test Guideline 403  
Assessment: The substance or mixture has no acute inhalation toxicity

Acute dermal toxicity : LD50 (Rat): > 2.000 mg/kg  
Method: OECD Test Guideline 402  
GLP: yes  
Assessment: The substance or mixture has no acute dermal toxicity

#### **O,O,O-triphenyl phosphorothioate:**

Acute oral toxicity : LD50 (Rat): > 10.000 mg/kg  
Method: OECD Test Guideline 401

Acute dermal toxicity : LD50 (Rat): > 2.000 mg/kg  
Method: OECD Test Guideline 402  
Assessment: The substance or mixture has no acute dermal toxicity  
Remarks: No mortality observed at this dose.

#### **butane:**

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

#### **isobutane:**

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

# SAFETY DATA SHEET

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



## OKS 481

Version	Revision Date:	Date of last issue: 26.05.2025	Print Date:
3.0	12.06.2026	Date of first issue: 07.06.2016	12.06.2026

### Skin corrosion/irritation

Repeated exposure may cause skin dryness or cracking.

#### Product:

Remarks : This information is not available.

#### Components:

##### pentane:

Result : Repeated exposure may cause skin dryness or cracking.

##### zinc oxide:

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

##### **O,O,O-triphenyl phosphorothioate:**

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

### Serious eye damage/eye irritation

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

#### Product:

Remarks : This information is not available.

#### Components:

##### pentane:

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

##### zinc oxide:

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

##### **O,O,O-triphenyl phosphorothioate:**

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

# SAFETY DATA SHEET

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



## OKS 481

Version	Revision Date:	Date of last issue: 26.05.2025	Print Date:
3.0	12.06.2026	Date of first issue: 07.06.2016	12.06.2026

### Respiratory or skin sensitisation

#### Skin sensitisation

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

#### Respiratory sensitisation

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

#### Product:

Remarks : This information is not available.

#### Components:

##### pentane:

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

##### zinc oxide:

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

##### || O,O,O-triphenyl phosphorothioate:

|| Assessment : Does not cause skin sensitisation.

### Germ cell mutagenicity

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

#### Product:

Genotoxicity in vitro : Remarks: No data available

Genotoxicity in vivo : Remarks: No data available

#### Components:

##### zinc oxide:

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

##### || O,O,O-triphenyl phosphorothioate:

# SAFETY DATA SHEET

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



## OKS 481

Version	Revision Date:	Date of last issue: 26.05.2025	Print Date:
3.0	12.06.2026	Date of first issue: 07.06.2016	12.06.2026

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

### **Carcinogenicity**

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

#### **Product:**

Remarks : No data available

#### **Components:**

##### **zinc oxide:**

Carcinogenicity -  
Assessment : Not classifiable as a human carcinogen.

### **Reproductive toxicity**

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

#### **Product:**

Effects on fertility : Remarks: No data available

Effects on foetal  
development : Remarks: No data available

#### **Components:**

##### **zinc oxide:**

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

##### **O,O,O-triphenyl phosphorothioate:**

Reproductive toxicity -  
Assessment : - Fertility -  
Animal testing did not show any effects on fertility.

### **STOT - single exposure**

May cause drowsiness or dizziness.

#### **Product:**

Remarks : No data available

#### **Components:**

##### **pentane:**

Exposure routes : Inhalation

# SAFETY DATA SHEET

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



## OKS 481

Version	Revision Date:	Date of last issue: 26.05.2025	Print Date:
3.0	12.06.2026	Date of first issue: 07.06.2016	12.06.2026

Target Organs : Central nervous system, Narcotic effects  
Assessment : May cause drowsiness or dizziness., The substance or mixture is classified as specific target organ toxicant, single exposure, category 3 with narcotic effects.

### **zinc oxide:**

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

### **STOT - repeated exposure**

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

### **Product:**

Remarks : No data available

### **Components:**

### **zinc oxide:**

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**

May be fatal if swallowed and enters airways.

### **Product:**

This information is not available.

### **Components:**

### **pentane:**

May be fatal if swallowed and enters airways.

### **zinc oxide:**

No aspiration toxicity classification

## 11.2 Information on other hazards

### **Endocrine disrupting properties**

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

### **Product:**

Assessment : The substance/mixture does not contain components

# SAFETY DATA SHEET

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



## OKS 481

Version 3.0	Revision Date: 12.06.2026	Date of last issue: 26.05.2025 Date of first issue: 07.06.2016	Print Date: 12.06.2026
----------------	------------------------------	---	---------------------------

considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

### Further information

#### Product:

Remarks : 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/aquatic plants : Remarks: No data available

Toxicity to microorganisms : Remarks: No data available

#### Components:

##### pentane:

#### Ecotoxicology Assessment

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

##### zinc oxide:

Toxicity to fish : LC50 (Danio rerio (zebra fish)): 1,55 mg/l  
Exposure time: 96 h  
Test Type: static test

Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna (Water flea)): 1 mg/l  
Exposure time: 48 h  
Test Type: static test  
Method: OECD Test Guideline 202

Toxicity to algae/aquatic plants : EC50 (Pseudokirchneriella subcapitata (green algae)): 0,136 mg/l  
Exposure time: 72 h

# SAFETY DATA SHEET

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



## OKS 481

Version	Revision Date:	Date of last issue: 26.05.2025	Print Date:
3.0	12.06.2026	Date of first issue: 07.06.2016	12.06.2026

Test Type: static test  
Method: OECD Test Guideline 201  
GLP: yes

M-Factor (Acute aquatic toxicity) : 1

Toxicity to microorganisms : EC50 (activated sludge): > 1.000 mg/l  
Exposure time: 3 h  
Method: OECD Test Guideline 209  
GLP: yes

Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) : 0,04 mg/l  
Exposure time: 21 d  
Species: Daphnia magna (Water flea)  
Test Type: semi-static test  
Method: OECD Test Guideline 211

M-Factor (Chronic aquatic toxicity) : 1

### **O,O,O-triphenyl phosphorothioate:**

Toxicity to fish : LC50 (Brachydanio rerio (zebrafish)): > 100 mg/l  
Exposure time: 96 h  
Method: OECD Test Guideline 203

Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna (Water flea)): > 100 mg/l  
Exposure time: 48 h  
Test Type: Immobilization  
Method: OECD Test Guideline 202

Toxicity to algae/aquatic plants : EC50 (Desmodesmus subspicatus (green algae)): > 100 mg/l  
Exposure time: 72 h  
Method: OECD Test Guideline 201

Toxicity to microorganisms : EC50 (activated sludge): > 100 mg/l  
Exposure time: 3 h  
Method: OECD Test Guideline 209

Toxicity to fish (Chronic toxicity) : NOEC: 0,0017 mg/l  
Exposure time: 97 d  
Species: Oncorhynchus mykiss (rainbow trout)  
Test Type: flow-through test  
Method: OECD Test Guideline 210

Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) : NOEC: 0,00724 mg/l  
Exposure time: 21 d  
Species: Daphnia magna (Water flea)  
Test Type: semi-static test  
Method: OECD Test Guideline 211

# SAFETY DATA SHEET

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



## OKS 481

Version	Revision Date:	Date of last issue: 26.05.2025	Print Date:
3.0	12.06.2026	Date of first issue: 07.06.2016	12.06.2026

M-Factor (Chronic aquatic toxicity) : 10

### 12.2 Persistence and degradability

#### Product:

Biodegradability : Remarks: No data available

Physico-chemical removability : Remarks: No data available

#### Components:

##### **pentane:**

Biodegradability : Test Type: aerobic  
Inoculum: activated sludge  
Result: rapidly biodegradable  
Biodegradation: 87 %  
Method: OECD Test Guideline 301F  
GLP: yes

##### **zinc oxide:**

Biodegradability : Remarks: The methods for determining biodegradability are not applicable to inorganic substances.

##### **O,O,O-triphenyl phosphorothioate:**

Biodegradability : Result: Not rapidly biodegradable

### 12.3 Bioaccumulative potential

#### Product:

Bioaccumulation : Remarks: No data available

#### Components:

##### **O,O,O-triphenyl phosphorothioate:**

Bioaccumulation : Species: Cyprinus carpio (Carp)  
Exposure time: 56 d  
Bioconcentration factor (BCF): 2.551

Partition coefficient: n-octanol/water : log Pow: 5,1 (20 °C)

##### **butane:**

Partition coefficient: n-octanol/water : log Pow: 2,89  
Method: OECD Test Guideline 107

# SAFETY DATA SHEET

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



## OKS 481

Version	Revision Date:	Date of last issue: 26.05.2025	Print Date:
3.0	12.06.2026	Date of first issue: 07.06.2016	12.06.2026

### 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

## 12.4 Mobility in soil

### Product:

Mobility : Remarks: No data available

Distribution among environmental compartments : Remarks: No data available

## 12.5 Results of PBT and vPvB assessment

### Product:

Assessment : This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

### Components:

#### zinc oxide:

Assessment : Remarks: Not applicable

#### O,O,O-triphenyl phosphorothioate:

Assessment : PBT substance  
Not very persistent and very bioaccumulative (vPvB).

## 12.6 Endocrine disrupting properties

### Product:

Assessment : The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

## 12.7 Other adverse effects

### Product:

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

# SAFETY DATA SHEET

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



## OKS 481

Version	Revision Date:	Date of last issue: 26.05.2025	Print Date:
3.0	12.06.2026	Date of first issue: 07.06.2016	12.06.2026

## 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:

Waste Code : unused product, packagings not completely emptied  
16 05 04\*, gases in pressure containers (including halons)  
containing hazardous substances

## SECTION 14: Transport information

### 14.1 UN number or ID number

ADR : UN 1950

RID : UN 1950

IMDG : UN 1950

IATA : UN 1950

### 14.2 UN proper shipping name

ADR : AEROSOLS

RID : AEROSOLS

IMDG : AEROSOLS  
(pentane, zinc oxide)

IATA : Aerosols, flammable

### 14.3 Transport hazard class(es)

	Class	Subsidiary risks
ADR	: 2	2.1

# SAFETY DATA SHEET

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



## OKS 481

Version 3.0	Revision Date: 12.06.2026	Date of last issue: 26.05.2025 Date of first issue: 07.06.2016	Print Date: 12.06.2026
----------------	------------------------------	---	---------------------------

**RID** : 2 2.1  
**IMDG** : 2.1  
**IATA** : 2.1

### 14.4 Packing group

#### ADR

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

#### RID

Packing group : Not assigned by regulation  
Classification Code : 5F  
Hazard Identification Number : 23  
Labels : 2.1

#### IMDG

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

#### IATA (Cargo)

Packing instruction (cargo 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

#### RID

Environmentally hazardous : yes

#### IMDG

Marine pollutant : yes

### 14.6 Special precautions for user

The transport classification(s) provided herein are for informational purposes only, and solely based upon the properties of the unpackaged material as it is described within this Safety Data Sheet. Transportation classifications may vary by mode of transportation, package sizes, and variations in regional or country regulations.

### 14.7 Maritime transport in bulk according to IMO instruments

# SAFETY DATA SHEET

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



## OKS 481

Version	Revision Date:	Date of last issue: 26.05.2025	Print Date:
3.0	12.06.2026	Date of first issue: 07.06.2016	12.06.2026

Remarks : Not applicable for product as supplied.

## SECTION 15: Regulatory information

### 15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture

- REACH - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles (Annex XVII) : Conditions of restriction for the following entries should be considered:  
Number on list 40  
This substance/mixture shall not be used in aerosol dispensers intended for supply to the general public for entertainment and decorative purposes.
- REACH - Candidate List of Substances of Very High Concern for Authorisation (Article 59). (EU SVHC) : This product does not contain substances of very high concern (Regulation (EC) No 1907/2006 (REACH), Article 57).
- Regulation (EU) No 2024/590 on substances that deplete the ozone layer (EC 2024/590) : Not applicable
- Regulation (EU) 2019/1021 on persistent organic pollutants (recast) (EU POP) : Not applicable
- Regulation (EU) No 649/2012 of the European Parliament and the Council concerning the export and import of dangerous chemicals (EU PIC) : Not applicable
- REACH - List of substances subject to authorisation (Annex XIV) (EU. REACH-Annex XIV) : Not applicable
- Regulation (EU) 2019/1148 on the marketing and use of explosives precursors : Not applicable

Seveso III: Directive 2012/18/EU of the European Parliament and of the Council on the control of P3a FLAMMABLE AEROSOLS

# SAFETY DATA SHEET

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



## OKS 481

Version	Revision Date:	Date of last issue: 26.05.2025	Print Date:
3.0	12.06.2026	Date of first issue: 07.06.2016	12.06.2026

major-accident hazards involving dangerous substances.

E2 ENVIRONMENTAL HAZARDS

18 Liquefied flammable gases  
(including LPG) and natural gas

Volatile organic compounds : Directive 2010/75/EU of 24 November 2010 on industrial and livestock rearing emissions (integrated pollution prevention and control)  
Volatile organic compounds (VOC) content: 82,5 %

### Other regulations:

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

## 15.2 Chemical safety assessment

This information is not available.

## SECTION 16: Other information

### Full text of H-Statements

EUH440 : Accumulates in the environment and living organisms including in humans.  
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.  
H336 : May cause drowsiness or dizziness.  
H400 : Very toxic to aquatic life.  
H410 : Very toxic to aquatic life with long lasting effects.  
H411 : Toxic to aquatic life with long lasting effects.  
EUH066 : Repeated exposure may cause skin dryness or cracking.

### Full text of other abbreviations

Aquatic Acute : Short-term (acute) aquatic hazard  
Aquatic Chronic : Long-term (chronic) aquatic hazard  
Asp. Tox. : Aspiration hazard  
Flam. Gas : Flammable gases

# SAFETY DATA SHEET

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



## OKS 481

Version	Revision Date:	Date of last issue: 26.05.2025	Print Date:
3.0	12.06.2026	Date of first issue: 07.06.2016	12.06.2026

Flam. Liq.	:	Flammable liquids
Note C	:	Some organic substances may be marketed either in a specific isomeric form or as a mixture of several isomers. In this case the supplier must state on the label whether the substance is a specific isomer or a mixture of isomers.
Note S	:	This substance may not require a label according to Article 17 (see Section 1.3 of Annex I) (Table 3).
Note U (Table 3)	:	When put on the market gases have to be classified as "Gases under pressure", in one of the groups compressed gas, liquefied gas, refrigerated liquefied gas or dissolved gas. The group depends on the physical state in which the gas is packaged and therefore has to be assigned case by case. The following codes are assigned: Press. Gas (Comp.) Press. Gas (Liq.) Press. Gas (Ref. Liq.) Press. Gas (Diss.) Aerosols shall not be classified as gases under pressure (See Annex I, Part 2, Section 2.3.2.1, Note 2).
PBT	:	Persistent, bioaccumulative and toxic
Press. Gas	:	Gases under pressure
STOT SE	:	Specific target organ toxicity - single exposure
2006/15/EC	:	Europe. Indicative occupational exposure limit values
ES VLA	:	Spain. Environmental Limits for exposure to Chemical agents - Table 1: Occupational Exposure Values
2006/15/EC / TWA	:	Limit Value - eight hours
ES VLA / VLA-ED	:	Environmental Daily Limit Value
ES VLA / VLA-EC	:	Environmental Short Term Value

ADN - European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways; ADR - Agreement concerning the International Carriage of Dangerous Goods by Road; AIIC - Australian Inventory of Industrial Chemicals; ASTM - American Society for the Testing of Materials; bw - Body weight; CLP - Classification Labelling Packaging Regulation; Regulation (EC) No 1272/2008; CMR - Carcinogen, Mutagen or Reproductive Toxicant; DIN - Standard of the German Institute for Standardisation; DSL - Domestic Substances List (Canada); ECHA - European Chemicals Agency; EC-Number - European Community number; ECx - Concentration associated with x% response; ELx - Loading rate associated with x% response; EmS - Emergency Schedule; ENCS - Existing and New Chemical Substances (Japan); ErCx - Concentration associated with x% growth rate response; GHS - Globally Harmonised 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 Organisation; ISHL - Industrial Safety and Health Law (Japan); ISO - International Organisation for Standardisation; 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 - Organisation 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;

# SAFETY DATA SHEET

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



## OKS 481

Version	Revision Date:	Date of last issue: 26.05.2025	Print Date:
3.0	12.06.2026	Date of first issue: 07.06.2016	12.06.2026

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; TECI - Thailand Existing Chemicals Inventory; TRGS - Technical Rule for Hazardous Substances; TSCA - Toxic Substances Control Act (United States); UN - United Nations; vPvB - Very Persistent and Very Bioaccumulative

### Further information

#### Classification of the mixture:

Aerosol 1	H222, H229
STOT SE 3	H336
Asp. Tox. 1	H304
Aquatic Chronic 2	H411

#### Classification procedure:

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

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

This safety data sheet applies only to products as originally packed and labelled. The information contained therein may not be reproduced or modified without our express written permission. Any forwarding of this document is only permitted to the extent required by law. Any further, in particular public, dissemination of the safety data sheet (e.g. as a document for download from the Internet) is not permitted without our express written consent. We provide our customers with amended safety data sheets as prescribed by law. The customer is responsible for passing on safety data sheets and any amendments contained therein to its own customers, employees and other users of the product. We provide no guarantee that safety data sheets received by users from third parties are up-to-date. All information and instructions in this safety data sheet have been compiled to the best of our knowledge and are based on the information available to us on the day of publication. The information provided is intended to describe the product in relation to the required safety measures; it is neither an assurance of characteristics nor a guarantee of the product's suitability for particular applications and does not justify any contractual legal relationship. The existence of a safety data sheet for a particular jurisdiction does not necessarily mean that import or use within that jurisdiction is legally permitted. If you have any questions, please contact your responsible sales contact or authorized trading partner.