

SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006 - FR
(Commission Regulation (EU) 2020/878)



OKS 2501

Version	Revision Date:	Date of last issue: 11.07.2018	Print Date:
4.0	07.09.2021	Date of first issue: 05.07.2016	07.09.2021

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

1.1 Product identifier

Product name : OKS 2501

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
info@oks-germany.com

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

National contact :

1.4 Emergency telephone number

Emergency telephone num-
ber : +33 1 45 42 59 59

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.
Skin irritation, Category 2	H315: Causes skin irritation.
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.

SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006 - FR
(Commission Regulation (EU) 2020/878)








OKS 2501

Version	Revision Date:	Date of last issue: 11.07.2018	Print Date:
4.0	07.09.2021	Date of first issue: 05.07.2016	07.09.2021

Aspiration hazard, Category 1	H304: May be fatal if swallowed and enters air-ways.
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 air-ways.
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, 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.
P280 Wear protective gloves/ eye protection/ face protection.

Response:
P301 + P310 IF SWALLOWED: Immediately call a POISON CENTER/ doctor.
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.
P331 Do NOT induce vomiting.
P391 Collect spillage.

Storage:
P405 Store locked up.
P410 + P412 Protect from sunlight. Do not expose to temperatures exceeding 50 °C/ 122 °F.

SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006 - FR
(Commission Regulation (EU) 2020/878)



OKS 2501

Version	Revision Date:	Date of last issue: 11.07.2018	Print Date:
4.0	07.09.2021	Date of first issue: 05.07.2016	07.09.2021

Hazardous components which must be listed on the label:

Hydrocarbons, C6-C7, n-alkanes, isoalkanes, cyclics, <5% n-hexane

calcium dihydroxide

Additional Labelling

EUH208 Contains Molybdenum trioxide, reaction products with bis[O,O-bis(2-ethylhexyl)] hydrogen dithiophosphate. **May produce an allergic reaction.**

EUH211 **Warning! Hazardous respirable droplets may be formed when sprayed. Do not breathe spray or mist.**

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 : Active substance with propellant
Synthetic hydrocarbon oil
solid lubricant

Components

Chemical name	CAS-No. EC-No. Index-No. Registration number	Classification	specific concentration limit M-Factor Notes Acute toxicity estimate	Concentration (% w/w)
Hydrocarbons, C6-C7, n-alkanes, isoalkanes, cyclics, <5% n-hexane	921-024-6 01-2119475514-35-XXXX	Flam. Liq.2; H225 Skin Irrit.2; H315 STOT SE3; H336 Asp. Tox.1; H304 Aquatic Chronic2; H411		>= 30 - < 50
propane	74-98-6 200-827-9	Flam. Gas1A; H220		>= 10 - < 20

SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006 - FR
(Commission Regulation (EU) 2020/878)



OKS 2501

Version
4.0

Revision Date:
07.09.2021

Date of last issue: 11.07.2018
Date of first issue: 05.07.2016

Print Date:
07.09.2021

	601-003-00-5 01-2119486944-21-XXXX	Press. GasCompr. Gas; H280	Note U (table 3.1)	
calcium dihydroxide	1305-62-0 215-137-3 01-2119475151-45-XXXX	Skin Irrit.2; H315 Eye Dam.1; H318 STOT SE3; H335		$\geq 3 - < 10$
Amines, N-C16-C18-alkyl-(evennumbered, C18 unsaturated) propane-1,3-diaminium di[(9Z)-octadec-9-enoate]	800-362-7 01-2119974117-33-XXXX	Skin Irrit.2; H315 Eye Irrit.2; H319 STOT RE2; H373 Aquatic Acute1; H400 Aquatic Chronic2; H411	M-Factor: 10/1	$\geq 1 - < 2,5$
Molybdenum trioxide, reaction products with bis[O,O-bis(2-ethylhexyl)] hydrogen dithiophosphate	947-946-9 01-2120772600-59-XXXX	Skin Irrit.2; H315 Skin Sens.1B; H317 Aquatic Chronic4; H413		$\geq 0,1 - < 0,25$
Substances with a workplace exposure limit :				
butane	106-97-8 203-448-7 601-004-00-0	Flam. Gas1A; H220 Press. GasCompr. Gas; H280	Note U (table 3.1), Note C	$\geq 20 - < 30$
titanium dioxide; [in powder form containing 1 % or more of particles with aerodynamic diameter $\leq 10 \mu\text{m}$]	13463-67-7 236-675-5 022-006-00-2 01-2119489379-17-XXXX	Not classified	Note 10, Note V, Note W	$\geq 1 - < 10$

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.

SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006 - FR
(Commission Regulation (EU) 2020/878)



OKS 2501

Version	Revision Date:	Date of last issue: 11.07.2018	Print Date:
4.0	07.09.2021	Date of first issue: 05.07.2016	07.09.2021

- 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.

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
Allergic appearance

Aspiration may cause pulmonary oedema and pneumonitis.
- Risks : 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.

4.3 Indication of any immediate medical attention and special treatment needed

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

SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006 - FR
(Commission Regulation (EU) 2020/878)



OKS 2501

Version	Revision Date:	Date of last issue: 11.07.2018	Print Date:
4.0	07.09.2021	Date of first issue: 05.07.2016	07.09.2021

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 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 (NOx)
Oxides of phosphorus
Metal oxides

5.3 Advice for firefighters

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

SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006 - FR
(Commission Regulation (EU) 2020/878)



OKS 2501

Version	Revision Date:	Date of last issue: 11.07.2018	Print Date:
4.0	07.09.2021	Date of first issue: 05.07.2016	07.09.2021

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.
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.

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.

SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006 - FR
(Commission Regulation (EU) 2020/878)



OKS 2501

Version 4.0 Revision Date: 07.09.2021 Date of last issue: 11.07.2018 Print Date: 07.09.2021
Date of first issue: 05.07.2016

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
butane	106-97-8	VME	800 ppm 1.900 mg/m ³	FR VLE (2005-02-01)
Further information: Indicative exposure limits				
titanium dioxide; [in powder form containing 1 % or more of particles with aerodynamic diameter ≤ 10 µm]	13463-67-7	VME	10 mg/m ³ (Titanium)	FR VLE (2016-10-01)
Further information: Indicative exposure limits				
calcium dihydroxide	1305-62-0	TWA (Respirable fraction)	1 mg/m ³	2017/164/EU (2017-02-01)
Further information: Indicative				
		STEL (Respirable fraction)	4 mg/m ³	2017/164/EU (2017-02-01)
Further information: Indicative				
		VME (Alveolar fraction)	1 mg/m ³	FR VLE (2019-10-02)
Further information: Indicative exposure limits				
		VLCT (VLE) (Alveolar fraction)	4 mg/m ³	FR VLE (2019-10-02)
Further information: Indicative exposure limits				

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

Substance name	End Use	Exposure routes	Potential health effects	Value
Hydrocarbons, C6-C7, n-alkanes, isoalkanes, cyclics, <5% n-hexane	Workers	Skin contact	Long-term systemic effects	773 mg/kg bw/day
	Workers	Inhalation	Long-term systemic effects	2035 mg/m ³
titanium dioxide; [in powder form containing 1 % or more of particles with aerodynamic diameter ≤ 10 µm]	Workers	Inhalation	Long-term local effects	10 mg/m ³

SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006 - FR
(Commission Regulation (EU) 2020/878)



OKS 2501

Version 4.0 Revision Date: 07.09.2021 Date of last issue: 11.07.2018 Print Date: 07.09.2021
Date of first issue: 05.07.2016

Benzene, mono-C10-13-alkyl derivs., distn. residues	Workers	Inhalation	Long-term systemic effects	3,2 mg/m3
	Workers	Skin contact	Long-term systemic effects	4,3 mg/kg bw/day
calcium dihydroxide	Workers	Inhalation	Long-term local effects	1 mg/m3
	Workers	Inhalation	Acute local effects	4 mg/m3
Amines, N-C16-C18-alkyl-(evennumbered, C18 unsaturated) propane-1,3-diaminium di[(9Z)-octadec-9-enoate]	Workers	Skin contact	Long-term systemic effects	0,04 mg/kg
	Workers	Inhalation	Long-term systemic effects	0,29 mg/m3
Molybdenum trioxide, reaction products with bis[O,O-bis(2-ethylhexyl)] hydrogen dithiophosphate	Workers	Inhalation	Long-term systemic effects	4,93 mg/m3
	Workers	Dermal	Long-term systemic effects	1,4 mg/kg bw/day

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

Substance name	Environmental Compartment	Value
titanium dioxide; [in powder form containing 1 % or more of particles with aerodynamic diameter ≤ 10 µm]	Fresh water	0,184 mg/l
	Intermittent use/release	0,193 mg/l
	Marine water	0,0184 mg/l
	Sewage treatment plant	100 mg/l
	Marine sediment	100 mg/l
	Fresh water sediment	1000 mg/l
	Soil	100 mg/l
Benzene, mono-C10-13-alkyl derivs., distn. residues	Fresh water	0,001 mg/l
	Intermittent use/release	0,001 mg/l
	Marine water	0 mg/l
	Microbiological Activity in Sewage Treatment Systems	2 mg/l
	Fresh water sediment	1,65 mg/kg
	Marine sediment	0,165 mg/kg
	Soil	0,329 mg/kg
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
Amines, N-C16-C18-alkyl-	Fresh water	0,00638 mg/l

SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006 - FR
(Commission Regulation (EU) 2020/878)



OKS 2501

Version 4.0 Revision Date: 07.09.2021 Date of last issue: 11.07.2018 Print Date: 07.09.2021
Date of first issue: 05.07.2016

(evennumbered, C18 unsaturated) propane-1,3-diaminium di[(9Z)-octadec-9-enoate]		
	Marine water	0,000638 mg/l
	Intermittent use/release	0,00509 mg/l
	Microbiological Activity in Sewage Treatment Systems	98,6 mg/l
	Fresh water sediment	204 mg/kg
	Marine sediment	20,4 mg/kg
	Soil	9,93 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 : 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.
The selected protective gloves have to satisfy the specifications of Regulation (EU) 2016/425 and the standard EN 374 derived from it.

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.
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

SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006 - FR
(Commission Regulation (EU) 2020/878)



OKS 2501

Version	Revision Date:	Date of last issue: 11.07.2018	Print Date:
4.0	07.09.2021	Date of first issue: 05.07.2016	07.09.2021

Physical state : aerosol

Colour : white

Odour : solvent-like

Odour Threshold : No data available

Melting point/range : No data available

Boiling point/boiling range : -20 °C (1.013 hPa)

Flammability : Not applicable

Upper explosion limit / Upper flammability limit : 15 %(V)

Lower explosion limit / Lower flammability limit : 0,6 %(V)

Flash point : -20 °C
Method: Abel-Pensky, closed cup

Auto-ignition temperature : No data available

Decomposition temperature
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 mm²/s (40 °C)

Solubility(ies)
Water solubility : insoluble

Solubility in other solvents : No data available

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

Vapour pressure : 2.860 hPa (20 °C)

Relative density : 0,775 (20 °C)
Reference substance: Water

SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006 - FR
(Commission Regulation (EU) 2020/878)



OKS 2501

Version	Revision Date:	Date of last issue: 11.07.2018	Print Date:
4.0	07.09.2021	Date of first issue: 05.07.2016	07.09.2021

The value is calculated

Density : 0,78 g/cm³
(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

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.

SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006 - FR
(Commission Regulation (EU) 2020/878)



OKS 2501

Version	Revision Date:	Date of last issue: 11.07.2018	Print Date:
4.0	07.09.2021	Date of first issue: 05.07.2016	07.09.2021

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:;
Respiratory disorder, Dizziness, Drowsiness, Vomiting, Fa-
tigue, Vertigo, Central nervous system depression
- Acute dermal toxicity : Symptoms: Redness, Local irritation

Components:

Hydrocarbons, C6-C7, n-alkanes, isoalkanes, cyclics, <5% n-hexane:

- Acute oral toxicity : LD50 (Rat): > 5.840 mg/kg
Assessment: The substance or mixture has no acute oral tox-
icity
- Acute inhalation toxicity : LC50 (Rat): > 25,2 mg/l
Exposure time: 4 h
Test atmosphere: vapour
Assessment: The substance or mixture has no acute inhala-
tion toxicity
- Acute dermal toxicity : LD50 (Rat): > 2,8 g/kg
Assessment: The substance or mixture has no acute dermal
toxicity

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 tox-
icity
- 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

SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006 - FR
(Commission Regulation (EU) 2020/878)



OKS 2501

Version	Revision Date:	Date of last issue: 11.07.2018	Print Date:
4.0	07.09.2021	Date of first issue: 05.07.2016	07.09.2021

Assessment: The substance or mixture has no acute dermal toxicity

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

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

Acute dermal toxicity : LD50 (Rabbit): > 2.000 mg/kg
Assessment: The substance or mixture has no acute dermal toxicity

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

Acute dermal toxicity : Symptoms: Redness, Local irritation

butane:

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

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

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

Acute inhalation toxicity : (Rat): > 5,09 mg/l
Method: OECD Test Guideline 403
GLP: no

Skin corrosion/irritation

Product:

Remarks : Irritating to skin.

Components:

Hydrocarbons, C6-C7, n-alkanes, isoalkanes, cyclics, <5% n-hexane:

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

calcium dihydroxide:

Species : human skin
Assessment : Irritating to skin.
Method : OECD Test Guideline 431
Result : Irritating to skin.

SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006 - FR
(Commission Regulation (EU) 2020/878)



OKS 2501

Version	Revision Date:	Date of last issue: 11.07.2018	Print Date:
4.0	07.09.2021	Date of first issue: 05.07.2016	07.09.2021

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

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

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

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

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

Remarks : Irritating to skin.

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

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

Serious eye damage/eye irritation

Product:

Remarks : Risk of serious damage to eyes.

Components:

Hydrocarbons, C6-C7, n-alkanes, isoalkanes, cyclics, <5% n-hexane:

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

calcium dihydroxide:

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

SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006 - FR
(Commission Regulation (EU) 2020/878)



OKS 2501

Version	Revision Date:	Date of last issue: 11.07.2018	Print Date:
4.0	07.09.2021	Date of first issue: 05.07.2016	07.09.2021

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

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

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

Assessment : No eye irritation
Result : No eye irritation

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

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

Respiratory or skin sensitisation

Product:

Remarks : This information is not available.

Components:

Hydrocarbons, C6-C7, n-alkanes, isoalkanes, cyclics, <5% n-hexane:

Test Type : Maximisation Test
Exposure routes : Dermal
Species : Guinea pig
Assessment : Does not cause skin sensitisation.
Method : OECD Test Guideline 406
Result : Did not cause sensitisation on laboratory animals.

calcium dihydroxide:

Test Type : Local lymph node assay (LLNA)
Species : Mouse
Assessment : Does not cause skin sensitisation.
Method : OECD Test Guideline 429
Result : Does not cause skin sensitisation.
GLP : yes

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

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

SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006 - FR
(Commission Regulation (EU) 2020/878)



OKS 2501

Version	Revision Date:	Date of last issue: 11.07.2018	Print Date:
4.0	07.09.2021	Date of first issue: 05.07.2016	07.09.2021

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

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

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

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

Germ cell mutagenicity

Product:

Genotoxicity in vitro : Remarks: No data available

Genotoxicity in vivo : Remarks: No data available

Components:

Hydrocarbons, C6-C7, n-alkanes, isoalkanes, cyclics, <5% n-hexane:

Genotoxicity in vitro : Test Type: Chromosome aberration test in vitro
Test system: Rodent cell line
Method: OECD Test Guideline 473
Result: negative

calcium dihydroxide:

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

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

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

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

Genotoxicity in vitro : Test Type: Ames test
Result: negative

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

SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006 - FR
(Commission Regulation (EU) 2020/878)



OKS 2501

Version 4.0	Revision Date: 07.09.2021	Date of last issue: 11.07.2018 Date of first issue: 05.07.2016	Print Date: 07.09.2021
----------------	------------------------------	-------------------------------------------------------------------	---------------------------

assessment mutagenic effects.

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

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

Carcinogenicity

Product:

Remarks : No data available

Components:

calcium dihydroxide:

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

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

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

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

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

Reproductive toxicity

Product:

Effects on fertility : Remarks: No data available

Effects on foetal development : Remarks: No data available

Components:

calcium dihydroxide:

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

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

SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006 - FR
(Commission Regulation (EU) 2020/878)



OKS 2501

Version	Revision Date:	Date of last issue: 11.07.2018	Print Date:
4.0	07.09.2021	Date of first issue: 05.07.2016	07.09.2021

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

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

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

STOT - single exposure

Components:

Hydrocarbons, C6-C7, n-alkanes, isoalkanes, cyclics, <5% n-hexane:

Assessment : May cause drowsiness or dizziness.

calcium dihydroxide:

Assessment : May cause respiratory irritation.

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

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

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

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

STOT - repeated exposure

Components:

Hydrocarbons, C6-C7, n-alkanes, isoalkanes, cyclics, <5% n-hexane:

Exposure routes : inhalation (vapour)
Assessment : No significant health effects observed in animals at concentrations of 1 mg/l/6h/d or less.

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

Exposure routes : Ingestion
Assessment : May cause damage to organs through prolonged or repeated exposure.

SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006 - FR
(Commission Regulation (EU) 2020/878)



OKS 2501

Version	Revision Date:	Date of last issue: 11.07.2018	Print Date:
4.0	07.09.2021	Date of first issue: 05.07.2016	07.09.2021

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

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

Repeated dose toxicity

Product:

Remarks : This information is not available.

Aspiration toxicity

Product:

May be fatal if swallowed and enters airways.

May be fatal if swallowed and enters airways.

Components:

Hydrocarbons, C6-C7, n-alkanes, isoalkanes, cyclics, <5% n-hexane:

May be fatal if swallowed and enters airways.

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

No aspiration toxicity classification

Further information

Product:

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

Components:

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

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

SECTION 12: Ecological information

12.1 Toxicity

Product:

Toxicity to fish : Remarks: Toxic to aquatic organisms, may cause long-term

SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006 - FR
(Commission Regulation (EU) 2020/878)



OKS 2501

Version	Revision Date:	Date of last issue: 11.07.2018	Print Date:
4.0	07.09.2021	Date of first issue: 05.07.2016	07.09.2021

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:

Hydrocarbons, C6-C7, n-alkanes, isoalkanes, cyclics, <5% n-hexane:

Toxicity to fish : LC50 (Oncorhynchus mykiss (rainbow trout)): > 22 mg/l
Exposure time: 96 h
Method: OECD Test Guideline 203
GLP: yes

Toxicity to daphnia and other aquatic invertebrates : EL50 (Daphnia magna (Water flea)): 3 mg/l
Exposure time: 48 h
Method: OECD Test Guideline 202
GLP: yes

Toxicity to algae/aquatic plants : EbC50 (Pseudokirchneriella subcapitata (green algae)): 26 mg/l
Exposure time: 72 h
Method: OECD Test Guideline 201

Ecotoxicology Assessment

Acute aquatic toxicity : Toxic to aquatic life.

Chronic aquatic toxicity : Toxic 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
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/aquatic plants : EC50 (Pseudokirchneriella subcapitata (green algae)): 184,57 mg/l
Exposure time: 72 h
Test Type: static test

SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006 - FR
(Commission Regulation (EU) 2020/878)



OKS 2501

Version	Revision Date:	Date of last issue: 11.07.2018	Print Date:
4.0	07.09.2021	Date of first issue: 05.07.2016	07.09.2021

Method: OECD Test Guideline 201

GLP: yes

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

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

Toxicity to fish : LC50 (Danio rerio (zebra fish)): > 0,1 - 1 mg/l
Exposure time: 96 h
Method: OECD Test Guideline 203

Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna (Water flea)): > 0,1 - 1 mg/l
Exposure time: 48 h

Toxicity to algae/aquatic plants : EC50 (Pseudokirchneriella subcapitata (green algae)): > 0,01 - 0,1 mg/l
Exposure time: 72 h
Method: OECD Test Guideline 201

M-Factor (Acute aquatic toxicity) : 10

Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) : EC50: 1,41 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

Ecotoxicology Assessment

Acute aquatic toxicity : Very toxic to aquatic life.

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

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

Toxicity to fish : LC50 (Oncorhynchus mykiss (rainbow trout)): > 100 mg/l
Exposure time: 96 h
Test Type: semi-static test
Method: OECD Test Guideline 203
GLP: yes

Remarks: May cause long-term adverse effects in the aquatic environment.

Toxicity to daphnia and other : EC50 (Daphnia magna (Water flea)): > 100 mg/l

SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006 - FR
(Commission Regulation (EU) 2020/878)



OKS 2501

Version 4.0	Revision Date: 07.09.2021	Date of last issue: 11.07.2018 Date of first issue: 05.07.2016	Print Date: 07.09.2021
----------------	------------------------------	-------------------------------------------------------------------	---------------------------

aquatic invertebrates Exposure time: 48 h
Test Type: static test
Method: OECD Test Guideline 202
GLP: yes

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

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

Toxicity to fish : LC50 (Oncorhynchus mykiss (rainbow trout)): > 100 mg/l
Exposure time: 96 h
Test Type: static test
Method: OECD Test Guideline 203

Toxicity to daphnia and other aquatic invertebrates : LC50 (Daphnia magna (Water flea)): > 100 mg/l
Exposure time: 48 h
Test Type: static test
Method: OECD Test Guideline 202

12.2 Persistence and degradability

Product:

Biodegradability : Remarks: No data available

Physico-chemical removability : Remarks: No data available

Components:

Hydrocarbons, C6-C7, n-alkanes, isoalkanes, cyclics, <5% n-hexane:

Biodegradability : Result: Readily biodegradable.

calcium dihydroxide:

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

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

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

SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006 - FR
(Commission Regulation (EU) 2020/878)



OKS 2501

Version	Revision Date:	Date of last issue: 11.07.2018	Print Date:
4.0	07.09.2021	Date of first issue: 05.07.2016	07.09.2021

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

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

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

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

Bioaccumulation : Remarks: Bioaccumulation is unlikely.

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

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

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

SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006 - FR
(Commission Regulation (EU) 2020/878)



OKS 2501

Version	Revision Date:	Date of last issue: 11.07.2018	Print Date:
4.0	07.09.2021	Date of first issue: 05.07.2016	07.09.2021

very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher..

Components:

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

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

12.6 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.

Components:

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

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

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:

SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006 - FR
(Commission Regulation (EU) 2020/878)



OKS 2501

Version	Revision Date:	Date of last issue: 11.07.2018	Print Date:
4.0	07.09.2021	Date of first issue: 05.07.2016	07.09.2021

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

ADN : UN 1950
ADR : UN 1950
RID : UN 1950
IMDG : UN 1950
IATA : UN 1950

14.2 UN proper shipping name

ADN : AEROSOLS
ADR : AEROSOLS
RID : AEROSOLS
IMDG : AEROSOLS
(naphtha (petroleum), hydrotreated light, fatty amine deriva-
tive)
IATA : Aerosols, flammable

14.3 Transport hazard class(es)

ADN : 2
ADR : 2
RID : 2
IMDG : 2.1
IATA : 2.1

14.4 Packing group

ADN
Packing group : Not assigned by regulation
Classification Code : 5F
Labels : 2.1

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

RID
Packing group : Not assigned by regulation

SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006 - FR
(Commission Regulation (EU) 2020/878)



OKS 2501

Version 4.0	Revision Date: 07.09.2021	Date of last issue: 11.07.2018 Date of first issue: 05.07.2016	Print Date: 07.09.2021
----------------	------------------------------	-------------------------------------------------------------------	---------------------------

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

ADN

Environmentally hazardous : yes

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

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, preparations and articles (Annex XVII) : Not applicable

REACH - Candidate List of Substances of Very High : This product does not contain sub-

SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006 - FR
(Commission Regulation (EU) 2020/878)



OKS 2501

Version 4.0	Revision Date: 07.09.2021	Date of last issue: 11.07.2018 Date of first issue: 05.07.2016	Print Date: 07.09.2021
----------------	------------------------------	-------------------------------------------------------------------	---------------------------

Concern for Authorisation (Article 59).
(EU SVHC) : stances of very high concern (Regulation (EC) No 1907/2006 (REACH), Article 57).

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

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

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

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

: P2

Seveso III: Directive 2012/18/EU of the European Parliament and of the Council on the control of major-accident hazards involving dangerous substances. P3a FLAMMABLE AEROSOLS

E2 ENVIRONMENTAL HAZARDS

18 Liquefied extremely flammable gases (including LPG) and natural gas

Occupational Illnesses (R-461-3, France) : 84, 36, 49, 49 bis, 25

Reinforced medical supervision (R4624-18) : The product has no CMR properties

Installations classified for the protection of the environment (Environment Code R511-9) : 4320, 4511, 4718, 4734

Volatile organic compounds : Directive 2010/75/EU of 24 November 2010 on industrial emissions (integrated pollution prevention and control)
Volatile organic compounds (VOC) content: 69,63 %

Other regulations:

SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006 - FR
(Commission Regulation (EU) 2020/878)



OKS 2501

Version	Revision Date:	Date of last issue: 11.07.2018	Print Date:
4.0	07.09.2021	Date of first issue: 05.07.2016	07.09.2021

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

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.
H317	: May cause an allergic skin reaction.
H318	: Causes serious eye damage.
H319	: Causes serious eye irritation.
H335	: May cause respiratory irritation.
H336	: May cause drowsiness or dizziness.
H373	: May cause damage to organs through prolonged or repeated exposure if swallowed.
H400	: Very toxic to aquatic life.
H411	: Toxic to aquatic life with long lasting effects.
H413	: May cause long lasting harmful effects to aquatic life.

Full text of other abbreviations

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

SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006 - FR
(Commission Regulation (EU) 2020/878)



OKS 2501

Version	Revision Date:	Date of last issue: 11.07.2018	Print Date:
4.0	07.09.2021	Date of first issue: 05.07.2016	07.09.2021

- diameter < 3 µm, length > 5 µm and aspect ratio >= 3:1) or particles of the substance fulfilling the WHO fibre criteria or as particles with modified surface chemistry, their hazardous properties must be evaluated in accordance with Title II of this Regulation, to assess whether a higher category (Carc. 1B or 1A) and/or additional routes of exposure (oral or dermal) should be applied.
- Note W : It has been observed that the carcinogenic hazard of this substance arises when respirable dust is inhaled in quantities leading to significant impairment of particle clearance mechanisms in the lung. This note aims to describe the particular toxicity of the substance; it does not constitute a criterion for classification according to this Regulation.
- 2017/164/EU : Europe. Commission Directive 2017/164/EU establishing a fourth list of indicative occupational exposure limit values
- FR VLE : France. Occupational Exposure Limits (INRS)
- 2017/164/EU / STEL : Short term exposure limit
- 2017/164/EU / TWA : Limit Value - eight hours
- FR VLE / VME : Time Weighted Average
- FR VLE / VLCT (VLE) : Short Term Exposure Limit

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; 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 Harmonized System; GLP - Good Laboratory Practice; IARC - International Agency for Research on Cancer; IATA - International Air Transport Association; IBC - International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk; IC50 - Half maximal inhibitory concentration; ICAO - International Civil Aviation Organization; IECSC - Inventory of Existing Chemical Substances in China; IMDG - International Maritime Dangerous Goods; IMO - International Maritime Organization; ISHL - Industrial Safety and Health Law (Japan); ISO - International Organisation for Standardization; KECI - Korea Existing Chemicals Inventory; LC50 - Lethal Concentration to 50 % of a test population; LD50 - Lethal Dose to 50% of a test population (Median Lethal Dose); MARPOL - International Convention for the Prevention of Pollution from Ships; n.o.s. - Not Otherwise Specified; NO(A)EC - No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NOELR - No Observable Effect Loading Rate; NZIoC - New Zealand Inventory of Chemicals; OECD - Organization for Economic Co-operation and Development; OPPTS - Office of Chemical Safety and Pollution Prevention; PBT - Persistent, Bioaccumulative and Toxic substance; PICCS - Philippines Inventory of Chemicals and Chemical Substances; (Q)SAR - (Quantitative) Structure Activity Relationship; REACH - Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals; RID - Regulations concerning the International Carriage of Dangerous Goods by Rail; SADT - Self-Accelerating Decomposition Temperature; SDS - Safety Data Sheet; SVHC - Substance of Very High Concern; TCSI - Taiwan Chemical Substance Inventory; TRGS - Technical Rule for Hazardous Substances; TSCA - Toxic Substances Control Act (United States); UN - United Nations; vPvB - Very Persistent and Very Bioaccumulative

SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006 - FR
(Commission Regulation (EU) 2020/878)



OKS 2501

Version	Revision Date:	Date of last issue: 11.07.2018	Print Date:
4.0	07.09.2021	Date of first issue: 05.07.2016	07.09.2021

Further information

Classification of the mixture:

Aerosol 1	H222, H229
Skin Irrit. 2	H315
Eye Dam. 1	H318
STOT SE 3	H336
Asp. Tox. 1	H304
Aquatic Chronic 2	H411

Classification procedure:

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

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