OKS 2501

Version	Revision Date:	Date of last issue: 28.05.2026	Print Date:
5.1	07.08.2026	Date of first issue: 05.07.2016	07.08.2026

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 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 Polska Sp. z o.o.
ul. Pilotów 19, Janikowo
62-006 Kobylnica
Polska
Tel: +48 61 6563 960
Fax: +48 61 8 793 805
office@pl.klueber.com

1.4 Emergency telephone number

Emergency telephone number : +49 8142 3051 517
Warszawa: +48 22 619 66 54

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.
Specific target organ toxicity - repeated exposure, Category 2, Central nervous system	H373: May cause damage to organs through prolonged or repeated exposure.
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.
H315	Causes skin irritation.
H318	Causes serious eye damage.
H336	May cause drowsiness or dizziness.
H373	May cause damage to organs (Central nervous system) through prolonged or repeated exposure.
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.
P260	Do not breathe mist.
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.

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:

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

calcium dihydroxide

n-hexane

Additional Labelling

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

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
solid lubricant

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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 SE 3; H336 (Central nervous system) Asp. Tox. 1; H304 Aquatic Chronic 2; H411		>= 25 - < 30
calcium dihydroxide	1305-62-0 215-137-3 01-2119475151-45-XXXX	Skin Irrit. 2; H315 Eye Dam. 1; H318 STOT SE 3; H335 (Respiratory system)		>= 3 - < 10
n-hexane	110-54-3 203-777-6 601-037-00-0 01-2119480412-44-XXXX	Flam. Liq. 2; H225 Skin Irrit. 2; H315 Repr. 2; H361f STOT SE 3; H336 (Central nervous system) STOT RE 1; H372 (Central nervous system) Asp. Tox. 1; H304 Aquatic Chronic 2; H411	**, ***	>= 1 - < 2,5
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 RE 2; H373 Aquatic Acute 1; H400 Aquatic Chronic 2; H411	M-Factor: 10/1	>= 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 Chronic 4; H413		>= 0,1 - < 0,25
Substances with a workplace exposure limit :				
butane	106-97-8 203-448-7	Flam. Gas 1; H220 Press. Gas	Note U (Table	>= 20 - < 30

	601-004-00-0 01-2119474691-32-XXXX	Compr. Gas; H280	3), Note C, Note S	
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)	>= 10 - < 20
titanium dioxide; [in powder form containing <1 % of particles with aerodynamic diameter ≤ 10 µm]	13463-67-7 236-675-5 01-2119489379-17-XXXX	Not classified		>= 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 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 : Aspiration may cause pulmonary oedema and pneumonitis.

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

Risks : May be fatal if swallowed and enters airways.
Causes skin irritation.
Causes serious eye damage.
May cause drowsiness or dizziness.
May cause damage to organs through prolonged or repeated exposure.

Central nervous system depression
Risk of product entering the lungs on vomiting after ingestion.
Health injuries may be delayed.

4.3 Indication of any immediate medical attention and special treatment needed

Treatment : Treat symptomatically.

SECTION 5: Firefighting measures

5.1 Extinguishing media

Suitable extinguishing media : ABC powder

Unsuitable extinguishing media : High volume water jet

5.2 Special hazards arising from the substance or mixture

Specific hazards during 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.

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.

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.
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
butane	106-97-8	NDS	1.900 mg/m3	PL OEL (2021-02-19)
		NDSch	3.000 mg/m3	PL OEL (2021-02-19)
propane	74-98-6	NDS	1.800 mg/m3	PL OEL (2021-02-19)
titanium dioxide; [in	13463-67-7	NDS (inhalable	10 mg/m3	PL OEL

powder form containing <1 % of particles with aerodynamic diameter ≤ 10 µm]		fraction)		(2024-07-10)
calcium dihydroxide	1305-62-0	TWA (Respirable fraction)	1 mg/m3	2017/164/EU (2017-02-01)
	Further information: Indicative			
		STEL (Respirable fraction)	4 mg/m3	2017/164/EU (2017-02-01)
	Further information: Indicative			
		NDS (inhalable fraction)	2 mg/m3	PL OEL (2021-02-19)
		NDS (respirable fraction)	1 mg/m3	PL OEL (2021-02-19)
		NDSch (inhalable fraction)	6 mg/m3	PL OEL (2021-02-19)
		NDSch (respirable fraction)	4 mg/m3	PL OEL (2021-02-19)
n-hexane	110-54-3	TWA	20 ppm 72 mg/m3	2006/15/EC (2006-02-09)
	Further information: Indicative			
		NDS	72 mg/m3	PL OEL (2021-02-19)
	Further information: Skin			
Molybdenum trioxide, reaction products with bis[O,O-bis(2-ethylhexyl)] hydrogen dithiophosphate	Not Assigned	NDS	4 mg/m3 (Molybdenum)	PL OEL (2021-02-19)
		NDSch	10 mg/m3 (Molybdenum)	PL OEL (2021-02-19)

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/m3
Benzene, mono-C10-13-alkyl derivs., distn. residues	Workers	Inhalation	Long-term systemic effects	2,2 mg/m3
	Workers	Skin contact	Long-term systemic effects	3,15 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
n-hexane	Workers	Inhalation	Long-term systemic effects	75 mg/m3
	Workers	Skin contact	Long-term systemic effects	11 mg/kg

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

Substance name	Environmental Compartment	Value
Benzene, mono-C10-13-alkyl derivs., distn. residues	Fresh water	0,001 mg/l
	Intermittent use/release	0,001 mg/l
	Marine water	0 mg/l
	Microbiological Activity in Sewage Treatment Systems	2 mg/l
	Fresh water sediment	16,5 mg/kg
	Marine sediment	1,65 mg/kg
	Soil	3,7 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-(evennumbered, C18 unsaturated) propane-1,3-diaminium di[(9Z)-octadec-9-enoate]	Fresh water	0,00638 mg/l
	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/face protection : Tightly fitting safety goggles

Hand protection
- Material : butyl-rubber
- Break through time : > 10 min
- Protective index : Class 1

Remarks : Wear protective gloves. The break through time depends amongst other things on the material, the thickness and the type of glove and therefore has to be measured for each case.
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

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

toxicity

Acute inhalation toxicity : LC50 (Rat): > 25,2 mg/l
Exposure time: 4 h
Test atmosphere: vapour
Assessment: The substance or mixture has no acute inhalation toxicity

Acute dermal toxicity : LD50 (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 toxicity

Acute inhalation toxicity : LC50 (Rat, male and female): > 6,04 mg/l
Exposure time: 4 h
Test atmosphere: dust/mist
Method: OECD Test Guideline 436
GLP: yes

Acute dermal toxicity : LD50 (Rabbit, male and female): > 2.500 mg/kg
Method: OECD Test Guideline 402
Assessment: The substance or mixture has no acute dermal toxicity

n-hexane:

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

Acute inhalation toxicity : LC50 (Rat): 259,35 mg/l
Exposure time: 4 h
Test atmosphere: vapour
Method: OECD Test Guideline 403

Acute dermal toxicity : LD50 (Rabbit): 3.350 mg/kg
Method: OECD Test Guideline 402
Assessment: The substance or mixture has no acute dermal toxicity

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 % of particles with aerodynamic diameter ≤ 10 µm]:

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

Causes skin irritation.

Product:

Remarks : This information is not available.

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.
GLP : yes

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

n-hexane:

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

Amines, N-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 dithiophosphate:

Species	:	reconstructed human epidermis (RhE)
Exposure time	:	15 min
Assessment	:	Irritating to skin.
Method	:	OECD Test Guideline 439
Result	:	Irritating to skin.
GLP	:	yes

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

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

Serious eye damage/eye irritation

Causes serious eye damage.

Product:

Remarks	:	This information is not available.

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

n-hexane:

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

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 dithiophosphate:

Species : Bovine cornea
Exposure time : 10 min
Assessment : No eye irritation
Method : OECD Test Guideline 437
Result : No eye irritation
GLP : yes

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

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

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:

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

n-hexane:

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

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.

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

Test Type	:	Local lymph node assay (LLNA)
Species	:	Mouse
Assessment	:	The product is a skin sensitiser, sub-category 1B.
Method	:	OECD Test Guideline 429
Result	:	The product is a skin sensitiser, sub-category 1B.
GLP	:	yes

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

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

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:

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

n-hexane:

Germ cell mutagenicity-Assessment : Weight of evidence does not support classification as a germ cell mutagen.

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

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

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

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

Genotoxicity in vitro : Test Type: Ames test
Test system: Salmonella typhimurium
Metabolic activation: with and without metabolic activation
Method: OECD Test Guideline 471
Result: negative
GLP: yes

Test Type: in vitro micronucleus test

Test system: Human lymphocytes
Metabolic activation: with and without metabolic activation
Method: OECD Test Guideline 487
Result: negative
GLP: yes

Test Type: In vitro mammalian cell gene mutation test
Test system: mouse lymphoma cells
Metabolic activation: with and without metabolic activation
Method: OECD Test Guideline 490
Result: negative
GLP: yes

Germ cell mutagenicity- Assessment : Weight of evidence does not support classification as a germ cell mutagen.

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

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

Carcinogenicity

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

Product:

Remarks : No data available

Components:

calcium dihydroxide:

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

n-hexane:

Carcinogenicity - Assessment : Weight of evidence does not support classification as a carcinogen

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 % of particles with aerodynamic diameter ≤ 10 µm]:

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

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:

calcium dihydroxide:

Reproductive toxicity - Assessment : - Fertility -

No toxicity to reproduction
- Teratogenicity -

No effects on or via lactation

n-hexane:

Reproductive toxicity - Assessment : - Fertility -

Suspected human reproductive toxicant

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

Reproductive toxicity - Assessment : - Fertility -

No toxicity to reproduction
- Teratogenicity -

No toxicity to reproduction

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

Reproductive toxicity - Assessment : - Fertility -

Animal testing did not show any effects on fertility.

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

Reproductive toxicity - Assessment : - Fertility -

No toxicity to reproduction
- Teratogenicity -

No effects on or via lactation

STOT - single exposure

May cause drowsiness or dizziness.

Product:

Remarks : No data available

Components:

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

Assessment : May cause drowsiness or dizziness.

calcium dihydroxide:

Assessment : May cause respiratory irritation.

n-hexane:

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

Amines, N-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 % of particles with aerodynamic diameter ≤ 10 µm]:

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

STOT - repeated exposure

May cause damage to organs (Central nervous system) through prolonged or repeated exposure.

Product:

Remarks : No data available

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.

n-hexane:

Target Organs : Central nervous system
Assessment : The substance or mixture is classified as specific target organ toxicant, repeated exposure, category 1.

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.

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

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

Repeated dose toxicity

Product:

Remarks	:	This information is not available.

Components:

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

Species	:	Rat, male and female
NOAEL	:	100 mg/kg
Application Route	:	oral (gavage)
Exposure time	:	28 d
Number of exposures	:	daily
Method	:	OECD Test Guideline 422
GLP	:	yes
Remarks	:	Not classified due to data which are conclusive although insufficient for classification.

Aspiration toxicity

May be fatal if swallowed and enters airways.

Product:

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.

n-hexane:

May be fatal if swallowed and enters airways.

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

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

Components:

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

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

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:

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
Method: OECD Test Guideline 201
GLP: yes

Ecotoxicology Assessment

Acute aquatic toxicity : This product has no known ecotoxicological effects.

Chronic aquatic toxicity : This product has no known ecotoxicological effects.

n-hexane:

Toxicity to fish : LC50 (Oncorhynchus mykiss (rainbow trout)): 12,51 mg/l
Exposure time: 96 h

Toxicity to daphnia and other : EC50 (Daphnia magna (Water flea)): 21,85 mg/l

aquatic invertebrates — Exposure time: 48 h

Toxicity to algae/aquatic plants : ErC50 (Pseudokirchneriella subcapitata (green algae)): 9,285 mg/l
Exposure time: 72 h

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 aquatic invertebrates : EC50 (Daphnia magna (Water flea)): > 100 mg/l
Exposure time: 48 h

Test Type: static test
Method: OECD Test Guideline 202
GLP: yes

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

Toxicity to microorganisms : EC50 (activated sludge): > 1.000 mg/l
Exposure time: 3 h
Test Type: Respiration inhibition
Analytical monitoring: no
Method: OECD Test Guideline 209
GLP: yes

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

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

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

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.

n-hexane:

Biodegradability : Test Type: aerobic
Inoculum: activated sludge
Result: rapidly biodegradable
Biodegradation: 98 %
Exposure time: 28 d
Method: OECD Test Guideline 301F
GLP: yes
Remarks: Information given is based on data obtained from similar 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

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

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

12.3 Bioaccumulative potential

Product:

Bioaccumulation : Remarks: No data available

Components:

calcium dihydroxide:

Partition coefficient: n-octanol/water : log Pow: 0,05

n-hexane:

Bioaccumulation : Bioconcentration factor (BCF): 501,19

Partition coefficient: n-octanol/water : log Pow: 3,42 - 5,8 (20 °C)
pH: 7

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 dithiophosphate:

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

butane:

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

propane:

Partition coefficient: n-octanol/water : log Pow: 2,36

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:

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

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:

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 derivative)
IATA	:	Aerosols, flammable

14.3 Transport hazard class(es)

		Class	Subsidiary risks
ADN	:	2	2.1
ADR	:	2	2.1
RID	:	2	2.1
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
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	:	203

(passenger aircraft)
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, mixtures and articles (Annex XVII) : Conditions of restriction for the following entries must 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.

Number on list 75
If you intend to use this product as tattoo ink, please contact your vendor.

REACH - Candidate List of Substances of Very High Concern for Authorisation (Article 59).
(EU SVHC) : n-hexane

OKS 2501

Version	Revision Date:	Date of last issue: 28.05.2026	Print Date:
5.1	07.08.2026	Date of first issue: 05.07.2016	07.08.2026

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 major-accident hazards involving dangerous substances.		P3a	FLAMMABLE AEROSOLS
		E2	ENVIRONMENTAL HAZARDS
		18	Liquefied flammable gases (including LPG) and natural gas
		P2	
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: 69,64 %	

Other regulations:

Act of February 25, 2011 on chemical substances and their mixtures (i.e. Journal of Laws of 2020, item 2289)
Regulation (EC) No 1272/2008 of the European Parliament and of the Council of 16 December 2008 on classification, labelling and packaging of substances and mixtures, amending and repealing Directives 67/548/EEC and 1999/45/EC, and amending Regulation (EC) No 1907/2006 (Official Journal of the European Union L 353 from 31.12.2008) with further adaptation to technical progress (ATP).
Regulation (EC) No 1907/2006 of the European Parliament and of the Council of 18 December 2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH), establishing a European Chemicals Agency, amending Directive 1999/45/EC and repealing Council Regulation (EEC) No 793/93 and Commission Regulation (EC) No 1488/94 as well as Council Directive 76/769/EEC and Commission Directives 91/155/EEC, 93/67/EEC, 93/105/EC and 2000/21/EC (Official Journal of the European Union L 396 from 30.12.2006, as amended).
Commission Regulation (EU) 2020/878 of 18 June 2020 amending Annex II to Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH)
Ordinance of the Minister of Family, Labour and Social Policy of 12 June 2018 concerning the highest allowable concentrations and levels of the agents harmful for health in the workplace (Dz.U 2018 pos 1286, with later amendments).
Ordinance of the Minister of Health of 2nd February 2011 concerning tests and measurement of agents harmful for health in the workplace (Dz. U. Nr. 33, item 166 with later amendments).
Ordinance of the Minister of Health of 30th December 2004 on the health and safety of workers related to chemical agents at work (consolidated text, Journal of Laws 2016 no. 0 item 1488)
Act of 14 December 2012. on Waste (Journal of Laws of 2013. pos. 21, as amended).
Act of 13 June 2013. On packaging and packaging waste (Journal. U. of 2013. Item. 888, as amended).
Ordinance of the Minister of Climate of 2nd January 2020 on Waste Catalog (Dz. U. 2020 item 10).
Ordinance of the Minister of Environment on the requirements for carrying out the process of thermal treatment of waste and how to deal with waste produced in the process. (Dz. U. of 2016., Pos. 108)
Act of 19 August 2011 on transport of dangerous goods (Dz. U. Nr. 227, item 1367, as amended).
Government Statement of February 15, 2021 on the entry into force of amendments to Annexes A and B to Agreement concerning the International Carriage of Dangerous Goods by Road (ADR), drawn up in Geneva on September 30, 1957 (Journal of Laws 202 poz.874 as amended)
Act of July 29, 2005 on drug addiction prevention (Journal of Laws of 2005, No. 179, item 1485, with later amendments)
Regulation (EU) 2016/425 of the European Parliament and of the Council of 9 March 2016 on personal protective equipment and repealing Council Directive 89/686/EEC

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.
H361f	:	Suspected of damaging fertility.
H372	:	Causes damage to organs through prolonged or repeated exposure.
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

**	:	Route of exposure cannot be excluded: For certain hazard classes, e.g. STOT, the route of exposure should be indicated in the hazard statement only if it is conclusively proven that no other route of exposure can cause the hazard in accordance to the criteria in Annex I. Under Directive 67/548/EEC the route of exposure was indicated for classifications with R48 when there was data justifying the classification for this route of exposure. The classification under 67/548/EEC indicating the route of exposure has been translated into the corresponding class and category according to this Regulation, but with a general hazard statement not specifying the route of exposure as the necessary information is not available.
***	:	Hazard statements for reproductive toxicity: Hazard statements H360 and H361 indicate a general concern for effects on fertility and/or development: 'May damage/Suspected of damaging fertility or the unborn child'. According to the criteria, the general hazard statement can be replaced by the hazard statement indicating the specific effect of concern in accordance with Section 1.1.2.1.2. When the other differentiation is not mentioned, this is due to evidence proving no such effect, inconclusive data or no data and the obligations in Article 4(3) shall apply for that differentiation. In order not to lose information from the harmonised classifications for fertility and developmental effects under

		Directive 67/548/EEC, the classifications have been translated only for those effects classified under that Directive
Aquatic Acute	:	Short-term (acute) aquatic hazard
Aquatic Chronic	:	Long-term (chronic) aquatic hazard
Asp. Tox.	:	Aspiration hazard
Eye Dam.	:	Serious eye damage
Eye Irrit.	:	Eye irritation
Flam. Gas	:	Flammable gases
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).
Press. Gas	:	Gases under pressure
Repr.	:	Reproductive toxicity
Skin Irrit.	:	Skin irritation
Skin Sens.	:	Skin sensitisation
STOT RE	:	Specific target organ toxicity - repeated exposure
STOT SE	:	Specific target organ toxicity - single exposure
2006/15/EC	:	Europe. Indicative occupational exposure limit values
2017/164/EU	:	Europe. Commission Directive 2017/164/EU establishing a fourth list of indicative occupational exposure limit values
PL OEL	:	Ordinance of the Minister of Family, Labour and Social Policy of 12 June 2018 concerning the highest allowable concentrations and levels of the agents harmful for health in the workplace (Dz.U 2018 pos 1286, with later amendments)
2006/15/EC / TWA	:	Limit Value - eight hours
2017/164/EU / STEL	:	Short term exposure limit
2017/164/EU / TWA	:	Limit Value - eight hours
PL OEL / NDS	:	Maximal Admissible Concentration
PL OEL / NDSch	:	Maximal Admissible Temporary Concentration

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; BGW - Biological Limit Values; 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); LSPN - List of Hazardous Notified Substances (Chile); 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; 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:		**Classification procedure:**
Aerosol 1	H222, H229	Based on product data or assessment
Skin Irrit. 2	H315	Calculation method
Eye Dam. 1	H318	Calculation method
STOT SE 3	H336	Calculation method
STOT RE 2	H373	Calculation method
Asp. Tox. 1	H304	Based on product data or assessment
Aquatic Chronic 2	H411	Calculation method

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

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