OKS 2301

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2.1	29.07.2022	Date of first issue: 30.03.2013	01.08.2022

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

1.1 Product identifier

Product name : OKS 2301

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

Use of the Substance/Mixture : Anticorrosion additive

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 number : +49 8142 3051 517 (24/7 service)

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Classification (REGULATION (EC) No 1272/2008) as amended by GB-CLP Regulation, UK SI 2019/720, and UK SI 2020/1567)

Aerosols, Category 1	H222: Extremely flammable aerosol. H229: Pressurised container: May burst if heated.
Specific target organ toxicity - single exposure, Category 3, Central nervous system	H336: May cause drowsiness or dizziness.
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) as amended by GB-CLP Regulation, UK SI 2019/720, and UK SI 2020/1567)

Hazard pictograms :

Signal word : Danger

Hazard statements :

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

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

Precautionary statements :

Prevention:

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

Response:

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

Storage:

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

Hazardous components which must be listed on the label:

Hydrocarbons, C9-C11, n-alkanes, isoalkanes, cyclics, <2% aromatics

Additional Labelling

EUH208 Contains calcium bis(dinonylnaphthalenesulphonate). 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.

SECTION 3: Composition/information on ingredients

3.2 Mixtures

Chemical nature : Active substance with propellant
Solvent

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, C9-C11, n-alkanes, isoalkanes, cyclics, <2% aromatics	265-150-3	Flam. Liq.3; H226 STOT SE3; H336 Asp. Tox.1; H304 Aquatic Chronic2; H411; EUH066		>= 30 - < 50
propane	74-98-6 200-827-9 601-003-00-5	Flam. Gas1; H220 Press. GasCompr. Gas; H280		>= 1 - < 10
isobutane	75-28-5 200-857-2 601-004-00-0	Flam. Gas1A; H220 Press. GasCompr. Gas; H280		>= 1 - < 10
calcium bis(dinonylnaphthalenesulphonate)	57855-77-3 260-991-2	Skin Irrit.2; H315 Eye Irrit.2; H319 Skin Sens.1; H317		>= 0.1 - < 1
Benzenesulfonic acid, mono-C16-24-alkyl derivs., calcium salts	70024-69-0 274-263-7	Skin Sens.1B; H317	>= 10 % Skin Sens.1B,	>= 0.1 - < 1

Substances with a workplace exposure limit :				
butane	106-97-8 203-448-7 601-004-00-0	Flam. Gas1; H220 Press. GasCompr. Gas; H280		>= 30 - < 50
Paraffin waxes and Hydrocarbon waxes	8002-74-2 232-315-6	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 skin thoroughly with soap and water or use recognized skin cleanser.

In case of eye contact : Rinse immediately with plenty of water, also under the eyelids, for at least 10 minutes.
Seek medical advice.

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
Can be absorbed through skin.
Risk of product entering the lungs on vomiting after ingestion.
Health injuries may be delayed.
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.

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

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.
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.

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	STEL	750 ppm 1,810 mg/m3	GB EH40GB EH40 (2007-08-01)
	Further information: Capable of causing cancer and/or heritable genetic damage.			
		TWA	600 ppm	GB EH40GB

			1,450 mg/m3	EH40 (2007-08-01)
	Further information: Capable of causing cancer and/or heritable genetic damage.			
Paraffin waxes and Hydrocarbon waxes	8002-74-2	TWA (Fumes)	2 mg/m3	GB EH40GB EH40 (2011-12-01)
		STEL (Fumes)	6 mg/m3	GB EH40GB EH40 (2011-12-01)

Derived No Effect Level (DNEL):

Substance name	End Use	Exposure routes	Potential health effects	Value
calcium bis(dinonylnaphthalenesulphonate)	Workers	Inhalation	Long-term systemic effects	2.23 mg/m3
	Workers	Skin contact	Long-term systemic effects	0.32 mg/kg

Predicted No Effect Concentration (PNEC):

Substance name	Environmental Compartment	Value
calcium bis(dinonylnaphthalenesulphonate)	Fresh water	0.27 mg/l
	Marine water	0.027 mg/l
	Intermittent use/release	2.7 mg/l
	Microbiological Activity in Sewage Treatment Systems	10 mg/l
	Fresh water sediment	4.69 mg/kg
	Marine sediment	0.469 mg/kg
	Soil	0.936 mg/kg

8.2 Exposure controls

Engineering measures

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

Personal protective equipment

Eye protection : Safety glasses with side-shields

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

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

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.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Appearance	:	aerosol
Colour	:	green
Odour	:	characteristic
Odour Threshold	:	No data available
pH	:	Not applicable substance/mixture is non-soluble (in water)
Melting point/range	:	No data available
Boiling point/boiling range	:	-161 °C (1,013 hPa)
Flash point	:	-60 °C Method: Abel-Pensky
Evaporation rate	:	No data available
Flammability (solid, gas)	:	Not applicable
Upper explosion limit / Upper flammability limit	:	10.9 %(V)
Lower explosion limit / Lower flammability limit	:	0.6 %(V)

Vapour pressure	:	3,700 hPa (20 °C)
Relative vapour density	:	No data available
Relative density	:	0.67 (20 °C) Reference substance: Water The value is calculated
Density	:	0.67 g/cm3 (20 °C)
Bulk density	:	No data available
Solubility(ies)		
Water solubility	:	insoluble
Solubility in other solvents	:	No data available
Partition coefficient: n-octanol/water	:	No data available
Auto-ignition temperature	:	No data available
Decomposition temperature	:	No data available
Viscosity		
Viscosity, dynamic	:	No data available
Viscosity, kinematic	:	< 20.5 mm2/s (40 °C)
Explosive properties	:	Not explosive
Oxidizing properties	:	No data available

9.2 Other information

Sublimation point	:	No data available
Metal corrosion rate	:	Not corrosive to metals
Self-ignition	:	No data available

SECTION 10: Stability and reactivity

10.1 Reactivity

No hazards to be specially mentioned.

10.2 Chemical stability

Stable under normal conditions.

10.3 Possibility of hazardous reactions

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

10.4 Conditions to avoid

Conditions to avoid : Heat, flames and sparks.
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 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. Irritating to respiratory system.

Symptoms: Inhalation may provoke the following symptoms:, Respiratory disorder, Local irritation, Respiratory disorders, Dizziness, Drowsiness, Vomiting, Fatigue, Vertigo, Central nervous system depression

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

Symptoms: Redness, Local irritation, Skin disorders

Components:

Hydrocarbons, C9-C11, n-alkanes, isoalkanes, cyclics, <2% aromatics:

Acute inhalation toxicity : Assessment: The substance or mixture is classified as specific target organ toxicant, single exposure, category 3 with narcotic effects.

isobutane:

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

calcium bis(dinonylnaphthalenesulphonate):

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

Acute dermal toxicity : LD50 (Rabbit): > 20,000 mg/kg

Benzenesulfonic acid, mono-C16-24-alkyl derivs., calcium salts:

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

Acute inhalation toxicity : LC50 (Rat): > 1.9 mg/l
Exposure time: 4 h
Test atmosphere: dust/mist
Assessment: The substance or mixture has no acute inhalation toxicity

Acute dermal toxicity : (Rabbit): > 5,000 mg/kg
Method: OECD Test Guideline 402
GLP: yes

butane:

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

Skin corrosion/irritation

Product:

Remarks : This information is not available.

Components:

Hydrocarbons, C9-C11, n-alkanes, isoalkanes, cyclics, <2% aromatics:

Result : Repeated exposure may cause skin dryness or cracking.

calcium bis(dinonylnaphthalenesulphonate):

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

Benzenesulfonic acid, mono-C16-24-alkyl derivs., calcium salts:

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

Serious eye damage/eye irritation

Product:

Remarks	:	Contact with eyes may cause irritation.

Components:

calcium bis(dinonylnaphthalenesulphonate):

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

Benzenesulfonic acid, mono-C16-24-alkyl derivs., calcium salts:

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:

calcium bis(dinonylnaphthalenesulphonate):

Species	:	Guinea pig
Assessment	:	May cause sensitisation by skin contact.
Result	:	May cause sensitisation by skin contact.

Benzenesulfonic acid, mono-C16-24-alkyl derivs., calcium salts:

Test Type	:	Buehler Test
Species	:	Guinea pig
Assessment	:	The product is a skin sensitiser, sub-category 1B.
Result	:	The product is a skin sensitiser, sub-category 1B.

Germ cell mutagenicity

Product:

Genotoxicity in vitro	:	Remarks: No data available
Genotoxicity in vivo	:	Remarks: No data available

Components:

Benzenesulfonic acid, mono-C16-24-alkyl derivs., calcium salts:

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

Genotoxicity in vivo : Test Type: Micronucleus test
Species: Mouse
Application Route: Oral
Method: OECD Test Guideline 474
Result: negative

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

Carcinogenicity

Product:

Remarks : No data available

Components:

Benzenesulfonic acid, mono-C16-24-alkyl derivs., calcium salts:

Carcinogenicity - Assessment : Not classifiable as a human carcinogen.

Reproductive toxicity

Product:

Effects on fertility : Remarks: No data available

Effects on foetal development : Remarks: No data available

Components:

calcium bis(dinonylnaphthalenesulphonate):

Reproductive toxicity - Assessment : - Fertility -

No toxicity to reproduction

Benzenesulfonic acid, mono-C16-24-alkyl derivs., calcium salts:

Effects on fertility : Test Type: reproductive and developmental toxicity study
Species: Rat
Application Route: Oral
General Toxicity - Parent: NOAEL: > 500 mg/kg body weight
General Toxicity F1: NOAEL: > 500 mg/kg body weight
Method: OECD Test Guideline 415

Reproductive toxicity - Assessment : - Fertility -

No toxicity to reproduction
- Teratogenicity -

No toxicity to reproduction

STOT - single exposure

Components:

Hydrocarbons, C9-C11, n-alkanes, isoalkanes, cyclics, <2% aromatics:

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

calcium bis(dinonylnaphthalenesulphonate):

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

Benzenesulfonic acid, mono-C16-24-alkyl derivs., calcium salts:

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

STOT - repeated exposure

Components:

calcium bis(dinonylnaphthalenesulphonate):

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

Benzenesulfonic acid, mono-C16-24-alkyl derivs., calcium salts:

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:

Benzenesulfonic acid, mono-C16-24-alkyl derivs., calcium salts:

Species : Rat
NOAEL : 500 mg/kg
NOAEL : 500 mg/kg
Application Route : Oral
Exposure time : 28
Method : OECD Test Guideline 407

Species	:	Rat
NOAEL	:	0.05 mg/l
NOAEL	:	0.05 mg/l
Application Route	:	Inhalation
Test atmosphere	:	dust/mist
Exposure time	:	28
Method	:	OECD Test Guideline 412

Species	:	Rat
NOAEL	:	> 1000 mg/kg
NOAEL	:	> 1,000 mg/kg
Application Route	:	Dermal
Exposure time	:	28
Method	:	OECD Test Guideline 410

Aspiration toxicity

Product:

May be fatal if swallowed and enters airways.

May be fatal if swallowed and enters airways.

Components:

Hydrocarbons, C9-C11, n-alkanes, isoalkanes, cyclics, <2% aromatics:

May be fatal if swallowed and enters airways.

calcium bis(dinonylnaphthalenesulphonate):

No aspiration toxicity classification

Further information

Product:

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

Components:

Paraffin waxes and Hydrocarbon waxes:

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

SECTION 12: Ecological information

12.1 Toxicity

Product:

Toxicity to fish	:	Remarks: Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
Toxicity to daphnia and other aquatic invertebrates	:	Remarks: No data available
Toxicity to algae/aquatic plants	:	Remarks: No data available
Toxicity to microorganisms	:	Remarks: No data available

12.2 Persistence and degradability

Product:

Biodegradability	:	Remarks: No data available
Physico-chemical removability	:	Remarks: No data available

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).

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.

12.6 Other adverse effects

Product:

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

SECTION 13: Disposal considerations

13.1 Waste treatment methods

Product	:	Do not dispose of with domestic refuse. Dispose of as hazardous waste in compliance with local and national regulations. Waste codes should be assigned by the user based on the application for which the product was used.
Contaminated packaging	:	Packaging that is not properly emptied must be disposed of as the unused product. Offer empty spray cans to an established disposal company. Pressurized container: Do not pierce or burn, even after use. The following Waste Codes are only suggestions:
Waste Code	:	unused product, packagings not completely emptied 16 05 04*, gases in pressure containers (including halons) containing hazardous substances

SECTION 14: Transport information

14.1 UN number or ID number

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

14.2 UN proper shipping name

ADR	:	AEROSOLS
RID	:	AEROSOLS

IMDG	:	AEROSOLS (Naphtha, petroleum, hydrotreated heavy)
IATA	:	Aerosols, flammable

14.3 Transport hazard class(es)

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

14.4 Packing group

ADR

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

RID

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

IMDG

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

IATA (Cargo)

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

IATA (Passenger)

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

14.5 Environmental hazards

ADR

Environmentally hazardous	:	yes

RID

Environmentally hazardous	:	yes

IMDG

Marine pollutant	:	yes

14.6 Special precautions for user

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

14.7 Maritime transport in bulk according to IMO instruments

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)	:	Not applicable
REACH - Candidate List of Substances of Very High Concern for Authorisation (Article 59). (EU SVHC)	:	This product does not contain substances of very high concern (Regulation (EC) No 1907/2006 (REACH), Article 57).
REACH - List of substances subject to authorisation (Annex XIV) (EU. REACH-Annex XIV)	:	Not applicable
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
UK REACH List of substances subject to authorisation (Annex XIV) (UK. REACH Annex XIV)	:	Not applicable
GB Export and import of hazardous chemicals - Prior Informed Consent (PIC) Regulation (GB PIC)	:	Not applicable
Regulation (EU) 2019/1148 on the marketing and use of explosives precursors	:	Not applicable

15.2 Chemical safety assessment

This information is not available.

SECTION 16: Other information

Full text of R-Phrases

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 P	:	The harmonised classification as a carcinogen or mutagen applies unless it can be shown that the substance contains less than 0,1 % w/w benzene (Einecs No 200-753-7), in which case a classification in accordance with Title II of this Regulation shall be performed also for those hazard classes. Where the substance is not classified as a carcinogen or mutagen, at least the precautionary statements (P102-)P260-P262-P301 + P310-P331 shall apply.
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).

Full text of H-Statements

EUH066	:	Repeated exposure may cause skin dryness or cracking.
H220	:	Extremely flammable gas.
H226	:	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.
H319	:	Causes serious eye irritation.
H336	:	May cause drowsiness or dizziness.
H411	:	Toxic to aquatic life with long lasting effects.

Full text of other abbreviations

Note C	:	Some organic substances may be marketed either in a specific isomeric form or as a mixture of several isomers. In

		this case the supplier must state on the label whether the substance is a specific isomer or a mixture of isomers.
Note P	:	The harmonised classification as a carcinogen or mutagen applies unless it can be shown that the substance contains less than 0,1 % w/w benzene (Einecs No 200-753-7), in which case a classification in accordance with Title II of this Regulation shall be performed also for those hazard classes. Where the substance is not classified as a carcinogen or mutagen, at least the precautionary statements (P102-)P260-P262-P301 + P310-P331 shall apply.
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).
GB EH40	:	UK. EH40 WEL - Workplace Exposure Limits
GB EH40 / TWA	:	Long-term exposure limit (8-hour TWA reference period)
GB EH40 / STEL	:	Short-term exposure limit (15-minute reference period)

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

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Inventory; TSCA - Toxic Substances Control Act (United States); UN - United Nations; UNRTDG - United Nations Recommendations on the Transport of Dangerous Goods; vPvB - Very Persistent and Very Bioaccumulative

Classification of the mixture:		**Classification procedure:**
Aerosol 1	H222, H229	Calculation method
STOT SE 3	H336	Calculation method
Asp. Tox. 1	H304	Based on product data or assessment
Aquatic Chronic 2	H411	Calculation method