OKS 2301

Version	Revision Date:	Date of last issue: 20.11.2025	Print Date:
3.0	28.07.2026	Date of first issue: 22.06.2016	28.07.2026

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
82216 Maisach
Germany
Tel.: +49 8142 3051-500
info@oks-germany.com

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

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

1.4 Emergency telephone number

Emergency telephone number : +34 91 562 04 20

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Classification (REGULATION (EC) No 1272/2008)

Aerosols, Category 1	H222: Extremely flammable aerosol. H229: Pressurised container: May burst if heated.
Specific target organ toxicity - single exposure, Category 3, Central nervous system	H336: May cause drowsiness or dizziness.

Aspiration hazard, Category 1	H304: May be fatal if swallowed and enters airways.
Long-term (chronic) aquatic hazard, Category 2	H411: Toxic to aquatic life with long lasting effects.

2.2 Label elements

Labelling (REGULATION (EC) No 1272/2008)

Hazard pictograms :



Signal word : Danger

Hazard statements :

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

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

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

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2.3 Other hazards

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

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
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	919-857-5 01-2119463258-33-XXXX	Flam. Liq. 3; H226 STOT SE 3; H336 (Central nervous system) Asp. Tox. 1; H304	Note P	>= 20 - < 30
Hydrocarbons, C9-C11, isoalkanes, cyclics, <2% aromatics	920-134-1 01-2119480153-44-XXXX	Flam. Liq. 3; H226 STOT SE 3; H336 (Central nervous system) Asp. Tox. 1; H304 Aquatic Chronic 2; H411	Note P	>= 20 - < 25
Reaction products of benzenesulfonic acid, mono-C20-24 (even)-sec-alkyl derivs. para-, calcium salts	947-519-7 01-2120765489-36-XXXX	Skin Sens. 1B; H317	> 10 - 100 % Skin Sens.1B, H317	>= 0,1 - < 1

Substances with a workplace exposure limit :				
butane	106-97-8 203-448-7 601-004-00-0 01-2119474691-32-XXXX	Flam. Gas 1; H220 Press. Gas Compr. Gas; H280	Note U (Table 3), Note C, Note S	>= 30 - < 50
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)	>= 1 - < 10
isobutane	75-28-5 200-857-2 601-004-00-0 01-2119485395-27-XXXX	Flam. Gas 1A; H220 Press. Gas Compr. Gas; H280	Note U (Table 3), Note C	>= 1 - < 10
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.
Wash off immediately with soap and plenty of water.
Get medical attention immediately if irritation develops and persists.

Wash clothing before reuse.
Thoroughly clean shoes before reuse.

In case of eye contact : Rinse immediately with plenty of water, also under the eyelids, for at least 10 minutes.
If eye irritation persists, consult a specialist.

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

4.2 Most important symptoms and effects, both acute and delayed

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

Aspiration may cause pulmonary oedema and pneumonitis.

Risks : May be fatal if swallowed and enters airways.
May cause drowsiness or dizziness.

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

4.3 Indication of any immediate medical attention and special treatment needed

Treatment : Treat symptomatically.

SECTION 5: Firefighting measures

5.1 Extinguishing media

Suitable extinguishing media : ABC powder

Unsuitable extinguishing media : High volume water jet

5.2 Special hazards arising from the substance or mixture

Specific hazards during 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.
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	Control parameters	Basis

		of exposure)		
butane	106-97-8	VLA-ED (gas)	1.000 ppm	ES VLA (2013-02-22)
propane	74-98-6	VLA-ED (gas)	1.000 ppm	ES VLA (2024-01-15)
isobutane	75-28-5	VLA-ED (gas)	1.000 ppm	ES VLA (2013-02-22)
Paraffin waxes and Hydrocarbon waxes	8002-74-2	VLA-ED (Fumes)	2 mg/m3	ES VLA (2013-02-22)

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

Substance name	End Use	Exposure routes	Potential health effects	Value
Hydrocarbons, C9-C11, n-alkanes, isoalkanes, cyclics, <2% aromatics	Workers	Inhalation	Long-term systemic effects	871 mg/m3
	Workers	Dermal	Long-term systemic effects	77 mg/kg
Hydrocarbons, C9-C11, isoalkanes, cyclics, <2% aromatics	Workers	Inhalation	Long-term systemic effects	871 mg/m3
	Workers	Dermal	Long-term systemic effects	77 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 : Safety glasses with side-shields

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

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

Skin and body protection : Choose body protection in relation to its type, to the concentration and amount of dangerous substances, and to

the specific work-place.

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

Filter type : Filter type A-P

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

Environmental exposure controls

Air : Should not be released into the environment.

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

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

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Physical state : aerosol

Colour : green

Odour : characteristic

Odour Threshold : No data available

Melting point/ range : No data available

Boiling point/boiling range : -161 °C (1.013 hPa)

Flammability : Flammability (solid, gas): Not applicable

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

flammability limit		
Lower explosion limit / Lower flammability limit	:	0,6 %(V)
Flash point	:	-60 °C Method: Abel-Pensky
Auto-ignition temperature	:	No data available
Decomposition temperature	:	No data available
pH	:	Not applicable substance/mixture is non-soluble (in water)
Viscosity		
Viscosity, dynamic	:	No data available
Viscosity, kinematic	:	< 20,5 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	:	3.700 hPa (20 °C)
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

Relative vapour density	:	No data available

9.2 Other information

Explosives	:	Not explosive
Oxidizing properties	:	No data available
Self-ignition	:	No data available
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	:	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 oral toxicity	:	LD50 (Rat): > 5.000 mg/kg Assessment: The substance or mixture has no acute oral toxicity Remarks: No mortality observed at this dose.
Acute inhalation toxicity	:	LC50 (Rat): > 5 mg/l Exposure time: 4 h Test atmosphere: dust/mist Assessment: The substance or mixture has no acute inhalation toxicity
Acute dermal toxicity	:	LD50 (Rabbit): > 5.000 mg/kg Remarks: No mortality observed at this dose.

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

Acute oral toxicity	:	LD50 (Rat): > 5.000 mg/kg Assessment: The substance or mixture has no acute oral toxicity Remarks: No mortality observed at this dose.
Acute inhalation toxicity	:	LC50 (Rat): > 5 mg/l Exposure time: 4 h Test atmosphere: dust/mist

Assessment: The substance or mixture has no acute inhalation toxicity

Acute dermal toxicity : LD50 (Rabbit): > 5.000 mg/kg
Remarks: No mortality observed at this dose.

butane:

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

isobutane:

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

Paraffin waxes and Hydrocarbon waxes:

Acute oral toxicity : LD50 (Rat): > 5.000 mg/kg
Method: OECD Test Guideline 420
GLP: yes
Assessment: The substance or mixture has no acute oral toxicity

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

Skin corrosion/irritation

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

Product:

Remarks : This information is not available.

Components:

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

Species : Rabbit
Assessment : No skin irritation
Method : OECD Test Guideline 404
Result : No skin irritation
GLP : yes
Remarks : Based on data from similar materials

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

Species : Rabbit
Assessment : No skin irritation

Method	:	OECD Test Guideline 404
Result	:	No skin irritation
GLP	:	yes
Remarks	:	Based on data from similar materials

Paraffin waxes and Hydrocarbon waxes:

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

Serious eye damage/eye irritation

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

Product:

Remarks	:	Contact with eyes may cause irritation.

Components:

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

Species	:	Rabbit
Assessment	:	No eye irritation
Method	:	OECD Test Guideline 405
Result	:	No eye irritation
GLP	:	yes
Remarks	:	Based on data from similar materials

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

Species	:	Rabbit
Assessment	:	No eye irritation
Method	:	OECD Test Guideline 405
Result	:	No eye irritation
GLP	:	yes
Remarks	:	Based on data from similar materials

Paraffin waxes and Hydrocarbon waxes:

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

Test Type	:	Maximisation Test
Species	:	Guinea pig
Assessment	:	Does not cause skin sensitisation.
Method	:	OECD Test Guideline 406
Result	:	Not a skin sensitizer.
GLP	:	yes
Remarks	:	Based on data from similar materials

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

Test Type	:	Maximisation Test
Species	:	Guinea pig
Assessment	:	Does not cause skin sensitisation.
Method	:	OECD Test Guideline 406
Result	:	Not a skin sensitizer.
GLP	:	yes
Remarks	:	Based on data from similar materials

Reaction products of benzenesulfonic acid, mono-C20-24 (even)-sec-alkyl derivs. para-, calcium salts:

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

Paraffin waxes and Hydrocarbon waxes:

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

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

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

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

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

Paraffin waxes and Hydrocarbon waxes:

Germ cell mutagenicity-Assessment : In vitro tests did not show mutagenic effects

Carcinogenicity

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

Product:

Remarks : No data available

Components:

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

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

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

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

Paraffin waxes and Hydrocarbon waxes:

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

Reproductive toxicity

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

Product:

Effects on fertility : Remarks: No data available

Effects on foetal development : Remarks: No data available

Components:

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

Reproductive toxicity - Assessment : - Fertility -
Weight of evidence does not support classification for reproductive toxicity

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

Reproductive toxicity - Assessment : - Fertility -
Weight of evidence does not support classification for reproductive toxicity

Paraffin waxes and Hydrocarbon waxes:

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

STOT - single exposure

May cause drowsiness or dizziness.

Product:

Remarks : No data available

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.

Hydrocarbons, C9-C11, 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.

Paraffin waxes and Hydrocarbon waxes:

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

STOT - repeated exposure

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

Product:

Remarks : No data available

Components:

Paraffin waxes and Hydrocarbon waxes:

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

Repeated dose toxicity

Product:

Remarks : This information is not available.

Aspiration toxicity

May be fatal if swallowed and enters airways.

Product:

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.

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

May be fatal if swallowed and enters airways.

Paraffin waxes and Hydrocarbon waxes:

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 : 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: Harmful 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

Ecotoxicology Assessment

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

Components:

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

Toxicity to fish	:	LL50 (Oncorhynchus mykiss (rainbow trout)): > 1.000 mg/l Exposure time: 96 h
Toxicity to daphnia and other aquatic invertebrates	:	EL0 (Daphnia magna (Water flea)): 1.000 mg/l Exposure time: 48 h
Toxicity to algae/aquatic plants	:	EL50 (Pseudokirchneriella subcapitata (green algae)): > 1.000 mg/l

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

Toxicity to fish	:	LL50 (Oncorhynchus mykiss (rainbow trout)): 3,6 mg/l Exposure time: 96 h Method: OECD Test Guideline 203
Toxicity to daphnia and other aquatic invertebrates	:	EL50 (Daphnia magna (Water flea)): 22 - 46 mg/l Exposure time: 48 h Method: OECD Test Guideline 202
Toxicity to algae/aquatic plants	:	EL50 (Pseudokirchneriella subcapitata (green algae)): > 1.000 mg/l Exposure time: 24 h Method: OECD Test Guideline 201
Toxicity to microorganisms	:	EL50 (Tetrahymena pyriformis): 0,868 mg/l Exposure time: 48 h

Ecotoxicology Assessment

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

Paraffin waxes and Hydrocarbon waxes:

Toxicity to fish : LC50 (Pimephales promelas (fathead minnow)): > 100 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)): > 10.000 mg/l
Exposure time: 48 h
Test Type: static test
Method: OECD Test Guideline 202

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

12.2 Persistence and degradability

Product:

Biodegradability : Remarks: No data available

Physico-chemical removability : Remarks: No data available

Components:

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

Biodegradability : Result: Readily biodegradable.

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

Biodegradability : Result: Readily biodegradable.

Reaction products of benzenesulfonic acid, mono-C20-24 (even)-sec-alkyl derivs. para-, calcium salts:

Biodegradability : Result: Not rapidly biodegradable

Paraffin waxes and Hydrocarbon waxes:

Biodegradability : Test Type: aerobic
Inoculum: activated sludge
Result: Not readily biodegradable.
Biodegradation: 31 %
Exposure time: 28 d

Method: OECD Test Guideline 301F
GLP: yes

12.3 Bioaccumulative potential

Product:

Bioaccumulation : Remarks: No data available

Components:

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

isobutane:

Partition coefficient: n-octanol/water : log Pow: 2,88
Method: OECD Test Guideline 107

12.4 Mobility in soil

Product:

Mobility : Remarks: No data available

Distribution among environmental compartments : Remarks: No data available

12.5 Results of PBT and vPvB assessment

Product:

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

Components:

Paraffin waxes and Hydrocarbon waxes:

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.

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)

		Class	Subsidiary risks
ADR	:	2	2.1
RID	:	2	2.1
IMDG	:	2.1	
IATA	:	2.1	

14.4 Packing group

ADR

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

RID

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

IMDG

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

IATA (Cargo)

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

IATA (Passenger)

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

14.5 Environmental hazards

ADR

Environmentally hazardous	:	yes

RID

Environmentally hazardous : yes

IMDG
Marine pollutant : yes

14.6 Special precautions for user

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

14.7 Maritime transport in bulk according to IMO instruments

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.
REACH - Candidate List of Substances of Very High Concern for Authorisation (Article 59). (EU SVHC)	:	This product does not contain substances of very high concern (Regulation (EC) No 1907/2006 (REACH), Article 57).
Regulation (EU) No 2024/590 on substances that deplete the ozone layer (EC 2024/590)	:	Not applicable
Regulation (EU) 2019/1021 on persistent organic pollutants (recast) (EU POP)	:	Not applicable
Regulation (EU) No 649/2012 of the European Parliament and the Council concerning the export and import of dangerous chemicals (EU PIC)	:	Not applicable
REACH - List of substances subject to authorisation (Annex XIV)	:	Not applicable

(EU. REACH-Annex XIV)

Regulation (EU) 2019/1148 on the marketing and use of explosives precursors		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
	18	Liquefied flammable gases (including LPG) and natural gas
	E2	ENVIRONMENTAL HAZARDS
	34	Petroleum products: (a) gasolines and naphthas, (b) kerosenes (including jet fuels), (c) gas oils (including diesel fuels, home heating oils and gas oil blending streams),(d) heavy fuel oils (e) alternative fuels serving the same purposes and with similar properties as regards flammability and environmental hazards as the products referred to in points (a) to (d)

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: 90,91 %

Other regulations:

Take note of Directive 94/33/EC on the protection of young people at work or stricter national

regulations, where applicable.

15.2 Chemical safety assessment

This information is not available.

SECTION 16: Other information

Full text of H-Statements

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.
H317	:	May cause an allergic skin reaction.
H336	:	May cause drowsiness or dizziness.
H411	:	Toxic to aquatic life with long lasting effects.

Full text of other abbreviations

Aquatic Chronic	:	Long-term (chronic) aquatic hazard
Asp. Tox.	:	Aspiration hazard
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 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 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
Skin Sens.	:	Skin sensitisation
STOT SE	:	Specific target organ toxicity - single exposure
ES VLA	:	Spain. Environmental Limits for exposure to Chemical agents - Table 1: Occupational Exposure Values

ES VLA / VLA-ED : Environmental Daily Limit Value

ADN - European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways; ADR - Agreement concerning the International Carriage of Dangerous Goods by Road; AIIC - Australian Inventory of Industrial Chemicals; ASTM - American Society for the Testing of Materials; 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	Calculation method
STOT SE 3	H336	Calculation method
Asp. Tox. 1	H304	Based on product data or assessment
Aquatic Chronic 2	H411	Based on product data or assessment

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

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