OKS 2611

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3.2	06.04.2020	Date of first issue: 28.06.2016	06.04.2020

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

1.1 Product identifier

Product name : OKS 2611

Article-No. : 999999

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

Use of the Substance/Mixture : cleaning spray

Recommended restrictions on use : Restricted to professional users.

1.3 Details of the supplier of the safety data sheet

Company : OKS Spezialschmierstoffe GmbH
Ganghoferstr. 47
D-82216 Maisach-Gernlinden
Tel.: +49 8142 3051 500
Fax.: +49 8142 3051 599

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

National contact :

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.
Eye irritation, Category 2	H319: Causes serious eye irritation.
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 3	H412: Harmful 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.
H319	Causes serious eye irritation.
H336	May cause drowsiness or dizziness.
H412	Harmful 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.
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:
isopropanol

Naphtha (petroleum), hydrotreated light; Low boiling point hydrogen treated naphtha

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 mixture

Components

Chemical name	CAS-No. EC-No. Index-No. Registration number	Classification	Concentration limits M-Factor Notes	Concentration (% w/w)
isopropanol	67-63-0 200-661-7 603-117-00-0 02-2119457558-25-XXXX	Flam. Liq.2; H225 Eye Irrit.2; H319 Eye Irrit.2A; H319 STOT SE3; H336		>= 20 - < 30
Naphtha (petroleum), hydrotreated light; Low boiling point hydrogen treated naphtha	64742-49-0 927-241-2 649-328-00-1 01-2119471843-32-xxxx	Flam. Liq.3; H226 STOT SE3; H336 Asp. Tox.1; H304 Aquatic Chronic3; H412		>= 25 - < 30
Naphtha (petroleum), hydrotreated light; Low boiling point hydrogen treated naphtha	64742-49-0 265-151-9 649-328-00-1	Flam. Liq.2; H225 Skin Irrit.2; H315 STOT SE3; H336 Asp. Tox.1; H304 Aquatic Chronic2; H411	Note P	>= 20 - < 25
acetone	67-64-1 200-662-2 606-001-00-8 01-2119471330-49-XXXX	Flam. Liq.2; H225 Eye Irrit.2; H319 STOT SE3; H336		>= 10 - < 20
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 SE3; H336 STOT RE2; H373 Asp. Tox.1; H304 Aquatic Chronic2; H411	>= 5 % STOT RE2, H373 **, ***	>= 1 - < 2,5
Substances with a workplace exposure limit :				
carbon dioxide	124-38-9 204-696-9	Press. GasCompr. Gas; H280		>= 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.
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

Aspiration may cause pulmonary oedema and pneumonitis.

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

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 fire-fighting	:	Fire may cause evolution of: Carbon oxides 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.

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 exposure - obtain special instructions before use.
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
isopropanol	67-63-0	NDS	900 mg/m3	PL OEL (2018-07-07)
Further information	Skin			
		NDSch	1.200 mg/m3	PL OEL (2018-07-07)
Further information	Skin			
Naphtha (petroleum), hydrotreated light; Low boiling point hydrogen treated naphtha	64742-49-0	NDS	500 mg/m3	PL OEL (2018-07-07)
		NDSch	1.500 mg/m3	PL OEL (2018-07-07)
Naphtha (petroleum), hydrotreated light; Low boiling point hydrogen treated naphtha	64742-49-0	NDS	500 mg/m3	PL OEL (2018-07-07)
		NDSch	1.500 mg/m3	PL OEL (2018-07-07)
acetone	67-64-1	TWA	500 ppm 1.210 mg/m3	2000/39/EC (2000-06-16)
Further information	Indicative			
		NDS	600 mg/m3	PL OEL (2018-07-07)
		NDSch	1.800 mg/m3	PL OEL (2018-07-07)
carbon dioxide	124-38-9	TWA	5.000 ppm 9.000 mg/m3	2006/15/EC (2006-02-09)
Further information	Indicative			
		NDS	9.000 mg/m3	PL OEL

				(2018-07-07)
		NDSch	27.000 mg/m3	PL OEL (2018-07-07)
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 (2018-07-07)
Further information	Skin			

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

Substance name	End Use	Exposure routes	Potential health effects	Value
Naphtha (petroleum), hydrotreated light; Low boiling point hydrogen treated naphtha	Workers	Inhalation	Long-term systemic effects	1300 mg/m3
	Workers	Inhalation	Long-term local effects	840 mg/m3
	Workers	Inhalation	Acute local effects	1100 mg/m3
n-hexane	Workers	Inhalation	Long-term systemic effects	75 mg/m3
	Workers	Skin contact	Long-term systemic effects	11 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 : butyl-rubber
- Break through time : > 10 min
- Protective index : Class 1

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

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

Filter type	:	Recommended Filter type: Organic gas and low boiling vapour type (AX)
Protective measures	:	The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace. Choose body protection in relation to its type, to the concentration and amount of dangerous substances, and to the specific work-place.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Appearance	:	aerosol
Colour	:	colourless
Odour	:	solvent-like
Odour Threshold	:	No data available
pH	:	Not applicable
Melting point/range	:	No data available
Boiling point/boiling range	:	56 °C (1.013 hPa)
Flash point	:	-18 °C Method: Abel-Pensky
Evaporation rate	:	No data available
Flammability (solid, gas)	:	Extremely flammable aerosol.
Upper explosion limit / Upper flammability limit	:	13 %(V)
Lower explosion limit / Lower flammability limit	:	0,6 %(V)
Vapour pressure	:	233 hPa (20 °C)
Relative vapour density	:	No data available
Density	:	0,75 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	:	not auto-flammable

SECTION 10: Stability and reactivity

10.1 Reactivity

No hazards to be specially mentioned.

10.2 Chemical stability

Stable under normal conditions.

10.3 Possibility of hazardous reactions

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

10.4 Conditions to avoid

Conditions to avoid : Heat, flames and sparks.

10.5 Incompatible materials

Materials to avoid : Oxidizing agents

10.6 Hazardous decomposition products

No decomposition if stored and applied as directed.

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	:	Symptoms: Redness, Local irritation

Components:

isopropanol:

Acute oral toxicity	:	LD50 Oral (Rat): 5.840 mg/kg

Naphtha (petroleum), hydrotreated light; Low boiling point hydrogen treated naphtha:

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

Naphtha (petroleum), hydrotreated light; Low boiling point hydrogen treated naphtha:

Acute oral toxicity	:	LD50 (Rat): > 5.000 mg/kg Method: OECD Test Guideline 401 GLP: yes
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 (Rabbit): > 2.000 mg/kg Method: OECD Test Guideline 402 GLP: yes Assessment: The substance or mixture has no acute dermal toxicity

acetone:

Acute oral toxicity : LD50 Oral (Rat): 5.800 mg/kg

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

Skin corrosion/irritation

Product:

Remarks : Irritating to skin.

Components:

Naphtha (petroleum), hydrotreated light; Low boiling point hydrogen treated naphtha:

Result : Repeated exposure may cause skin dryness or cracking.

Naphtha (petroleum), hydrotreated light; Low boiling point hydrogen treated naphtha:

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

acetone:

Result : Repeated exposure may cause skin dryness or cracking.

n-hexane:

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

Serious eye damage/eye irritation

Product:

Remarks : Irritating to eyes.

Components:

isopropanol:

Result : Irritating to eyes.

Naphtha (petroleum), hydrotreated light; Low boiling point hydrogen treated naphtha:

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

acetone:

Species : Rabbit
Result : Eye irritation

n-hexane:

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:

Naphtha (petroleum), hydrotreated light; Low boiling point hydrogen treated naphtha:

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

n-hexane:

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

Germ cell mutagenicity

Product:

Genotoxicity in vitro : Remarks: No data available

Genotoxicity in vivo : Remarks: No data available

Carcinogenicity

Product:

Remarks : No data available

Reproductive toxicity

Product:

Effects on fertility : Remarks: No data available

Effects on foetal development : Remarks: No data available

Components:

n-hexane:

Reproductive toxicity - Assessment : Suspected human reproductive toxicant

STOT - single exposure

Components:

isopropanol:

Assessment : May cause drowsiness or dizziness.

Naphtha (petroleum), hydrotreated light; Low boiling point hydrogen treated naphtha:

Exposure routes : Inhalation
Assessment : May cause drowsiness or dizziness.

Naphtha (petroleum), hydrotreated light; Low boiling point hydrogen treated naphtha:

Exposure routes : Inhalation
Target Organs : Central nervous system
Assessment : May cause drowsiness or dizziness.

acetone:

Exposure routes : Inhalation
Assessment : May cause drowsiness or dizziness.

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.

STOT - repeated exposure

Components:

n-hexane:

Exposure routes	:	Inhalation
Target Organs	:	Central nervous system
Assessment	:	The substance or mixture is classified as specific target organ toxicant, repeated exposure, category 2.

Repeated dose toxicity

Product:

Remarks	:	This information is not available.

Aspiration toxicity

Product:

May be fatal if swallowed and enters airways.

May be fatal if swallowed and enters airways.

Components:

Naphtha (petroleum), hydrotreated light; Low boiling point hydrogen treated naphtha:

May be fatal if swallowed and enters airways.

Naphtha (petroleum), hydrotreated light; Low boiling point hydrogen treated naphtha:

May be fatal if swallowed and enters airways.

n-hexane:

May be fatal if swallowed and enters airways.

Further information

Product:

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

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

Components:

Naphtha (petroleum), hydrotreated light; Low boiling point hydrogen treated naphtha:

Ecotoxicology Assessment

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

Naphtha (petroleum), hydrotreated light; Low boiling point hydrogen treated naphtha:

Toxicity to fish	:	LC50 (Oncorhynchus mykiss (rainbow trout)): 10 mg/l Exposure time: 96 h Test Type: semi-static test Method: OECD Test Guideline 203 GLP: yes
Toxicity to daphnia and other aquatic invertebrates	:	EC50 (Daphnia magna (Water flea)): 4,5 mg/l Exposure time: 48 h Test Type: static test Method: OECD Test Guideline 202
Toxicity to algae/aquatic plants	:	EC50 (Pseudokirchneriella subcapitata (green algae)): 3,1 mg/l Exposure time: 72 h Test Type: static test

Ecotoxicology Assessment

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

n-hexane:

Toxicity to fish	:	LC50 (Oncorhynchus mykiss (rainbow trout)): 12,51 mg/l Exposure time: 96 h
Toxicity to daphnia and other aquatic invertebrates	:	EC50 (Daphnia magna (Water flea)): 21,85 mg/l Exposure time: 48 h
Toxicity to algae/aquatic plants	:	ErC50 (Pseudokirchneriella subcapitata (green algae)): 9,285 mg/l Exposure time: 72 h

12.2 Persistence and degradability

Product:

Biodegradability : Remarks: No data available

Physico-chemical removability : Remarks: No data available

Components:

isopropanol:

Biodegradability : Result: Readily biodegradable.

Naphtha (petroleum), hydrotreated light; Low boiling point hydrogen treated naphtha:

Biodegradability : Result: rapidly biodegradable

Naphtha (petroleum), hydrotreated light; Low boiling point hydrogen treated naphtha:

Biodegradability : Test Type: aerobic
Inoculum: activated sludge
Result: rapidly biodegradable
Biodegradation: 90,35 %
Exposure time: 28 d

acetone:

Biodegradability : Result: rapidly biodegradable

n-hexane:

Biodegradability : Test Type: aerobic
Inoculum: activated sludge
Result: rapidly biodegradable
Biodegradation: 21 %
Exposure time: 28 d
GLP: yes

12.3 Bioaccumulative potential

Product:

Bioaccumulation : Remarks: This mixture contains no substance considered to be persistent, bioaccumulating and toxic (PBT).
This mixture contains no substance considered to be very persistent and very bioaccumulating (vPvB).

Components:

isopropanol:

Bioaccumulation : Remarks: Bioaccumulation is unlikely.

Partition coefficient: n- : log Pow: 0,05

octanol/water

Naphtha (petroleum), hydrotreated light; Low boiling point hydrogen treated naphtha:

Bioaccumulation : Remarks: No data available

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

Naphtha (petroleum), hydrotreated light; Low boiling point hydrogen treated naphtha:

Partition coefficient: n-octanol/water : log Pow: 3,4 - 5,2

acetone:

Bioaccumulation : Remarks: Does not bioaccumulate.

Partition coefficient: n-octanol/water : log Pow: 0,2

n-hexane:

Bioaccumulation : Bioconcentration factor (BCF): 501,19

Partition coefficient: n-octanol/water : log Pow: 4 (20 °C)
pH: 7

carbon dioxide:

Partition coefficient: n-octanol/water : log Pow: 0,83

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:

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

Global warming potential

The Fifth Assessment Report of the United Nations Intergovernmental Panel on Climate Change (IPCC)

Components:

carbon dioxide:

20-year global warming potential: 1
100-year global warming potential: 1
Further information: No single lifetime can be given. The impulse response function for CO2 from Joos et al. (2013) has been used. See also Supplementary Material Section 8.SM.11.

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

ADR : UN 1950

IMDG : UN 1950

IATA : UN 1950

14.2 UN proper shipping name

ADR : AEROSOLS

IMDG	:	AEROSOLS
IATA	:	Aerosols, flammable

14.3 Transport hazard class(es)

ADR	:	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)

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	:	no

IMDG

Marine pollutant	:	no

IATA (Passenger)

Environmentally hazardous	:	no

IATA (Cargo)

Environmentally hazardous	:	no

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 Transport in bulk according to Annex II of Marpol and the IBC Code

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 - Candidate List of Substances of Very High Concern for Authorisation (Article 59).	:	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)	:	Not applicable
Regulation (EC) No 1005/2009 on substances that deplete the ozone layer	:	Not applicable
Regulation (EU) 2019/1021 on persistent organic pollutants (recast)	:	Not applicable
Regulation (EC) No 649/2012 of the European Parliament and the Council concerning the export and import of dangerous chemicals	:	Not applicable
REACH - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, preparations and articles (Annex XVII)	:	Not applicable

P5c

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

P3b	FLAMMABLE AEROSOLS
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

emissions (integrated pollution prevention and control)
Volatile organic compounds (VOC) content: 96,39 %

Other regulations:

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

Act of 25 February 2011 on the Chemical Substances and Their Mixtures (consolidated text Dz. U. 2015, item 1203).
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 1-7).
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) 2015/830 of 28 May 2015 amending Regulation (EC) No 1907/2006 of the European Parliament and of the Council on the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH)
Ordinance of the Minister of Health of 10 August 2012 concerning the criteria and procedure of classification of chemical substances and their mixtures (consolidated text Dz. U. of 2015., pos. 208).
Ordinance of the Minister of Economy, Labour and Social Policy of 21st December 2005 concerning the basic requirements for personal protective equipment (Dz. U. Nr. 259, item 2173).
Ordinance of the Minister of 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).
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).
Ordinance of the Minister of Health of 30th December 2004 on the health and safety of workers related to chemical agents at work (Dz. U. from 2005, Nr. 11, item 86, as amended).
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 Environment of 9th December 2014 on Waste Catalog (Dz. U. 2014 item 1923).
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 26 July 2005 on enforcing of changes Annexes A and B of European Agreement concerning international transport of dangerous goods by road (ADR) (Dz. U. Nr. 178, item 1481, as amended).
Ordinance of the Minister of Health of 20th April 2012 concerning labeling of containers of dangerous substances and dangerous mixtures and some mixtures ((consolidated text) Dz. U. z 2015 nr. 0 poz. 450).

Ordinance of the Minister of Health of 11th June 2012 concerning categories of dangerous substances and dangerous mixtures for which containers must be fitted with child-resistant fastenings and a tactile warning of danger (Dz. U. from 2012, item 688 as amended).

15.2 Chemical safety assessment

This information is not available.

SECTION 16: Other information

Full text of H-Statements

H225	:	Highly flammable liquid and vapour.
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.
H319	:	Causes serious eye irritation.
H336	:	May cause drowsiness or dizziness.
H361f	:	Suspected of damaging fertility.
H373	:	May cause damage to organs through prolonged or repeated exposure.
H411	:	Toxic to aquatic life with long lasting effects.
H412	:	Harmful to aquatic life with long lasting effects.

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
Note P	:	The classification as a carcinogen or mutagen need not apply if it can be shown that the substance contains less than 0,1 % w/w benzene (Einecs No 200-753-7). When the substance is not classified as a carcinogen at least the precautionary statements (P102-)P260- P262-P301 + P310-P331 shall apply. This note applies only to certain complex oil-derived substances in Part 3.
2000/39/EC	:	Europe. Commission Directive 2000/39/EC establishing a first list of indicative occupational exposure limit values
2006/15/EC	:	Europe. Indicative occupational exposure limit values
PL OEL	:	Poland. Occupational exposure limits for airborne toxic substances
2000/39/EC / TWA	:	Limit Value - eight hours
2006/15/EC / 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 - European Agreement concerning the International Carriage of Dangerous Goods by Road; AICS - Australian Inventory of Chemical Substances; ASTM - American Society for the Testing of Materials; bw - Body weight; CLP - Classification Labelling Packaging Regulation; Regulation (EC) No 1272/2008; CMR - Carcinogen, Mutagen or Reproductive Toxicant; DIN - Standard of the German Institute for Standardisation; DSL - Domestic Substances List (Canada); ECHA - European Chemicals Agency; EC-Number - European Community number; ECx - Concentration associated with x% response; ELx - Loading rate associated with x% response; EmS - Emergency Schedule; ENCS - Existing and New Chemical Substances (Japan); ErCx - Concentration associated with x% growth rate response; GHS - Globally Harmonized System; GLP - Good Laboratory Practice; IARC - International Agency for Research on Cancer; IATA - International Air Transport Association; IBC - International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk; IC50 - Half maximal inhibitory concentration; ICAO - International Civil Aviation Organization; IECSC - Inventory of Existing Chemical Substances in China; IMDG - International Maritime Dangerous Goods; IMO - International Maritime Organization; ISHL - Industrial Safety and Health Law (Japan); ISO - International Organisation for Standardization; KECI - Korea Existing Chemicals Inventory; LC50 - Lethal Concentration to 50 % of a test population; LD50 - Lethal Dose to 50% of a test population (Median Lethal Dose); MARPOL - International Convention for the Prevention of Pollution from Ships; n.o.s. - Not Otherwise Specified; NO(A)EC - No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NOELR - No Observable Effect Loading Rate; NZIoC - New Zealand Inventory of Chemicals; OECD - Organization for Economic Co-operation and Development; OPPTS - Office of Chemical Safety and Pollution Prevention; PBT - Persistent, Bioaccumulative and Toxic substance; PICCS - Philippines Inventory of Chemicals and Chemical Substances; (Q)SAR - (Quantitative) Structure Activity Relationship; REACH - Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals; RID - Regulations concerning the International Carriage of Dangerous Goods by Rail; SADT - Self-Accelerating Decomposition Temperature; SDS - Safety Data Sheet; SVHC - Substance of Very High Concern; TCSI - Taiwan Chemical Substance Inventory; TRGS - Technical Rule for Hazardous Substances; TSCA - Toxic Sub-

stances 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 Irrit. 2	H319	Calculation method
STOT SE 3	H336	Calculation method
Asp. Tox. 1	H304	Based on product data or assessment
Aquatic Chronic 3	H412	Calculation method