

Safety Data Sheet

according to UK REACH Regulation

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Print date: 22.03.2023

Revision date: 03.03.2023

VKF 96

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

1.1. Product identifier

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

Use of the substance/mixture

Aerosol
Cooling lubricant, cutting oil

Uses advised against

Any non-intended use.

1.3. Details of the supplier of the safety data sheet

Company name:	Meusburger Georg GmbH & Co KG	
Street:	Kesselstrasse 42	
Place:	A-6960 Wolfurt	
Telephone:	+43 5574 6706-0	Telefax: +43 5574 6706-12
e-mail:	office@meusburger.com	
Internet:	www.meusburger.com	
Responsible Department:	Dr. Gans-Eichler Chemieberatung GmbH Otto-Hahn-Str. 36 D-48161 Muenster	e-mail: info@tge-consult.de Tel.: +49 2534 41594-0 www.tge-consult.de

1.4. Emergency telephone number:

Poison Information Center Mainz, Germany, Tel: +49(0)6131/19240

Further Information

Safety Data Sheet according to UK-REACH Regulation

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

GB CLP Regulation

Aerosol 1; H222-H229
Eye Irrit. 2; H319

Full text of hazard statements: see SECTION 16.

2.2. Label elements

GB CLP Regulation

Signal word: Danger

Pictograms:



Hazard statements

H222	Extremely flammable aerosol.
H229	Pressurised container: May burst if heated.
H319	Causes serious eye irritation.

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Precautionary statements

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.
P280	Wear protective gloves/protective clothing/eye protection/face protection.
P305+P351+P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P337+P313	If eye irritation persists: Get medical advice/attention.
P410+P412	Protect from sunlight. Do not expose to temperatures exceeding 50 °C/122 °F.

2.3. Other hazards

In case of insufficient ventilation and/or through use, explosive/highly flammable mixtures may develop. The substances in the mixture (> 0.1%) do not meet the PBT/vPvB criteria according to UK REACH. This product does not contain a substance (> 0.1 %) that has endocrine disrupting properties with respect to non-target organisms as no components meets the criteria.

SECTION 3: Composition/information on ingredients

3.2. Mixtures

Hazardous components

CAS No EC No REACH No Index No	Chemical name GHS Classification	Quantity
115-10-6 204-065-8 01-2119472128-37 603-019-00-8	dimethyl ether Flam. Gas 1, Compressed gas; H220 H280	15 - < 20 %
57635-48-0 611-563-2	Alkylpolyglycoethercarbonic acid Skin Irrit. 2, Eye Dam. 1; H315 H318	1 - < 2,5 %
107-41-5 203-489-0 01-2119539582-35 603-053-00-3	2-methylpentane-2,4-diol Skin Irrit. 2, Eye Irrit. 2; H315 H319	1 - < 2,5 %
110-97-4 203-820-9 01-2119475444-34 603-083-00-7	1,1'-iminodipropan-2-ol; di-isopropanolamine Eye Irrit. 2; H319	1 - < 2,5 %

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141-43-5	2-aminoethanol, ethanolamine	< 0,1 %
205-483-3	Acute Tox. 4, Acute Tox. 4, Acute Tox. 4, Skin Corr. 1B, STOT SE 3; H332 H312 H302 H314 H335	
01-2119486455-28		
603-030-00-8		

Full text of H and EUH statements: see section 16.

Specific Conc. Limits, M-factors and ATE

CAS No	EC No	Chemical name	Quantity
Specific Conc. Limits, M-factors and ATE			
115-10-6	204-065-8	dimethyl ether	15 - < 20 %
inhalation: LC50 = 164000 ppm (gases)			
107-41-5	203-489-0	2-methylpentane-2,4-diol	1 - < 2,5 %
dermal: LD50 = >2000 mg/kg; oral: LD50 = >2000 mg/kg			
110-97-4	203-820-9	1,1'-iminodipropan-2-ol; di-isopropanolamine	1 - < 2,5 %
dermal: LD50 = 8000 mg/kg; oral: LD50 = > 2000 mg/kg			
141-43-5	205-483-3	2-aminoethanol, ethanolamine	< 0,1 %
inhalation: ATE = 11 mg/l (vapours); inhalation: LC50 = > 1,3 mg/l (dusts or mists); dermal: LD50 = (2504) mg/kg; oral: LD50 = 1089 mg/kg STOT SE 3; H335: >= 5 - 100			

Further Information

Product does not contain listed SVHC substances > 0.1 % according to UK REACH.

SECTION 4: First aid measures

4.1. Description of first aid measures

General information

In case of accident or unwellness, seek medical advice immediately (show directions for use or safety data sheet if possible).

After inhalation

In case of accident by inhalation: remove casualty to fresh air and keep at rest. In case of respiratory tract irritation, consult a physician.

After contact with skin

After contact with skin, wash immediately with plenty of water and soap. In case of skin irritation, seek medical treatment.

After contact with eyes

Rinse immediately carefully and thoroughly with eye-bath or water. In case of troubles or persistent symptoms, consult an ophthalmologist.

After ingestion

If swallowed, immediately drink: Water. Never give anything by mouth to an unconscious person or a person with cramps. Do NOT induce vomiting. Caution if victim vomits: Risk of aspiration! Call a physician immediately.

4.2. Most important symptoms and effects, both acute and delayed

No information available.

4.3. Indication of any immediate medical attention and special treatment needed

Treat symptomatically.

SECTION 5: Firefighting measures

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5.1. Extinguishing media

Suitable extinguishing media

Carbon dioxide (CO₂). Dry extinguishing powder. Alcohol resistant foam. Atomized water.

Unsuitable extinguishing media

High power water jet.

5.2. Special hazards arising from the substance or mixture

In use, may form flammable/explosive vapour-air mixture. Can be released in case of fire: Carbon dioxide (CO₂). Carbon monoxide Pyrolysis products, toxic.

5.3. Advice for firefighters

In case of fire: Wear self-contained breathing apparatus.

Additional information

Use water spray jet to protect personnel and to cool endangered containers. Suppress gases/vapours/mists with water spray jet. Contaminated fire-fighting water must be collected separately. Do not allow to enter into surface water or drains. In case of fire and/or explosion do not breathe fumes.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

General advice

Ventilate affected area. Remove all sources of ignition. Do not breathe gas/fumes/vapour/spray. Avoid contact with skin, eyes and clothes.

For non-emergency personnel

Wear personal protection equipment (refer to section 8).

For emergency responders

Use a positive-pressure air-supplied respirator if there is any potential for an uncontrolled release, exposure levels are not known, or any other circumstances where air-purifying respirators may not provide adequate protection.

6.2. Environmental precautions

Do not allow to enter into surface water or drains. Explosion hazard. Eliminate leaks immediately. Prevent spread over a wide area (e.g. by containment or oil barriers). In case of gas escape or of entry into waterways, soil or drains, inform the responsible authorities.

6.3. Methods and material for containment and cleaning up

For containment

Absorb with liquid-binding material (e.g. sand, diatomaceous earth, acid- or universal binding agents).

Treat the recovered material as prescribed in the section on waste disposal.

For cleaning up

Clean contaminated objects and areas thoroughly observing environmental regulations.

6.4. Reference to other sections

Safe handling: see section 7

Personal protection equipment: see section 8

Disposal: see section 13

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Advice on safe handling

Use only in well-ventilated areas. Take precautionary measures against static discharges. Do not spray on

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naked flames or any incandescent material. Due to danger of explosion, prevent leakage of vapours into cellars, flues and ditches.

Wear suitable protective clothing. (See section 8.)

Advice on protection against fire and explosion

Keep away from sources of ignition. - No smoking. Heating causes rise in pressure with risk of bursting.

Advice on general occupational hygiene

Always close containers tightly after the removal of product.

Do not eat, drink, smoke or sneeze at the workplace.

Wash hands before breaks and after work.

Further information on handling

General protection and hygiene measures: refer to chapter 8

7.2. Conditions for safe storage, including any incompatibilities

Requirements for storage rooms and vessels

Keep container tightly closed in a cool, well-ventilated place. Keep away from sources of ignition. - No smoking.

Provide adequate ventilation.

Hints on joint storage

Do not store together with: Explosives. Flammable solids. Pyrophoric liquids and solids. Self-heating substances and mixtures. Substances and mixtures which, in contact with water, emit flammable gases. Oxidizing liquids. Oxidizing solids. Self-reactive substances and mixtures. Organic peroxides. Radioactive substances.

Infectious substances.

Further information on storage conditions

Recommended storage temperature: 15 - 35 °C. Do not store at temperatures over: 50 °C

Note: Storage requirements for flammable aerosols.

Maximum period of storage (time): 24 months.

7.3. Specific end use(s)

See section 1.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Exposure limits (EH40)

CAS No	Substance	ppm	mg/m ³	fibres/ml	Category	Origin
141-43-5	2-Aminoethanol	1	2.5		TWA (8 h)	WEL
		3	7.6		STEL (15 min)	WEL
107-41-5	2-Methylpentane-2,4-diol	25	123		TWA (8 h)	WEL
		25	123		STEL (15 min)	WEL
115-10-6	Dimethyl ether	400	766		TWA (8 h)	WEL
		500	958		STEL (15 min)	WEL

DNEL/DMEL values

CAS No	Substance	Exposure route	Effect	Value
DNEL type				

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115-10-6	dimethyl ether			
Worker DNEL, long-term		inhalation	systemic	1894 mg/m ³
Consumer DNEL, long-term		inhalation	systemic	471 mg/m ³
107-41-5	2-methylpentane-2,4-diol			
Consumer DNEL, long-term		dermal	systemic	1 mg/kg bw/day
Consumer DNEL, long-term		oral	systemic	1 mg/kg bw/day
Worker DNEL, long-term		dermal	systemic	2 mg/kg bw/day
Worker DNEL, acute		inhalation	local	98 mg/m ³
Consumer DNEL, long-term		inhalation	local	25 mg/m ³
Consumer DNEL, long-term		inhalation	systemic	3,5 mg/m ³
Consumer DNEL, acute		inhalation	local	49 mg/m ³
Worker DNEL, long-term		inhalation	local	49 mg/m ³
Worker DNEL, long-term		inhalation	systemic	14 mg/m ³
110-97-4	1,1'-iminodipropan-2-ol; di-isopropanolamine			
Worker DNEL, long-term		inhalation	systemic	6,4 mg/m ³
Worker DNEL, long-term		dermal	systemic	5 mg/kg bw/day
Consumer DNEL, long-term		inhalation	systemic	3,9 mg/m ³
Consumer DNEL, long-term		dermal	systemic	6,3 mg/kg bw/day
Consumer DNEL, long-term		oral	systemic	1,3 mg/kg bw/day
141-43-5	2-aminoethanol, ethanolamine			
Worker DNEL, long-term		inhalation	systemic	1 mg/m ³
Consumer DNEL, long-term		inhalation	systemic	0,18 mg/m ³
Consumer DNEL, long-term		oral	systemic	1,5 mg/kg bw/day
Consumer DNEL, long-term		dermal	systemic	1,5 mg/kg bw/day
Worker DNEL, long-term		dermal	systemic	3 mg/kg bw/day
Consumer DNEL, long-term		inhalation	local	0,28 mg/m ³
Worker DNEL, long-term		inhalation	local	0,51 mg/m ³

PNEC values

CAS No	Substance	
Environmental compartment		Value
115-10-6	dimethyl ether	
Freshwater		0,155 mg/l
Freshwater (intermittent releases)		1,549 mg/l
Marine water		0,016 mg/l
Freshwater sediment		0,681 mg/kg
Marine sediment		0,069 mg/kg
Micro-organisms in sewage treatment plants (STP)		160 mg/l
Soil		0,045 mg/kg

107-41-5 | 2-methylpentane-2,4-diol

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Freshwater	0,429 mg/l
Marine water	0,0429 mg/l
Freshwater sediment	1,79 mg/kg
Marine sediment	0,179 mg/kg
Secondary poisoning	100 mg/kg
Micro-organisms in sewage treatment plants (STP)	20 mg/l
Soil	0,11 mg/kg
110-97-4	1,1'-iminodipropan-2-ol; di-isopropanolamine
Freshwater	0,278 mg/l
Freshwater (intermittent releases)	2,777 mg/l
Marine water	0,028 mg/l
Freshwater sediment	2,33 mg/kg
Marine sediment	0,233 mg/kg
Micro-organisms in sewage treatment plants (STP)	15000 mg/l
Soil	0,303 mg/kg
141-43-5	2-aminoethanol, ethanolamine
Freshwater	0,07 mg/l
Freshwater (intermittent releases)	0,028 mg/l
Marine water	0,007 mg/l
Freshwater sediment	0,357 mg/kg
Marine sediment	0,036 mg/kg
Micro-organisms in sewage treatment plants (STP)	100 mg/l
Soil	1,29 mg/kg

8.2. Exposure controls



Appropriate engineering controls

Technical measures and the application of suitable work processes have priority over personal protection equipment.

If local exhaust ventilation is not possible or not sufficient, the entire working area should be ventilated by technical means.

Individual protection measures, such as personal protective equipment

Eye/face protection

Wear safety glasses; chemical goggles (if splashing is possible).

Hand protection

In case of prolonged or frequently repeated skin contact: Wear suitable gloves.

Suitable material:

NBR (Nitrile rubber) (>0,9 - 1 mm)

Penetration time (maximum wearing period): >480 min

The selected protective gloves have to satisfy the specifications of the Personal Protective Equipment at Work

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(Amendment) Regulations 2022 and the standard EN ISO 374.

Check leak tightness/impermeability prior to use. In the case of wanting to use the gloves again, clean them before taking off and air them well.

Skin protection

Protective clothing.

Minimum standard for preventive measures while handling with working materials are specified in the TRGS 500 (D).

Respiratory protection

With correct and proper use, and under normal conditions, breathing protection is not required.

Respiratory protection necessary at:

Exceeding exposure limit values

Insufficient ventilation

Suitable respiratory protective equipment: Protective respiration apparatus not using surrounding air (breathing apparatus) (DIN EN 133).

Use only respiratory protection equipment with CE-symbol including four digit test number.

Thermal hazards

No special precautionary measures are necessary.

Environmental exposure controls

Do not allow uncontrolled discharge of product into the environment.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state:	Aerosol
Colour:	light yellow
Odour:	characteristic
Odour threshold:	not determined

Test method

Melting point/freezing point:	not determined
Boiling point or initial boiling point and boiling range:	-24 °C
Flammability:	not determined
Lower explosion limits:	2,6 vol. %
Upper explosion limits:	18,6 vol. %
Flash point:	not relevant
Auto-ignition temperature:	235 °C
Decomposition temperature:	not determined
pH-Value (at 20 °C):	7 - 8
Viscosity / kinematic:	not determined
Water solubility:	completely miscible
Solubility in other solvents	not determined
Dissolution rate:	not relevant
Partition coefficient n-octanol/water:	not determined
Dispersion stability:	not relevant
Vapour pressure:	3500 - 5000 hPa
(at 20 °C)	
Density (at 20 °C):	0,965 g/cm ³ DIN 55990

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Bulk density:	not determined
Relative vapour density:	not determined
Particle characteristics:	not determined

9.2. Other information

Information with regard to physical hazard classes

Explosive properties

In case of insufficient ventilation and/or through use, explosive/highly flammable mixtures may develop.

Sustaining combustion: No data available

Self-ignition temperature

Solid: not relevant

Gas: not determined

Oxidizing properties

Pressurized container: protect from sunlight and do not expose to temperatures exceeding 50 °C. Do not pierce or burn, even after use. Do not spray on naked flames or any incandescent material.

Other safety characteristics

Evaporation rate: not determined

Solvent separation test: not determined

Solvent content: not determined

Solid content: not determined

Sublimation point: not determined

Softening point: not determined

Pour point: not determined

Viscosity / dynamic: not determined

Flow time: not determined

Further Information

Vapours are heavier than air and will spread at floor level.

SECTION 10: Stability and reactivity

10.1. Reactivity

No information available.

10.2. Chemical stability

The product is stable under storage at normal ambient temperatures.

10.3. Possibility of hazardous reactions

No hazardous reaction when handled and stored according to provisions.

Refer to chapter 10.5.

10.4. Conditions to avoid

Keep away from heat.

Ignition hazard.

Heating causes rise in pressure with risk of bursting.

10.5. Incompatible materials

Oxidizing agents, strong.

10.6. Hazardous decomposition products

Does not decompose when used for intended uses.

Further information

storage stability: >= 24 months.

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SECTION 11: Toxicological information

11.1. Information on hazard classes as defined in GB CLP Regulation

Toxicokinetics, metabolism and distribution

No information available.

Acute toxicity

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

CAS No	Chemical name					
	Exposure route	Dose		Species	Source	Method
115-10-6	dimethyl ether					
	inhalation (4 h) gas	LC50 ppm	164000	Rat	ECHA Dossier	
107-41-5	2-methylpentane-2,4-diol					
	oral	LD50 mg/kg	>2000	Rat	ECHA dossier	OECD 420
	dermal	LD50 mg/kg	>2000	Rabbit	ECHA dossier	OECD 402
110-97-4	1,1'-iminodipropan-2-ol; di-isopropanolamine					
	oral	LD50 mg/kg	> 2000	Rat	ECHA dossier	OECD 401
	dermal	LD50 mg/kg	8000	Rabbit	ECHA dossier	24 hr dosing period followed by a 14 day
141-43-5	2-aminoethanol, ethanolamine					
	oral	LD50 mg/kg	1089	Rat	ECHA dossier	OECD 401
	dermal	LD50 mg/kg	(2504)	Rabbit	ECHA dossier	OECD 402
	inhalation vapour	ATE	11 mg/l			
	inhalation (4 h) dust/mist	LC50 mg/l	> 1,3			

Irritation and corrosivity

Causes serious eye irritation.

Skin corrosion/irritation: Based on available data, the classification criteria are not met.

Skin corrosion/irritation: slightly irritant but not relevant for classification.

Sensitising effects

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

Carcinogenic/mutagenic/toxic effects for reproduction

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

dimethyl ether:

Developmental toxicity/teratogenicity: NOAEL = 4000 ppm

Literature information: ECHA dossier

In-vitro mutagenicity:

Method: OECD Guideline 473 (In Vitro Mammalian Chromosomal Aberration Test)

Result: negative.

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Literature information: ECHA dossier

Carcinogenicity:

Method: (inhalative) OECD Guideline 453 (Combined Chronic Toxicity/Carcinogenicity Studies)

Species: Rat; Length of test: 2 years

Result: negative.

Literature information: ECHA dossier

2-aminoethanol, ethanolamine:

In-vitro mutagenicity: No experimental indications of mutagenicity in-vitro exist. Reproductive toxicity: Exposure time: 32d. Species: Rat Method: OECD Guideline 416 (Two-Generation Reproduction Toxicity Study); Result:

NOAEL = 300 mg/kg bw/day; Developmental toxicity/teratogenicity: Exposure time: 21d. Species:

Sprague-Dawley Rat.; Method: OECD Guideline 414 (Prenatal Developmental Toxicity Study), Result: NOAEL = 75 mg/kg bw/day (maternal toxicity), Result: NOAEL = 225 mg/kg bw/day (Developmental toxicity/teratogenicity)

Literature information: ECHA dossier

STOT-single exposure

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

STOT-repeated exposure

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

dimethyl ether:

Chronic inhalative toxicity: NOAEL = 47106 mg/m³ (Rat)

OECD Guideline 452 (Chronic Toxicity Studies)

Literature information: ECHA dossier

2-methylpentane-2,4-diol:

Chronic oral toxicity:

Species: Rat.

OECD Guideline 408 (Repeated Dose 90-Day Oral Toxicity Study in Rodents)

Length of test: 91 d

Result: NOAEL = 450 mg/kg

Literature information: ECHA dossier

In-vitro mutagenicity: Method: OECD Guideline 473 (In Vitro Mammalian Chromosomal Aberration Test),

Species: Rat.

Result: negative.

Literature information: ECHA dossier

Reproductive toxicity: Species: Rat.

Result: NOAEL = 500 mg/kg

Literature information: ECHA dossier

2-aminoethanol, ethanolamine:

Subacute inhalative toxicity Exposure time: 28d. Species: Wistar Rat.; Method: OECD Guideline 412 (Repeated Dose Inhalation Toxicity: 28/14-Day); Result: NOAEC = 10 mg/m³

Literature information: ECHA dossier

Aspiration hazard

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

Specific effects in experiment on an animal

No information available.

11.2. Information on other hazards

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Endocrine disrupting properties

This product does not contain a substance (> 0.1 %) that has endocrine disrupting properties with respect to non-target organisms as no components meets the criteria.

Other information

No data available.

SECTION 12: Ecological information

12.1. Toxicity

The product has not been tested.

CAS No	Chemical name					
	Aquatic toxicity	Dose	[h] [d]	Species	Source	Method
115-10-6	dimethyl ether					
	Acute fish toxicity	LC50 > 4100 mg/l	96 h	Poecilia reticulata	ECHA dossier	NEN 6504
	Acute algae toxicity	ErC50 154,917 mg/l	96 h	green algae	ECHA dossier	ECOSAR v1.00
	Acute crustacea toxicity	EC50 > 4400 mg/l	48 h	Daphnia magna	ECHA dossier	NEN6501
107-41-5	2-methylpentane-2,4-diol					
	Acute fish toxicity	LC50 8690 mg/l	96 h	Pimephales promelas	ECHA dossier	(OECD 203)
	Acute algae toxicity	ErC50 >429 mg/l	72 h	Pseudokirchnerella subcapitata	ECHA dossier	(OECD 201)
	Acute crustacea toxicity	EC50 5410 mg/l	48 h	Daphnia magna	ECHA dossier	(OECD 202)
	Acute bacteria toxicity	(EC50 3070 mg/l)		Pseudomonas aeruginosa	ECHA dossier	
110-97-4	1,1'-iminodipropan-2-ol; di-isopropanolamine					
	Acute fish toxicity	LC50 1466 mg/l	96 h	Danio rerio	ECHA dossier	OECD 203
	Acute algae toxicity	ErC50 339 mg/l	72 h	Desmodesmus subspicatus	ECHA dossier	German industrial standard DIN 38
	Acute crustacea toxicity	EC50 277,7 mg/l	48 h	Daphnia magna	ECHA dossier	79/831/EEC, C.2
141-43-5	2-aminoethanol, ethanolamine					
	Acute fish toxicity	LC50 349 mg/l	96 h	Cyprinus carpio	ECHA dossier	other: Directive 92/69/EEC, C.1.
	Acute algae toxicity	ErC50 2,8 mg/l	72 h	Pseudokirchneriella subcapitata	ECHA dossier	OECD 201
	Acute crustacea toxicity	EC50 27,04 mg/l	48 h	Daphnia magna	ECHA dossier	OECD 202
	Fish toxicity	NOEC 1,24 mg/l	41 d	Oryzias latipes	ECHA dossier	OECD 210
	Crustacea toxicity	NOEC 0,85 mg/l	21 d	Daphnia magna	ECHA dossier	OECD 202

12.2. Persistence and degradability

The product has not been tested.

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CAS No	Chemical name	Method	Value	d	Source
		Evaluation			
115-10-6	dimethyl ether	OECD 301D / EEC 92/69 annex V, C.4-E	5%	28	ECHA dossier
	Not easily bio-degradable (according to OECD-criteria).				
107-41-5	2-methylpentane-2,4-diol	OECD 301F / ISO 9408 / EEC 92/69 annex V, C.4-D	81%	28	ECHA dossier
	Easily biodegradable (concerning to the criteria of the OECD)				
141-43-5	2-aminoethanol, ethanolamine	OECD 301A/ ISO 7827/ EEC 92/69/V, C.4-A	>90%	21	ECHA dossier
	Readily biodegradable (according to OECD criteria).				

12.3. Bioaccumulative potential

Partition coefficient n-octanol/water

CAS No	Chemical name	Log Pow
115-10-6	dimethyl ether	0,07
107-41-5	2-methylpentane-2,4-diol	0,58
110-97-4	1,1'-iminodipropan-2-ol; di-isopropanolamine	-0,878
141-43-5	2-aminoethanol, ethanolamine	-2,3

BCF

CAS No	Chemical name	BCF	Species	Source
110-97-4	1,1'-iminodipropan-2-ol; di-isopropanolamine	2,34		SAR and QSAR in Envi
141-43-5	2-aminoethanol, ethanolamine	2,5		QSAR

12.4. Mobility in soil

No information available.

12.5. Results of PBT and vPvB assessment

The substances in the mixture do not meet the PBT/vPvB criteria according to UK REACH.

The aforementioned statement applies to substances contained in the product with a minimum content of 0.1 %.

12.6. Endocrine disrupting properties

This product does not contain a substance that has endocrine disrupting properties with respect to non-target organisms as no components meets the criteria.

The aforementioned statement applies to substances contained in the product with a minimum content of 0.1 %.

12.7. Other adverse effects

No information available.

Further information

Do not allow to enter into surface water or drains.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

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Disposal recommendations

Dispose of waste according to applicable legislation.

Non-contaminated packages may be recycled.

According to (EWC) European Waste Catalogue, allocation of waste identity numbers/waste descriptions must be carried out in a specific way for every industry and process.

Control report for waste code/ waste marking according to (EWC) European Waste Catalogue:

List of Wastes Code - residues/unused products

160504 WASTES NOT OTHERWISE SPECIFIED IN THE LIST; gases in pressure containers and discarded chemicals; gases in pressure containers (including halons) containing hazardous substances; hazardous waste

List of Wastes Code - used product

160504 WASTES NOT OTHERWISE SPECIFIED IN THE LIST; gases in pressure containers and discarded chemicals; gases in pressure containers (including halons) containing hazardous substances; hazardous waste

List of Wastes Code - contaminated packaging

150104 WASTE PACKAGING; ABSORBENTS, WIPING CLOTHS, FILTER MATERIALS AND PROTECTIVE CLOTHING NOT OTHERWISE SPECIFIED; packaging (including separately collected municipal packaging waste); metallic packaging

Contaminated packaging

Handle contaminated packages in the same way as the substance itself.

SECTION 14: Transport information

Land transport (ADR/RID)

14.1. UN number or ID number:	UN 1950
14.2. UN proper shipping name:	AEROSOLS
14.3. Transport hazard class(es):	2
14.4. Packing group:	-
Hazard label:	2.1



Classification code:	5F
Special Provisions:	190 327 344 625
Limited quantity:	1 L
Excepted quantity:	E0
Transport category:	2
Tunnel restriction code:	D

Inland waterways transport (ADN)

14.1. UN number or ID number:	UN 1950
14.2. UN proper shipping name:	AEROSOLS
14.3. Transport hazard class(es):	2
14.4. Packing group:	-
Hazard label:	2.1



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Classification code: 5F
 Special Provisions: 190 327 344 625
 Limited quantity: 1 L
 Excepted quantity: E0

Marine transport (IMDG)

14.1. UN number or ID number: UN 1950
14.2. UN proper shipping name: AEROSOLS
14.3. Transport hazard class(es): 2.1
14.4. Packing group: -
 Hazard label: 2.1



Marine pollutant: NO
 Special Provisions: 63, 190, 277, 327, 344, 381, 959
 Limited quantity: 1000 mL
 Excepted quantity: E0
 EmS: F-D, S-U

Air transport (ICAO-TI/IATA-DGR)

14.1. UN number or ID number: UN 1950
14.2. UN proper shipping name: AEROSOLS, FLAMMABLE
14.3. Transport hazard class(es): 2.1
14.4. Packing group: -
 Hazard label: 2.1



Special Provisions: A145 A167 A802
 Limited quantity Passenger: 30 kg G
 Passenger LQ: Y203
 Excepted quantity: E0
 IATA-packing instructions - Passenger: 203
 IATA-max. quantity - Passenger: 75 kg
 IATA-packing instructions - Cargo: 203
 IATA-max. quantity - Cargo: 150 kg

14.5. Environmental hazards

ENVIRONMENTALLY HAZARDOUS: No

14.6. Special precautions for user

Refer to section 6 - 8

14.7. Maritime transport in bulk according to IMO instruments

not applicable

SECTION 15: Regulatory information

15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

EU regulatory information

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Restrictions on use (REACH, annex XVII):

Entry 3, Entry 40, Entry 75

2010/75/EU (VOC):	not determined
2004/42/EC (VOC):	38,4 % (373 g/l)
Information according to 2012/18/EU (SEVESO III):	P3a FLAMMABLE AEROSOLS

Additional information

Safety Data Sheet according to UK-REACH Regulation
 UK Aerosols Regulation
 UK REACH Appendix XVII, No (mixture): 3, 40
 The mixture is classified as hazardous according to GHS (GB CLP).

National regulatory information

Employment restrictions:	Observe restrictions to employment for juveniles according to the 'juvenile work protection guideline' (94/33/EC).
Water hazard class (D):	1 - slightly hazardous to water

15.2. Chemical safety assessment

For the following substances of this mixture a chemical safety assessment has been carried out:

dimethyl ether
 2-methylpentane-2,4-diol
 1,1'-iminodipropan-2-ol; di-isopropanolamine
 2-aminoethanol, ethanolamine

SECTION 16: Other information

Changes

Rev. 1,0; Initial release 09.05.2018
 Rev. 2,0; Revision 06.04.2020 Changes in chapter: 2-16
 Rev. 3,0; Revision 10.02.2021 Changes in chapter: 2-16
 Rev. 4,0; Revision 03.03.2023 Changes in chapter: 1-16

Abbreviations and acronyms

ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)
 CAS: Chemical Abstracts Service
 CLP: Classification, Labeling, Packaging
 DNEL: Derived No Effect Level
 d: day(s)
 EINECS: European Inventory of Existing Commercial Chemical Substances
 ELINCS: European List of Notified Chemical Substances
 ECHA: European Chemicals Agency
 ECOSAR: Ecological Structure Activity Relationships
 EWC: European Waste Catalogue
 IARC: INTERNATIONAL AGENCY FOR RESEARCH ON CANCER
 IMDG: International Maritime Code for Dangerous Goods
 IATA: International Air Transport Association
 IATA-DGR: Dangerous Goods Regulations by the "International Air Transport Association" (IATA)
 ICAO: International Civil Aviation Organization
 ICAO-TI: Technical Instructions by the "International Civil Aviation Organization" (ICAO)
 GHS: Globally Harmonized System of Classification and Labelling of Chemicals

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GefStoffV: Gefahrstoffverordnung (Ordinance on Hazardous Substances, Germany)
 OECD: Organisation for Economic Co-operation and Development
 PNEC: Predicted No Effect Concentration
 PBT: Persistent, bio-cumulative, toxic
 QSAR: Quantitative Structure-Activity Relationship
 RID: Regulation Concerning the International Transport of Dangerous Goods by Rail
 SVHC: Substance of Very High Concern
 TRGS: Technische Regeln für Gefahrstoffe
 UN: United Nations
 vPvB: very persistent and very bio-cumulative
 VOC: Volatile Organic Compounds
 w: week(s)
 WoE: Weight of Evidence

Classification for mixtures and used evaluation method according to GB CLP Regulation

Classification	Classification procedure
Aerosol 1; H222-H229	On basis of test data
Eye Irrit. 2; H319	Bridging principle "Aerosols"

Relevant H and EUH statements (number and full text)

H220	Extremely flammable gas.
H222	Extremely flammable aerosol.
H229	Pressurised container: May burst if heated.
H280	Contains gas under pressure; may explode if heated.
H302	Harmful if swallowed.
H312	Harmful in contact with skin.
H314	Causes severe skin burns and eye damage.
H315	Causes skin irritation.
H318	Causes serious eye damage.
H319	Causes serious eye irritation.
H332	Harmful if inhaled.
H335	May cause respiratory irritation.

Further Information

The above information describes exclusively the safety requirements of the product and is based on our present-day knowledge. The information is intended to give you advice about the safe handling of the product named in this safety data sheet, for storage, processing, transport and disposal. The information cannot be transferred to other products. In the case of mixing the product with other products or in the case of processing, the information on this safety data sheet is not necessarily valid for the new made-up material.

(The data for the hazardous ingredients were taken respectively from the last version of the sub-contractor's safety data sheet.)