Safety data sheet according to Regulation (EC) No 1907/2006, Annex II (last amended by Regulation (EU) 2020/878)

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

1.1 Product identifier

Luftmassensensorreiniger
Air Flow Sensor Cleaner

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

Relevant identified uses of the substance or mixture:
Cleaner

Uses advised against:
No information available at present.

1.3 Details of the supplier of the safety data sheet

GB

LIQUI MOLY GmbH
Jerg-Wieland-Str. 4
89081 Ulm-Lehr
Tel.: (+49) 0731-1420-0
Fax: (+49) 0731-1420-88

LIQUI MOLY UK
1310 Solihull Parkway
Birmingham Business Park
B37 7YB Solihull
Tel: +44 121 796 5365

Qualified person's e-mail address: info@chemical-check.de, k.schnurbusch@chemical-check.de Please DO NOT use for requesting Safety Data Sheets.

1.4 Emergency telephone number

Emergency information services / official advisory body:

GB

Landspitali- The National University Hospital of Iceland, tel. +354 543 2222 or 112 (valid only for Iceland)

Telephone number of the company in case of emergencies:
+49 (0) 700 / 24 112 112 (LMR)
+1 872 5888271 (LMR)

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Classification according to Regulation (EC) 1272/2008 (CLP)

Hazard class	Hazard category	Hazard statement
Eye Irrit.	2	H319-Causes serious eye irritation.
Skin Irrit.	2	H315-Causes skin irritation.
Asp. Tox.	1	H304-May be fatal if swallowed and enters airways.

STOT SE	3	H336-May cause drowsiness or dizziness.
Aquatic Chronic	3	H412-Harmful to aquatic life with long lasting effects.
Aerosol	1	H222-Extremely flammable aerosol.
Aerosol	1	H229-Pressurised container: May burst if heated.

2.2 Label elements
Labeling according to Regulation (EC) 1272/2008 (CLP)



Danger

H319-Causes serious eye irritation. H315-Causes skin irritation. H336-May cause drowsiness or dizziness. H412-Harmful to aquatic life with long lasting effects. H222-Extremely flammable aerosol. H229-Pressurised container: May burst if heated.

P101-If medical advice is needed, have product container or label at hand. P102-Keep out of reach of children.
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. P261-Avoid breathing vapours or spray. P271-Use only outdoors or in a well-ventilated area. P280-Wear protective gloves and 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. P312-Call a POISON CENTRE / doctor if you feel unwell.
P405-Store locked up. P410+P412-Protect from sunlight. Do not expose to temperatures exceeding 50 °C.
P501-Dispose of contents / container to an approved waste disposal facility.

Without adequate ventilation, formation of explosive mixtures may be possible.
Propan-2-ol
Hydrocarbons, C7, n-alkanes, isoalkanes, cyclics
Hydrocarbons, C6-C7, n-alkanes, isoalkanes, cyclics, <5% n-hexane

2.3 Other hazards
The mixture does not contain any vPvB substance (vPvB = very persistent, very bioaccumulative) or is not included under XIII of the regulation (EC) 1907/2006 (< 0,1 %).
The mixture does not contain any PBT substance (PBT = persistent, bioaccumulative, toxic) or is not included under XIII of the regulation (EC) 1907/2006 (< 0,1 %).
The mixture does not contain any substance with endocrine disrupting properties (< 0,1 %).

SECTION 3: Composition/information on ingredients

Aerosol

3.1 Substances
n.a.

3.2 Mixtures

Propan-2-ol	
Registration number (REACH)	01-2119457558-25-XXXX
Index	603-117-00-0
EINECS, ELINCS, NLP, REACH-IT List-No.	200-661-7
CAS	67-63-0
content %	70-90

Classification according to Regulation (EC) 1272/2008 (CLP), M-factors	Flam. Liq. 2, H225 Eye Irrit. 2, H319 STOT SE 3, H336

Hydrocarbons, C7, n-alkanes, isoalkanes, cyclics	
Registration number (REACH)	01-2119475515-33-XXXX
Index	---
EINECS, ELINCS, NLP, REACH-IT List-No.	927-510-4
CAS	---
content %	5-15
Classification according to Regulation (EC) 1272/2008 (CLP), M-factors	Flam. Liq. 2, H225 Skin Irrit. 2, H315 STOT SE 3, H336 Asp. Tox. 1, H304 Aquatic Chronic 2, H411

Hydrocarbons, C6-C7, n-alkanes, isoalkanes, cyclics, <5% n-hexane	
Registration number (REACH)	01-2119475514-35-XXXX
Index	---
EINECS, ELINCS, NLP, REACH-IT List-No.	921-024-6
CAS	---
content %	5-<10
Classification according to Regulation (EC) 1272/2008 (CLP), M-factors	Flam. Liq. 2, H225 Skin Irrit. 2, H315 STOT SE 3, H336 Asp. Tox. 1, H304 Aquatic Chronic 2, H411

Carbon dioxide	**Substance for which an EU exposure limit value applies.**
Registration number (REACH)	---
Index	---
EINECS, ELINCS, NLP, REACH-IT List-No.	204-696-9
CAS	124-38-9
content %	1-5
Classification according to Regulation (EC) 1272/2008 (CLP), M-factors	---

For the text of the H-phrases and classification codes (GHS/CLP), see Section 16.
The substances named in this section are given with their actual, appropriate classification!
For substances that are listed in appendix VI, table 3.1 of the regulation (EC) no. 1272/2008 (CLP regulation) this means that all notes that may be given here for the named classification have been taken into account.
The addition of the highest concentrations listed here can result in a classification. Only when this classification is listed in Section 2 does it apply. In all other cases the total concentration is below the classification.

SECTION 4: First aid measures

4.1 Description of first aid measures

First-aiders should ensure they are protected!
Never pour anything into the mouth of an unconscious person!

Inhalation

Remove person from danger area.
Supply person with fresh air and consult doctor according to symptoms.
If the person is unconscious, place in a stable side position and consult a doctor.

Skin contact

Remove polluted, soaked clothing immediately, wash thoroughly with plenty of water and soap, in case of irritation of the skin (flare), consult a doctor.

Eye contact

Remove contact lenses.
Wash thoroughly for several minutes using copious water. Seek medical help if necessary.

Ingestion

Typically no exposure pathway.

Rinse the mouth thoroughly with water.
Give copious water to drink - consult doctor immediately.

4.2 Most important symptoms and effects, both acute and delayed

If applicable delayed symptoms and effects can be found in section 11 and the absorption route in section 4.1.
The following may occur:
Irritation of the respiratory tract
Coughing
Headaches
Dizziness
Effects/damages the central nervous system
Coordination disorders
With long-term contact:
Product removes fat.
Dermatitis (skin inflammation)
Other dangerous properties cannot be ruled out.
In certain cases, the symptoms of poisoning may only appear after an extended period / after several hours.

4.3 Indication of any immediate medical attention and special treatment needed

Symptomatic treatment.

SECTION 5: Firefighting measures

5.1 Extinguishing media

Suitable extinguishing media

Water jet spray
CO2
Extinction powder

Unsuitable extinguishing media

High volume water jet

5.2 Special hazards arising from the substance or mixture

In case of fire the following can develop:
Oxides of carbon
Toxic gases
Danger of bursting (explosion) when heated
Explosive vapour/air or gas/air mixtures.

5.3 Advice for firefighters

For personal protective equipment see Section 8.
In case of fire and/or explosion do not breathe fumes.
Protective respirator with independent air supply.
According to size of fire
Full protection, if necessary.
Cool container at risk with water.
Dispose of contaminated extinction water according to official regulations.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

6.1.1 For non-emergency personnel

In case of spillage or accidental release, wear personal protective equipment as specified in section 8 to prevent contamination.
Ensure sufficient ventilation, remove sources of ignition.
Avoid dust formation with solid or powder products.
Leave the danger zone if possible, use existing emergency plans if necessary.
Remove possible causes of ignition - do not smoke.
Ensure sufficient supply of air.
Avoid inhalation, and contact with eyes or skin.

6.1.2 For emergency responders

See section 8 for suitable protective equipment and material specifications.

6.2 Environmental precautions

Prevent from entering drainage system.

Prevent surface and ground-water infiltration, as well as ground penetration.

6.3 Methods and material for containment and cleaning up

If spray or gas escapes, ensure ample fresh air is available.
Without adequate ventilation, formation of explosive mixtures may be possible.
Active substance:
Soak up with absorbent material (e.g. sand, earth) and dispose of according to Section 13.

6.4 Reference to other sections

For personal protective equipment see Section 8 and for disposal instructions see Section 13.

SECTION 7: Handling and storage

In addition to information given in this section, relevant information can also be found in section 8 and 6.1.

7.1 Precautions for safe handling

7.1.1 General recommendations

Ensure good ventilation.
Avoid inhalation of the vapours.
Keep away from sources of ignition - Do not smoke.
Do not use on hot surfaces.
Avoid contact with eyes or skin.
Eating, drinking, smoking, as well as food-storage, is prohibited in work-room.
Observe directions on label and instructions for use.
Use working methods according to operating instructions.

7.1.2 Notes on general hygiene measures at the workplace

General hygiene measures for the handling of chemicals are applicable.
Wash hands before breaks and at end of work.
Keep away from food, drink and animal feedingstuffs.
Remove contaminated clothing and protective equipment before entering areas in which food is consumed.

7.2 Conditions for safe storage, including any incompatibilities

Keep out of access to unauthorised individuals.
Not to be stored in gangways or stair wells.
Store product closed and only in original packing.
Observe special regulations for aerosols!
Do not store with oxidizing agents.
Observe special storage conditions.
Observe special storage conditions.
Keep protected from direct sunlight and temperatures over 50°C.
Store in a well ventilated place.

7.3 Specific end use(s)

No information available at present.
Observe the instructions for good working practice and the recommendations for risk assessment.
Consult hazardous substance information systems, e.g. from the professional associations, the chemical industry or different industries, depending on the application (building materials, wood, chemistry, laboratory, leather, metal).

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

Workplace exposure limit (WEL) of the total hydrocarbon solvent content of the mixture (RCP method according to EH40):
800 mg/m3

GB **Chemical Name**	Propan-2-ol	
WEL-TWA: 400 ppm (999 mg/m3)	WEL-STEL: 500 ppm (1250 mg/m3)	---
Monitoring procedures:	- Draeger - Alcohol 25/a i-Propanol (81 01 631) - Compur - KITA-122 SA(C) (549 277) - Compur - KITA-150 U (550 382) DFG (D) (Loesungsmittelgemische), DFG (E) (Solvent mixtures 6) - 2013, 2002 - EU - project BC/CEN/ENTR/000/2002-16 card 66-3 (2004) - NIOSH 1400 (ALCOHOLS I) - 1994 - NIOSH 2549 (VOLATILE ORGANIC COMPOUNDS (SCREENING)) - 1996	

- Draeger - Alcohol 100/a (CH 29 701)	
BMGV: ---	Other information: ---

GB **Chemical Name**	Hydrocarbons, C7, n-alkanes, isoalkanes, cyclics	
WEL-TWA: 800 mg/m3	WEL-STEL: ---	---
Monitoring procedures:	- Draeger - Hydrocarbons 0,1%/c (81 03 571) - Draeger - Hydrocarbons 2/a (81 03 581) - Compur - KITA-187 S (551 174)	
BMGV: ---		Other information: (OEL acc. to RCP-method, paragraphs 84-87, EH40)

GB **Chemical Name**	Hydrocarbons, C6-C7, n-alkanes, isoalkanes, cyclics, <5% n-hexane	
WEL-TWA: 1000 mg/m3	WEL-STEL: ---	---
Monitoring procedures:	- Compur - KITA-187 S (551 174)	
BMGV: ---		Other information: (OEL acc. to RCP-method, paragraphs 84-87, EH40)

GB **Chemical Name**	Carbon dioxide	
WEL-TWA: 5000 ppm (9150 mg/m3) (WEL-TWA), 5000 ppm (9000 mg/m3) (EU)	WEL-STEL: 15000 ppm (27400 mg/m3) (WEL-STEL)	---
Monitoring procedures:	- Draeger - Carbon Dioxide 0,1%/a (CH 23 501) - Draeger - Carbon Dioxide 0,5%/a (CH 31 401) - Draeger - Carbon Dioxide 1%/a (CH 25 101) - Draeger - Carbon Dioxide 100/a (81 01 811) - Draeger - Carbon Dioxide 5%/A (CH 20 301) - Compur - KITA-126 B (549 475) - Compur - KITA-126 SA (549 467) - Compur - KITA-126 SB (548 816) - Compur - KITA-126 SF (549 491) - Compur - KITA-126 SG (550 210) - Compur - KITA-126 SH (549 509) - Compur - KITA-126 UH (549 517) - NIOSH 6603 (Carbon dioxide) - 1994 - OSHA ID-172 (Carbon dioxide in workplace atmospheres) - 1990	
BMGV: ---		Other information: ---

Propan-2-ol

Area of application	Exposure route / Environmental compartment	Effect on health	Descriptor	Value	Unit	Note
	Environment - freshwater		PNEC	140,9	mg/l	
	Environment - marine		PNEC	140,9	mg/l	
	Environment - sediment, freshwater		PNEC	552	mg/kg dw	
	Environment - sediment, marine		PNEC	552	mg/kg dw	
	Environment - soil		PNEC	28	mg/kg dw	
	Environment - sewage treatment plant		PNEC	2251	mg/l	
	Environment - water, sporadic (intermittent) release		PNEC	140,9	mg/l	
	Environment - oral (animal feed)		PNEC	160	mg/kg feed	
Consumer	Human - dermal	Long term, systemic effects	DNEL	319	mg/kg bw/day	
Consumer	Human - inhalation	Long term, systemic effects	DNEL	89	mg/m3	
Consumer	Human - oral	Long term, systemic effects	DNEL	26	mg/kg bw/day	
Workers / employees	Human - dermal	Long term, systemic effects	DNEL	888	mg/kg bw/day	

Workers / employees	Human - inhalation	Long term, systemic effects	DNEL	500	mg/m3	

Hydrocarbons, C7, n-alkanes, isoalkanes, cyclics						
Area of application	**Exposure route / Environmental compartment**	**Effect on health**	**Descriptor**	**Value**	**Unit**	**Note**
Consumer	Human - dermal	Long term, systemic effects	DNEL	149	mg/kg bw/d	
Consumer	Human - inhalation	Long term, systemic effects	DNEL	447	mg/m3	
Consumer	Human - oral	Long term, systemic effects	DNEL	149	mg/kg bw/d	
Workers / employees	Human - dermal	Long term, systemic effects	DNEL	300	mg/kg bw/d	
Workers / employees	Human - inhalation	Long term, systemic effects	DNEL	2085	mg/m3	

Hydrocarbons, C6-C7, n-alkanes, isoalkanes, cyclics, <5% n-hexane						
Area of application	**Exposure route / Environmental compartment**	**Effect on health**	**Descriptor**	**Value**	**Unit**	**Note**
Consumer	Human - oral	Long term, systemic effects	DNEL	699	mg/kg bw/d	
Consumer	Human - dermal	Long term, systemic effects	DNEL	699	mg/kg bw/d	
Consumer	Human - inhalation	Long term, systemic effects	DNEL	608	mg/m3	
Workers / employees	Human - inhalation	Long term, systemic effects	DNEL	2035	mg/m3	
Workers / employees	Human - dermal	Long term, systemic effects	DNEL	733	mg/kg bw/d	

GB - United Kingdom | WEL-TWA = Workplace Exposure Limit - Long-term exposure limit - 8-hour TWA (= time weighted average) reference period (EH40/2005 Workplace exposure limits (Fourth Edition 2020)).
(EU) = Directive 91/322/EEC, 98/24/EC, 2000/39/EC, 2004/37/EC, 2006/15/EC, 2009/161/EU, 2017/164/EU or 2019/1831/EU:
(8) = Inhalable fraction (2004/37/CE, 2017/164/EU). (9) = Respirable fraction (2004/37/CE, 2017/164/EU). (11) = Inhalable fraction (2004/37/CE). (12) = Inhalable fraction. Respirable fraction in those Member States that implement, on the date of the entry into force of this Directive, a biomonitoring system with a biological limit value not exceeding 0,002 mg Cd/g creatinine in urine (2004/37/CE). |
| WEL-STEL = Workplace Exposure Limit - Short-term exposure limit - 15-minute reference period (EH40/2005 Workplace exposure limits (Fourth Edition 2020)).
(EU) = Directive 91/322/EEC, 98/24/EC, 2000/39/EC, 2004/37/EC, 2006/15/EC, 2009/161/EU, 2017/164/EU or 2019/1831/EU:
(8) = Inhalable fraction (2004/37/EC, 2017/164/EU). (9) = Respirable fraction (2004/37/EC, 2017/164/EU). (10) = Short-term exposure limit value in relation to a reference period of 1 minute (2017/164/EU). |
| BMGV = Biological monitoring guidance value (EH40/2005 Workplace exposure limits (Fourth Edition 2020)).
(EU) = Directive 98/24/EC or 2004/37/EC or SCOEL (Biological Limit Value - BLV, Recommendation from the Scientific Committee on Occupational Exposure Limits (SCOEL)) |
| Other information (EH40/2005 Workplace exposure limits (Fourth Edition 2020)): Sen = Capable of causing occupational asthma. Sk = Can be absorbed through skin. Carc = Capable of causing cancer and/or heritable genetic damage.
(EU) = Directive 91/322/EEC, 98/24/EC, 2000/39/EC, 2004/37/EC, 2006/15/EC, 2009/161/EU, 2017/164/EU, 2019/1831/EU or 2024/869/EU:
(13) = The substance can cause sensitisation of the skin and of the respiratory tract (98/24/EC, 2004/37/CE), (14) = The substance can cause sensitisation of the skin (2004/37/CE), (15) = Substantial contribution to the total body burden via dermal exposure possible. |

8.2 Exposure controls

8.2.1 Appropriate engineering controls

Ensure good ventilation. This can be achieved by local suction or general air extraction.
If this is insufficient to maintain the concentration under the WEL or AGW values, suitable breathing protection should be worn.
Applies only if maximum permissible exposure values are listed here.
Suitable assessment methods for reviewing the effectiveness of protection measures adopted include metrological and non-metrological investigative techniques.

These are specified by e.g. EN 14042.
EN 14042 "Workplace atmospheres. Guide for the application and use of procedures for the assessment of exposure to chemical and biological agents".

8.2.2 Individual protection measures, such as personal protective equipment

General hygiene measures for the handling of chemicals are applicable.
Wash hands before breaks and at end of work.
Keep away from food, drink and animal feedingstuffs.
Remove contaminated clothing and protective equipment before entering areas in which food is consumed.

Eye/face protection:
Tight fitting protective goggles with side protection (EN 166).

Skin protection - Hand protection:
Solvent resistant protective gloves (EN ISO 374).
Recommended
Protective nitrile gloves (EN ISO 374).
Minimum layer thickness in mm:
0,5
Permeation time (penetration time) in minutes:
>= 480

The breakthrough times determined in accordance with EN 16523-1 were not obtained under practical conditions.
The recommended maximum wearing time is 50% of breakthrough time.
Protective hand cream recommended.

Skin protection - Other:
Protective working garments (e.g. safety shoes EN ISO 20345, long-sleeved protective working garments).

Respiratory protection:
Normally not necessary.
If the workplace limit value is exceeded.
Filter A2 P2 (EN 14387), code colour brown, white
At high concentrations:
Respiratory protection appliance (insulation device) (e.g. EN 137 or EN 138)

Thermal hazards:
Not applicable

Additional information on hand protection - No tests have been performed.
In the case of mixtures, the selection has been made according to the knowledge available and the information about the contents.
Selection of materials derived from glove manufacturer's indications.
Final selection of glove material must be made taking the breakthrough times, permeation rates and degradation into account.
Selection of a suitable glove depends not only on the material but also on other quality characteristics and varies from manufacturer to manufacturer.
In the case of mixtures, the resistance of glove materials cannot be predicted and must therefore be tested before use.
The exact breakthrough time of the glove material can be requested from the protective glove manufacturer and must be observed.

8.2.3 Environmental exposure controls

No information available at present.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Physical state:	Aerosol. Active substance: liquid.
Colour:	Colourless
Odour:	Characteristic
Melting point/freezing point:	There is no information available on this parameter.
Boiling point or initial boiling point and boiling range:	60 °C (Active substance)
Flammability:	Does not apply to aerosols.
Lower explosion limit:	0,6 Vol-%
Upper explosion limit:	12 Vol-%

Flash point:	Does not apply to aerosols.
Auto-ignition temperature:	200 °C
Decomposition temperature:	There is no information available on this parameter.
pH:	Mixture is non-soluble (in water).
Kinematic viscosity:	Does not apply to aerosols.
Solubility:	Not miscible
Partition coefficient n-octanol/water (log value):	Does not apply to mixtures.
Vapour pressure:	5400 hPa (20°C)
Density and/or relative density:	0,76 g/ml (20°C)
Relative vapour density:	Does not apply to aerosols.
Particle characteristics:	Does not apply to aerosols.

9.2 Other information

Explosives:	Product is not explosive. Possible build up of explosive/highly flammable vapour/air mixture.
Oxidising liquids:	No
Evaporation rate:	n.a.
Bulk density:	n.a.
Solvents content:	97,0 % (Organic solvents)

SECTION 10: Stability and reactivity

10.1 Reactivity
The product has not been tested.

10.2 Chemical stability
Stable with proper storage and handling.

10.3 Possibility of hazardous reactions
No dangerous reactions are known.

10.4 Conditions to avoid
Heating, open flame, ignition sources
Pressure increase will result in danger of bursting.

10.5 Incompatible materials
Avoid contact with oxidizing agents.

10.6 Hazardous decomposition products
No decomposition when used as directed.

SECTION 11: Toxicological information

11.1. Information on hazard classes as defined in Regulation (EC) No 1272/2008
Possibly more information on health effects, see Section 2.1 (classification).

Luftmassensensorreiniger
Air Flow Sensor Cleaner

Toxicity / effect	Endpoint	Value	Unit	Organism	Test method	Notes
Acute toxicity, by oral route:						n.d.a.
Acute toxicity, by dermal route:						n.d.a.
Acute toxicity, by inhalation:						n.d.a.
Skin corrosion/irritation:						n.d.a.
Serious eye damage/irritation:						n.d.a.
Respiratory or skin sensitisation:						n.d.a.
Germ cell mutagenicity:						n.d.a.
Carcinogenicity:						n.d.a.
Reproductive toxicity:						n.d.a.
Specific target organ toxicity - single exposure (STOT-SE):						n.d.a.
Specific target organ toxicity - repeated exposure (STOT-RE):						n.d.a.
Aspiration hazard:						n.d.a.
Symptoms:						n.d.a.

Propan-2-ol

Toxicity / effect	Endpoint	Value	Unit	Organism	Test method	Notes
Acute toxicity, by oral route:	LD50	4570-5840	mg/kg	Rat	OECD 401 (Acute Oral Toxicity)	
Acute toxicity, by dermal route:	LD50	12800-13900	mg/kg	Rabbit	OECD 402 (Acute Dermal Toxicity)	
Acute toxicity, by inhalation:	LC50	> 25	mg/l/6h	Rat	OECD 403 (Acute Inhalation Toxicity)	Vapours
Acute toxicity, by inhalation:	LC50	46600	mg/l/4h	Rat		Aerosol
Skin corrosion/irritation:				Rabbit	OECD 404 (Acute Dermal Irritation/Corrosion)	Not irritant
Serious eye damage/irritation:				Rabbit	OECD 405 (Acute Eye Irritation/Corrosion)	Eye Irrit. 2
Respiratory or skin sensitisation:				Guinea pig	OECD 406 (Skin Sensitisation)	No (skin contact)
Germ cell mutagenicity:				Salmonella typhimurium	OECD 471 (Bacterial Reverse Mutation Test)	Negative
Germ cell mutagenicity:				Mouse	OECD 474 (Mammalian Erythrocyte Micronucleus Test)	Negative
Germ cell mutagenicity:				Mammalian	OECD 476 (In Vitro Mammalian Cell Gene Mutation Test)	Negative, Chinese hamster
Carcinogenicity:						Negative
Reproductive toxicity:	NOAEL	500	mg/kg/d	Rat	OECD 416 (Two-generation Reproduction Toxicity Study)	Negative (oral, 7 weeks)
Reproductive toxicity:	NOAEL	853	mg/kg bw/d	Rat	OECD 415 (One-Generation Reproduction Toxicity Study)	Negative
Reproductive toxicity:	NOAEL	400	mg/kg bw/d	Rat	OECD 414 (Prenatal Developmental Toxicity Study)	Negative
Specific target organ toxicity - single exposure (STOT-SE):						STOT SE 3, H336, May cause drowsiness or dizziness.
Specific target organ toxicity - repeated exposure (STOT-RE), oral:	NOAEL	900	mg/kg	Rat	OECD 408 (Repeated Dose 90-Day Oral Toxicity Study in Rodents)	
Specific target organ toxicity - repeated exposure (STOT-RE), inhalat.:	NOAEL	5000	ppm	Rat		Vapours (OECD 451)
Aspiration hazard:						No
Symptoms:						breathing difficulties, unconsciousness, vomiting, headaches, fatigue, dizziness, nausea, eyes, reddened, watering eyes

Hydrocarbons, C7, n-alkanes, isoalkanes, cyclics

Toxicity / effect	Endpoint	Value	Unit	Organism	Test method	Notes

Acute toxicity, by oral route:	LD50	>5840	mg/kg	Rat	OECD 401 (Acute Oral Toxicity)	Analogous conclusion
Acute toxicity, by dermal route:	LD50	>2920	mg/kg	Rat	OECD 402 (Acute Dermal Toxicity)	Analogous conclusion
Acute toxicity, by inhalation:	LC50	>23,3	mg/l/4h	Rat	OECD 403 (Acute Inhalation Toxicity)	Analogous conclusion
Skin corrosion/irritation:				Rabbit	OECD 404 (Acute Dermal Irritation/Corrosion)	Irritant
Serious eye damage/irritation:				Rabbit		Not irritant
Respiratory or skin sensitisation:				Guinea pig	OECD 406 (Skin Sensitisation)	No (skin contact)
Germ cell mutagenicity:					OECD 476 (In Vitro Mammalian Cell Gene Mutation Test)	Negative
Carcinogenicity:						Negative
Reproductive toxicity:	NOAEL	9000	ppm	Rat	OECD 416 (Two-generation Reproduction Toxicity Study)	Negative
Aspiration hazard:						Yes
Symptoms:						diarrhoea, headaches, dizziness, nausea and vomiting.
Symptoms:						drowsiness, unconsciousness, heart/circulatory disorders, headaches, cramps, drowsiness, mucous membrane irritation, dizziness, nausea and vomiting., diarrhoea

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

Toxicity / effect	Endpoint	Value	Unit	Organism	Test method	Notes
Acute toxicity, by oral route:	LD50	>5840	mg/kg	Rat		
Acute toxicity, by dermal route:	LD50	>2920	mg/kg	Rat		
Acute toxicity, by inhalation:	LC50	25,2	mg/l/4h	Rat		Vapours
Skin corrosion/irritation:				Rabbit	OECD 404 (Acute Dermal Irritation/Corrosion)	Skin Irrit. 2
Serious eye damage/irritation:						Slightly irritant
Respiratory or skin sensitisation:				Guinea pig	OECD 406 (Skin Sensitisation)	No (skin contact)
Specific target organ toxicity - single exposure (STOT-SE):						May cause drowsiness or dizziness., STOT SE 3, H336
Aspiration hazard:						Yes

Symptoms:						may cause headaches and vertigo., nausea, drowsiness, unconsciousness

Carbon dioxide						
Toxicity / effect	**Endpoint**	**Value**	**Unit**	**Organism**	**Test method**	**Notes**
Symptoms:						unconsciousness, blisters by skin-contact, vomiting, frostbite, annoyance, palpitations, itching, headaches, cramps, ear noises, dizziness

11.2. Information on other hazards

Luftmassensensorreiniger **Air Flow Sensor Cleaner**						
Toxicity / effect	**Endpoint**	**Value**	**Unit**	**Organism**	**Test method**	**Notes**
Endocrine disrupting properties:						Does not apply to mixtures.
Other information:						No other relevant information available on adverse effects on health.

Carbon dioxide						
Toxicity / effect	**Endpoint**	**Value**	**Unit**	**Organism**	**Test method**	**Notes**
Endocrine disrupting properties:						No

SECTION 12: Ecological information

Possibly more information on environmental effects, see Section 2.1 (classification).

Luftmassensensorreiniger **Air Flow Sensor Cleaner**							
Toxicity / effect	**Endpoint**	**Time**	**Value**	**Unit**	**Organism**	**Test method**	**Notes**
12.1. Toxicity to fish:							n.d.a.
12.1. Toxicity to daphnia:							n.d.a.
12.1. Toxicity to algae:							n.d.a.
12.2. Persistence and degradability:							n.d.a.
12.3. Bioaccumulative potential:							n.d.a.
12.4. Mobility in soil:							Product is slightly volatile.
12.5. Results of PBT and vPvB assessment							n.d.a.
12.6. Endocrine disrupting properties:							Does not apply to mixtures.
12.7. Other adverse effects:							No information available on other adverse effects on the environment.

Other information:							According to the recipe, contains no AOX.
Other information:							DOC-elimination degree(complexing organic substance)>= 80%/28d: n.a.

Propan-2-ol

Toxicity / effect	Endpoint	Time	Value	Unit	Organism	Test method	Notes
12.1. Toxicity to fish:	LC50	96h	>100	mg/l	Leuciscus idus		
12.1. Toxicity to fish:	LC50	96h	1400	mg/l	Lepomis macrochirus		
12.1. Toxicity to daphnia:	EC50	48h	2285	mg/l	Daphnia magna		
12.1. Toxicity to daphnia:	EC50	16d	141	mg/l	Daphnia magna		
12.1. Toxicity to algae:	EC50	72h	>100	mg/l	Desmodesmus subspicatus		
12.2. Persistence and degradability:		21d	95	%		OECD 301 E (Ready Biodegradability - Modified OECD Screening Test)	Readily biodegradable
12.2. Persistence and degradability:			99,9	%		OECD 303 A (Simulation Test - Aerobic Sewage Treatment - Activated Sludge Units)	Readily biodegradable
12.3. Bioaccumulative potential:	Log Pow		0,05			OECD 107 (Partition Coefficient (n-octanol/water) - Shake Flask Method)	Slight
12.3. Bioaccumulative potential:	BCF		3,2				Low
12.4. Mobility in soil:	Koc		1,1				Expert judgement
12.5. Results of PBT and vPvB assessment							No PBT substance, No vPvB substance
Toxicity to bacteria:	EC50		>1000	mg/l	activated sludge		
Other organisms:	IC50	3d	2104	mg/l	Lactuca sativa		
Other information:	ThOD		2,4	g/g			
Other information:	BOD5		53	%			
Other information:	COD		96	%			References
Other information:	COD		2,3	g/g			
Other information:	BOD		1171	mg/g			

Hydrocarbons, C7, n-alkanes, isoalkanes, cyclics

Toxicity / effect	Endpoint	Time	Value	Unit	Organism	Test method	Notes
12.1. Toxicity to fish:	LC50	96h	13,4	mg/l	Oncorhynchus mykiss		
12.1. Toxicity to fish:	LL50	96h	>13,4	mg/l	Oncorhynchus mykiss	OECD 203 (Fish, Acute Toxicity Test)	
12.1. Toxicity to fish:	NOELR	28d	1,53	mg/l	Oncorhynchus mykiss	QSAR	
12.1. Toxicity to daphnia:	NOELR	21d	1	mg/l	Daphnia magna	OECD 211 (Daphnia magna Reproduction Test)	

12.1. Toxicity to daphnia:	EC50	48h	3	mg/l	Daphnia magna	OECD 202 (Daphnia sp. Acute Immobilisation Test)	Analogous conclusion
12.1. Toxicity to algae:	EC50	72h	10 - 30	mg/l	Pseudokirchneriella subcapitata		
12.1. Toxicity to algae:	NOELR	72h	10	mg/l	Pseudokirchneriella subcapitata		
12.1. Toxicity to algae:	ErL50	72h	10-30	mg/l	Pseudokirchneriella subcapitata	OECD 201 (Alga, Growth Inhibition Test)	
12.1. Toxicity to algae:	NOELR	72h	6,3	mg/l	Pseudokirchneriella subcapitata	OECD 201 (Alga, Growth Inhibition Test)	
12.2. Persistence and degradability:		28d	98	%		OECD 301 F (Ready Biodegradability - Manometric Respirometry Test)	Readily biodegradable
12.3. Bioaccumulative potential:							Possible
12.5. Results of PBT and vPvB assessment							No PBT substance, No vPvB substance
Water solubility:			2,6	mg/l			25°C

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

Toxicity / effect	Endpoint	Time	Value	Unit	Organism	Test method	Notes
12.1. Toxicity to fish:	NOEC/NOEL	28d	2,045	mg/l	Oncorhynchus mykiss	QSAR	
12.1. Toxicity to fish:	LC50	96h	11,4	mg/l	Oncorhynchus mykiss	OECD 203 (Fish, Acute Toxicity Test)	Goldforelle (Oncorhynchus aguabonita)
12.1. Toxicity to daphnia:	EL50	48h	3	mg/l	Daphnia magna	OECD 202 (Daphnia sp. Acute Immobilisation Test)	
12.1. Toxicity to daphnia:	NOEC/NOEL	21d	1	mg/l	Daphnia magna	OECD 211 (Daphnia magna Reproduction Test)	
12.1. Toxicity to algae:	EL50	72h	30	mg/l	Raphidocelis subcapitata	OECD 201 (Alga, Growth Inhibition Test)	
12.2. Persistence and degradability:		28d	100	%		OECD 301 F (Ready Biodegradability - Manometric Respirometry Test)	Readily biodegradable
12.3. Bioaccumulative potential:	BCF		26-315				
12.3. Bioaccumulative potential:	Log Pow		3,4-5,2				A notable biological accumulation potential has to be expected (LogPow > 3).
12.5. Results of PBT and vPvB assessment							No PBT substance, No vPvB substance

12.7. Other adverse effects:							Product floats on the water surface.

Carbon dioxide							
Toxicity / effect	**Endpoint**	**Time**	**Value**	**Unit**	**Organism**	**Test method**	**Notes**
12.1. Toxicity to fish:	LC50	96h	35	mg/l	Salmo gairdneri		
12.3. Bioaccumulative potential:	Log Kow		0,83				
12.5. Results of PBT and vPvB assessment							No PBT substance, No vPvB substance
12.7. Other adverse effects:							Greenhouse effect
Global warming potential (GWP):			1				

SECTION 13: Disposal considerations

13.1 Waste treatment methods
For the substance / mixture / residual amounts
EC disposal code no.:
The waste codes are recommendations based on the scheduled use of this product.
Owing to the user's specific conditions for use and disposal, other waste codes may be allocated under certain circumstances. (2014/955/EU)
16 05 04 gases in pressure containers (including halons) containing hazardous substances
Recommendation:
Sewage disposal shall be discouraged.
Pay attention to local and national official regulations.
Take full aerosol cans to problem waste collection.
Take emptied aerosol cans to valuable material collection.
For contaminated packing material
Pay attention to local and national official regulations.
Recommendation:
Do not perforate, cut up or weld uncleaned container.
15 01 04 metallic packaging
15 01 10 packaging containing residues of or contaminated by hazardous substances

SECTION 14: Transport information

General statements
Transport by road/by rail (ADR/RID)
14.1. UN number or ID number: 1950
14.2. UN proper shipping name:
UN 1950 AEROSOLS



14.3. Transport hazard class(es): 2.1
14.4. Packing group: -
14.5. Environmental hazards: Not applicable
Tunnel restriction code: D
Classification code: 5F
LQ: 1 L
Transport category: 2
Transport by sea (IMDG-code)
14.1. UN number or ID number: 1950
14.2. UN proper shipping name:
UN 1950 AEROSOLS



14.3. Transport hazard class(es): 2.1
14.4. Packing group: -
14.5. Environmental hazards: Not applicable

Marine Pollutant: Not applicable
EmS: F-D, S-U

Transport by air (IATA)

14.1. UN number or ID number: 1950
14.2. UN proper shipping name:
UN 1950 Aerosols, flammable
14.3. Transport hazard class(es): 2.1
14.4. Packing group: -
14.5. Environmental hazards: Not applicable



14.6. Special precautions for user

Persons employed in transporting dangerous goods must be trained.
All persons involved in transporting must observe safety regulations.
Precautions must be taken to prevent damage.

14.7. Maritime transport in bulk according to IMO instruments

Freighted as packaged goods rather than in bulk, therefore not applicable.
Minimum amount regulations have not been taken into account.
Danger code and packing code on request.
Comply with special provisions.

SECTION 15: Regulatory information

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

Observe restrictions:
Comply with national regulations/laws governing the protection of young people at work (national implementation of the Directive 94/33/EC)!
Regulation (EC) No 1907/2006, Annex XVII
Hydrocarbons, C6-C7, n-alkanes, isoalkanes, cyclics, <5% n-hexane
Comply with trade association/occupational health regulations.

Directive 2012/18/EU ("Seveso III"), Annex I, Part 1 - The following categories apply to this product (others may also need to be considered according to storage, handling etc.):

Hazard categories	Notes to Annex I	Qualifying quantity (tonnes) of dangerous substances as referred to in Article 3(10) for the application of - Lower-tier requirements	Qualifying quantity (tonnes) of dangerous substances as referred to in Article 3(10) for the application of - Upper-tier requirements
P3b	11.1, 11.2	5000 (netto)	50000 (netto)

The Notes to Annex 1 of Directive 2012/18/EU, in particular those named in the tables here and notes 1-6, must be taken into account when assigning categories and qualifying quantities.

Directive 2010/75/EU (VOC): 96,8 %

REGULATION (EC) No 648/2004

15 % or over but less than 30 %
aliphatic hydrocarbons

National requirements/regulations on safety and health protection must be applied when using work equipment.

15.2 Chemical safety assessment

A chemical safety assessment is not provided for mixtures.

SECTION 16: Other information

Revised sections: 8
Employee training in handling dangerous goods is required.
These details refer to the product as it is delivered.
Employee instruction/training in handling hazardous materials is required.

Classification and processes used to derive the classification of the mixture in accordance with the ordinance (EG) 1272/2008 (CLP):

Classification in accordance with regulation (EC) No. 1272/2008 (CLP)	Evaluation method used
Eye Irrit. 2, H319	Classification according to calculation procedure.
Skin Irrit. 2, H315	Classification according to calculation procedure.
Asp. Tox. 1, H304	Classification according to calculation procedure.
STOT SE 3, H336	Classification according to calculation procedure.
Aquatic Chronic 3, H412	Classification according to calculation procedure.
Aerosol 1, H222	Classification according to calculation procedure.
Aerosol 1, H229	Classification based on the form or physical state.

The following phrases represent the posted Hazard Class and Risk Category Code (GHS/CLP) of the product and the constituents.
H225 Highly flammable liquid and vapour.
H304 May be fatal if swallowed and enters airways.
H315 Causes skin irritation.
H319 Causes serious eye irritation.
H336 May cause drowsiness or dizziness.
H411 Toxic to aquatic life with long lasting effects.

Eye Irrit. — Eye irritation
Skin Irrit. — Skin irritation
Asp. Tox. — Aspiration hazard
STOT SE — Specific target organ toxicity - single exposure - narcotic effects
Aquatic Chronic — Hazardous to the aquatic environment - chronic
Aerosol — Aerosols
Flam. Liq. — Flammable liquid

Key literature references and sources for data:

Regulation (EC) No 1907/2006 (REACH) and Regulation (EC) No 1272/2008 (CLP) as amended.
Guidelines for the preparation of safety data sheets as amended (ECHA).
Guidelines on labelling and packaging according to the Regulation (EG) Nr. 1272/2008 (CLP) as amended (ECHA).
Safety data sheets for the constituent substances.
ECHA Homepage - Information about chemicals.
GESTIS Substance Database (Germany).
German Environment Agency "Rigoletto" information site on substances that are hazardous to water (Germany).
EU Occupation Exposure Limits Directives 91/322/EEC, 2000/39/EC, 2006/15/EC, 2009/161/EU, (EU) 2017/164, (EU) 2019/1831, each as amended.
National Lists of Occupational Exposure Limits for each country as amended.
Regulations on the transport of hazardous goods by road, rail, sea and air (ADR, RID, IMDG, IATA) as amended.

Any abbreviations and acronyms used in this document:

acc., acc. to according, according to
ADR Accord européen relatif au transport international des marchandises Dangereuses par Route (= European Agreement concerning the International Carriage of Dangerous Goods by Road)
AOX Adsorbable organic halogen compounds
approx. approximately
Art., Art. no. Article number
ASTM ASTM International (American Society for Testing and Materials)
ATE Acute Toxicity Estimate
BAM Bundesanstalt für Materialforschung und -prüfung (= Federal Institute for Materials Research and Testing, Germany)
BAuA Bundesanstalt für Arbeitsschutz und Arbeitsmedizin (= Federal Institute for Occupational Health and Safety, Germany)
BCF Bioconcentration factor
BSEF The International Bromine Council
CAS Chemical Abstracts Service

CLP Classification, Labelling and Packaging (REGULATION (EC) No 1272/2008 on classification, labelling and packaging of substances and mixtures)
CMR carcinogenic, mutagenic, reproductive toxic
DMEL Derived Minimum Effect Level
DNEL Derived No Effect Level
DOC Dissolved organic carbon
e.g. for example (abbreviation of Latin 'exempli gratia'), for instance
EbCx, EyCx, EbLx (x = 10, 50) Effect Concentration/Level of x % on reduction of the biomass (algae, plants)
EC European Community
ECHA European Chemicals Agency
ECx, ELx (x = 0, 3, 5, 10, 20, 50, 80, 100) Effect Concentration/Level for x % effect
EEC European Economic Community
EINECS European Inventory of Existing Commercial Chemical Substances
ELINCS European List of Notified Chemical Substances
EN European Norms
EPA United States Environmental Protection Agency (United States of America)
ErCx, EμCx, ErLx (x = 10, 50) Effect Concentration/Level of x % on inhibition of the growth rate (algae, plants)
etc. et cetera
EU European Union
EVAL Ethylene-vinyl alcohol copolymer
Fax. Fax number
gen. general
GHS Globally Harmonized System of Classification and Labelling of Chemicals
GWP Global warming potential
Koc Adsorption coefficient of organic carbon in the soil
Kow octanol-water partition coefficient
IARC International Agency for Research on Cancer
IATA International Air Transport Association
IBC (Code) International Bulk Chemical (Code)
IMDG-code International Maritime Code for Dangerous Goods
incl. including, inclusive
IUCLID International Uniform Chemical Information Database
IUPAC International Union for Pure Applied Chemistry
LC50 Lethal Concentration to 50 % of a test population
LD50 Lethal Dose to 50% of a test population (Median Lethal Dose)
Log Koc Logarithm of adsorption coefficient of organic carbon in the soil
Log Kow, Log Pow Logarithm of octanol-water partition coefficient
LQ Limited Quantities
MARPOL International Convention for the Prevention of Marine Pollution from Ships
mg/kg bw mg/kg body weight
mg/kg bw/d, mg/kg bw/day mg/kg body weight/day
mg/kg dw mg/kg dry weight
mg/kg wwt mg/kg wet weight
n.a. not applicable
n.av. not available
n.c. not checked
n.d.a. no data available
NIOSH National Institute for Occupational Safety and Health (USA)
NLP No-longer-Polymer
NOEC, NOEL No Observed Effect Concentration/Level
OECD Organisation for Economic Co-operation and Development
org. organic
OSHA Occupational Safety and Health Administration (USA)
PBT persistent, bioaccumulative and toxic
PE Polyethylene
PNEC Predicted No Effect Concentration
ppm parts per million
PVC Polyvinylchloride
REACH Registration, Evaluation, Authorisation and Restriction of Chemicals (REGULATION (EC) No 1907/2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals)
REACH-IT List-No. 6/7/8/9xx-xxx-x No. is automatically assigned, e.g. to pre-registrations without a CAS No. or other numerical identifier. List Numbers do not have any legal significance, rather they are purely technical identifiers for processing a submission via REACH-IT.

RID Règlement concernant le transport International ferroviaire de marchandises Dangereuses (= Regulation concerning the International Carriage of Dangerous Goods by Rail)
SVHC Substances of Very High Concern
Tel. Telephone
TOC Total organic carbon
UN RTDG United Nations Recommendations on the Transport of Dangerous Goods
VOC Volatile organic compounds
vPvB very persistent and very bioaccumulative

The statements made here should describe the product with regard to the necessary safety precautions - they are not meant to guarantee definite characteristics - but they are based on our present up-to-date knowledge.
No responsibility.
These statements were made by:

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