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Safety data sheet according to Regulation (EC) No 1907/2006, Annex II

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

1.1 Product identifier

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(GB)

1.2 Relevant identified uses of the substance or mixture and uses advised against Relevant identified uses of the substance or mixture: Test gas Uses advised against:

No information available at present.

1.3 Details of the supplier of the safety data sheet

Hekatron Vertriebs GmbH Brühlmatten 9 D-79295 Sulzburg Tel.: +49 7634 500-0 Homepage: hekatron-brandschutz.de

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)

Emergency poisoning centre D-79110 Freiburg Tel.: +49 (0) 761 19240 (24 hour) Telephone number of the company in case of emergencies:

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Classification acco	ording to Regulation (EC)	1272/2008 (CLP)
Hazard class	Hazard category	Hazard statement
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)

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Danger

Aerosol

H222-Extremely flammable aerosol. H229-Pressurised container: May burst if heated.

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

Without adequate ventilation, formation of explosive mixtures may be possible.

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

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 %	1-<5
Classification according to Regulation (EC) 1272/2008 (CLP), M-	Flam. Liq. 2, H225
factors	Eye Irrit. 2, H319
	STOT SE 3, H336

Ethyl acetate	Substance for which an EU exposure limit value applies.
Registration number (REACH)	01-2119475103-46-XXXX
Index	607-022-00-5
EINECS, ELINCS, NLP, REACH-IT List-No.	205-500-4
CAS	141-78-6
content %	1-<5
Classification according to Regulation (EC) 1272/2008 (CLP), M-	EUH066
factors	Flam. Liq. 2, H225
	Eye Irrit. 2, H319
	STOT SE 3, H336

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! Page 3 of 20 Safety data sheet according to Regulation (EC) No 1907/2006, Annex II Revision date / version: 10.02.2023 / 0003 Replacing version dated / version: 27.09.2022 / 0002 Valid from: 10.02.2023 PDF print date: 10.02.2023 Prüfgas 918/5

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.

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

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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.

Do not induce vomiting - 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. In certain cases, the symptoms of poisoning may only appear after an extended period / after several hours. The following may occur:

Irritation of the respiratory tract Coughing Headaches Dizziness

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 / alcohol resistant foam / CO2 / dry extinguisher.

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

Possible build up of explosive/highly flammable vapour/air mixture.

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

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(GB)

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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 contact with eyes or skin.

If applicable, caution - risk of slipping. 6.1.2 For emergency responders

See section 8 for suitable protective equipment and material specifications.

6.2 Environmental precautions

Prevent penetration into drains, cellars, working pits or other places in which accumulation could be hazardous.

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

If accidental entry into drainage system occurs, inform responsible authorities.

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. universal binding agent, sand, diatomaceous 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.

Avoid contact with eyes or skin.

Keep away from sources of ignition - Do not smoke.

Take measures against electrostatic charging, if appropriate.

Do not use on hot surfaces.

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! Observe special storage conditions.

Do not store with flammable or self-igniting materials.

Keep protected from direct sunlight and temperatures over 50°C.

Store in a well-ventilated place.

Store cool.

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,

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depending on the application (building materials, wood, chemistry, laboratory, leather, metal).

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

Chemical Name	Propan-2-ol		
WEL-TWA: 400 ppm (999 mg/r		WEL-STEL: 500 ppm (1250 mg/m3)	
Monitoring procedures:	-	Draeger - Alcohol 25/a i-Propanol (81 01 631)	
Monitoring procedures.	-	Compur - KITA-122 SA(C) (549 277)	
	_	Comput - 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 (200	
	_	NIOSH 1400 (ALCOHOLS I) - 1994	
	-	NIOSH 2549 (VOLATILE ORGANIC COMPOUNDS (S	CREENING)) - 1996
	-	Draeger - Alcohol 100/a (CH 29 701)	
BMGV:			
Chemical Name	Ethyl agotata		
WEL-TWA: 200 ppm (734 mg/r	Ethyl acetate	WEL-STEL: 400 ppm (1468 mg/m3) (WEL, EU)	
Monitoring procedures:	(VVEL, EU)	Draeger - Ethyl Acetate 200/a (CH 20 201)	
monitoring procedures.	-	Compur - KITA-111 SA (549 160)	
	-	Comput - KITA-111 U(C) (549 100)	
	-	DFG Meth. Nr. 1 (D) (Loesungsmittelgemische 2), DFG	(E) (Solvent mixtures 2)
	_	1993, 2002	
	-	DFG Meth. Nr. 2 (D) (Loesungsmittelgemische 3), DFG	(E) (Solvent mixtures 3) -
	_	2014. 2002	
		DFG Meth. Nr. 6 (D) (Loesungsmittelgemische 4), DFG	(E) (Solvent mixtures 4) -
	_	2014, 2002	
	-	NIOSH 1457 (ETHYL ACETATE) - 1994	
	-	NIOSH 2549 (VOLATILE ORGANIC COMPOUNDS (S	CREENING)) - 1996
BMGV:		Other information:	
Chemical Name	Butane		
WEL-TWA: 600 ppm (1450 mg		WEL-STEL: 750 ppm (1810 mg/m3)	
Monitoring procedures:	/113)	Compur - KITA-221 SA (549 459)	
Monitoring procedures.	-	OSHA PV2010 (n-Butane) - 1993	
BMGV:	-		
		Other Information.	
Chemical Name	Propane		
WEL-TWA: 1000 ppm (ACGIH)		WEL-STEL:	
Monitoring procedures:	-	Compur - KITA-125 SA (549 954)	
	-	OSHA PV2077 (Propane) - 1990	
BMGV:		Other information:	
Chemical Name	Isobutane		
WEL-TWA: 1000 ppm (EX) (AC	CGIH)	WEL-STEL:	
Monitoring procedures:	-	Compur - KITA-113 SB(C) (549 368)	•
BMGV:		Other information:	

Area of application	Exposure route / Environmental compartment	Effect on health	Descripto r	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	

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	Environment - sewage treatment plant		PNEC	2251	mg/l
	Environment - water, sporadic (intermittent)		PNEC	140,9	mg/l
	release				
	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

Area of application	Exposure route / Environmental compartment	Effect on health	Descripto r	Value	Unit	Note
	Environment - freshwater		PNEC	0,24	mg/l	
	Environment - marine		PNEC	0,024	mg/l	
	Environment - water, sporadic (intermittent) release		PNEC	1,65	mg/l	
	Environment - sediment, freshwater		PNEC	1,15	mg/kg	
	Environment - sediment, marine		PNEC	0,115	mg/kg	
	Environment - soil		PNEC	0,148	mg/kg	
	Environment - sewage treatment plant		PNEC	650	mg/l	
	Environment - oral (animal feed)		PNEC	200	mg/kg	
Consumer	Human - oral	Long term, systemic effects	DNEL	4,5	mg/kg	
Consumer	Human - dermal	Long term, systemic effects	DNEL	37	mg/kg	
Consumer	Human - inhalation	Long term, systemic effects	DNEL	367	mg/m3	
Consumer	onsumer Human - inhalation		DNEL	367	mg/m3	
Consumer	Human - inhalation	Short term, systemic effects	DNEL	734	mg/m3	
Consumer	Human - inhalation	Short term, local effects	DNEL	734	mg/m3	
Workers / employees	Human - dermal	Long term, systemic effects Long term, systemic	DNEL	63	mg/kg	
Workers / employees	Norkers / employees Human - inhalation		DNEL	734	mg/m3	
Workers / employees	Norkers / employees Human - inhalation		DNEL	734	mg/m3	
Workers / employees	Human - inhalation	Short term, systemic effects	DNEL	1468	mg/m3	
Workers / employees	Human - inhalation	Short term, local effects	DNEL	1468	mg/m3	

WEL-TWA = Workplace Exposure Limit - Long-term exposure limit (8-hour TWA (= time weighted average) reference period) EH40. AGW = "Arbeitsplatzgrenzwert" (workplace limit value, Germany). Page 7 of 20 Safety data sheet according to Regulation (EC) No 1907/2006, Annex II Revision date / version: 10.02.2023 / 0003 Replacing version dated / version: 27.09.2022 / 0002 Valid from: 10.02.2023 PDF print date: 10.02.2023 Prüfgas 918/5

(8) = Inhalable fraction (Directive 2017/164/EU, Directive 2004/37/CE). (9) = Respirable fraction (Directive 2017/164/EU, Directive 2004/37/CE). (11) = Inhalable fraction (Directive 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 (Directive 2004/37/CE). | WEL-STEL = Workplace Exposure Limit - Short-term exposure limit (15-minute reference period).

(8) = Inhalable fraction (2017/164/EU, 2017/2398/EU). (9) = Respirable fraction (2017/164/EU, 2017/2398/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. BGW = "Biologischer Grenzwert" (biological limit value, Germany) | Other information: Sen = Capable of causing occupational asthma. Sk = Can be absorbed through skin. Carc = Capable of causing cancer and/or heritable genetic damage.

** = The exposure limit for this substance is repealed through the TRGS 900 (Germany) of January 2006 with the goal of revision. (13) = The substance can cause sensitisation of the skin and of the respiratory tract (Directive 2004/37/CE), (14) = The substance can cause sensitisation of the skin (Directive 2004/37/CE).

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 nonmetrological investigative techniques.

These are specified by e.g. EN 14042.

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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: Chemical resistant protective gloves (EN ISO 374). If applicable Protective gloves in butyl rubber (EN ISO 374). Minimum layer thickness in mm: 0,7 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: If OES or MEL is exceeded. Gas mask filter AX (EN 14387), code colour brown. Observe wearing time limitations for respiratory protection equipment.

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. Page 8 of 20 Safety data sheet according to Regulation (EC) No 1907/2006, Annex II Revision date / version: 10.02.2023 / 0003 Replacing version dated / version: 27.09.2022 / 0002 Valid from: 10.02.2023 PDF print date: 10.02.2023 Prüfgas 918/5

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.

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SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Physical state: Colour: Odour. Melting point/freezing point: Boiling point or initial boiling point and boiling range: Flammability: Lower explosion limit: Upper explosion limit: Flash point: Auto-ignition temperature: Decomposition temperature: pH: Kinematic viscosity: Solubility: Partition coefficient n-octanol/water (log value): Vapour pressure: Density and/or relative density: Relative vapour density: Particle characteristics: 9.2 Other information

Explosives:

Oxidising liquids:

Aerosol. Active substance: liquid. Clear Characteristic There is no information available on this parameter. -42 °C (Propane) Does not apply to aerosols. There is no information available on this parameter. There is no information available on this parameter. -104 °C (Propane) 400 °C (Propellant gas) There is no information available on this parameter. There is no information available on this parameter. Does not apply to aerosols. partially Does not apply to mixtures. 3000 - 3800 hPa (20°C) 0,5713 g/cm3 Does not apply to aerosols. Does not apply to aerosols.

Product is not explosive. When using: development of explosive vapour/air mixture possible.

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 strong oxidizing agents.
10.6 Hazardous decomposition products

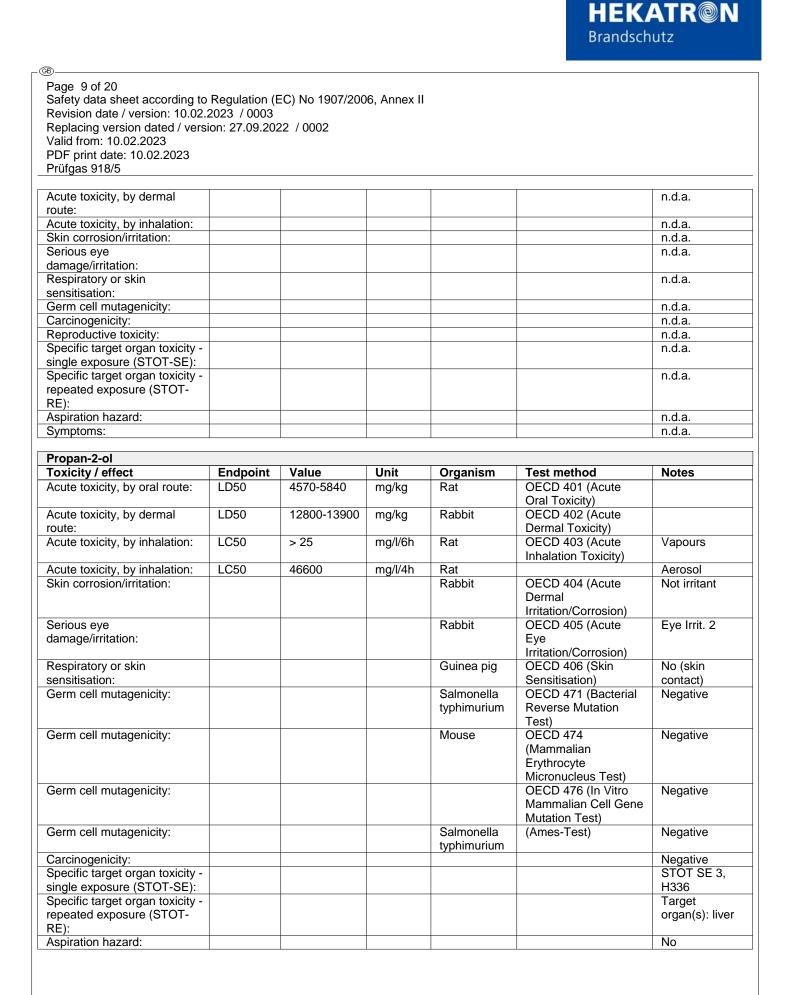
No decomposition when used as directed.

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).

dpoint Va	lue Uni	t Organism	Test method	Nataa
		t Organisin	Test method	Notes
				n.d.a.
-				



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Symptoms:						breathing difficulties, unconsciousnes s, vomiting, headaches, fatigue, dizziness, nausea, eyes, reddened, watering eyes
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)

Ethyl acetate						
Toxicity / effect	Endpoint	Value	Unit	Organism	Test method	Notes
Acute toxicity, by oral route:	LD50	4934	mg/kg	Rabbit	OECD 401 (Acute Oral Toxicity)	
Acute toxicity, by dermal route:	LD50	>20000	mg/kg	Rabbit		
Acute toxicity, by inhalation:	LC0	29,3	mg/l/4h	Rat		Vapours
Skin corrosion/irritation:				Rabbit	OECD 404 (Acute Dermal Irritation/Corrosion)	Not irritant, Repeated exposure may cause skin dryness or cracking.
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:				Mammalian	OECD 473 (In Vitro Mammalian Chromosome Aberration Test)	Negative
Germ cell mutagenicity:				Mammalian	OECD 474 (Mammalian Erythrocyte Micronucleus Test)	Negative
Carcinogenicity:						Negative
Reproductive toxicity:						Negative
Aspiration hazard:						No

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[Symptoms:						lack of
	eymptomet						appetite,
							breathing
							difficulties,
							drowsiness,
							unconsciousnes
							s, drop in blood
							pressure,
							cornea opacity,
							coughing,
							headaches,
							gastrointestinal
							disturbances,
							intoxication,
							drowsiness.
							mucous
							membrane
							irritation,
							dizziness.
							salivation,
							nausea and
							vomiting.,
							fatigue
	Specific target organ toxicity -	NOAEL	900	mg/kg	Rat	Regulation (EC)	laliguo
	repeated exposure (STOT-		000	bw/d	. lat	440/2008 B.26 (SUB-	
	RE), oral:			511/4		CHRONIC ORAL	
						TOXICITY TEST	
						REPEATED DOSE 90	
						- DAY (RODENTS))	
	Specific target organ toxicity -	NOAEL	0,002	mg/kg	Rat	Regulation (EC)	
	repeated exposure (STOT-		-,			440/2008 B.29 (SUB-	
	RE), inhalat.:					CHRONIC	
	,,					INHALATION	
						TOXICITY STUDY 90-	
						DAY REPEATED	
						(RODENTS))	
l		1					

Butane						
Toxicity / effect	Endpoint	Value	Unit	Organism	Test method	Notes
Acute toxicity, by inhalation:	LC50	658	mg/l/4h	Rat		
Germ cell mutagenicity:				Salmonella	OECD 471 (Bacterial	Negative
				typhimurium	Reverse Mutation	
					Test)	
Germ cell mutagenicity:					OECD 473 (In Vitro	Negative
					Mammalian	-
					Chromosome	
					Aberration Test)	
Germ cell mutagenicity:				Human being	OECD 473 (In Vitro	Negative
					Mammalian	
					Chromosome	
					Aberration Test)	
Germ cell mutagenicity:				Rat	OECD 474	Negative
					(Mammalian	-
					Erythrocyte	
					Micronucleus Test)	
Aspiration hazard:						No

HEKATR N Brandschutz Page 12 of 20 Safety data sheet according to Regulation (EC) No 1907/2006, Annex II Revision date / version: 10.02.2023 / 0003 Replacing version dated / version: 27.09.2022 / 0002 Valid from: 10.02.2023 PDF print date: 10.02.2023 Prüfgas 918/5

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Specific target organ toxicity - repeated exposure (STOT- RE), inhalat.:	NOAEC	21,394	mg/l	Rat	OECD 422 (Combined Repeated Dose Tox. Study with the Reproduction/Develop m. Tox. Screening Test)	
Symptoms:						ataxia, breathing difficulties, drowsiness, unconsciousnes s, frostbite, disturbed heart rhythm, headaches, cramps, intoxication, dizziness, nausea and vomiting.

Toxicity / effect	Endpoint	Value	Unit	Organism	Test method	Notes
Acute toxicity, by inhalation:	LC50	658	mg/l/4h	Rat		
Acute toxicity, by inhalation:	LC50	260000	ppmV/4h	Rat		Gasses, Male, Analogous conclusion
Skin corrosion/irritation:						Not irritant
Serious eye damage/irritation:						Not irritant
Germ cell mutagenicity:					OECD 473 (In Vitro Mammalian Chromosome Aberration Test)	Negative
Germ cell mutagenicity:				Salmonella typhimurium	OECD 471 (Bacterial Reverse Mutation Test)	Negative
Reproductive toxicity (Developmental toxicity):	NOAEC	21,641	mg/l		OECD 422 (Combined Repeated Dose Tox. Study with the Reproduction/Develop m. Tox. Screening Test)	
Aspiration hazard:						No
Symptoms:						breathing difficulties, unconsciousne s, frostbite, headaches, cramps, mucous membrane irritation, dizziness, nausea and vomiting.

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Specific target organ toxicity - repeated exposure (STOT- RE), inhalat.:	NOAEL	7,214	mg/l	Rat	OECD 422 (Combined Repeated Dose Tox. Study with the Reproduction/Develop m. Tox. Screening Test)
Specific target organ toxicity - repeated exposure (STOT- RE), inhalat.:	LOAEL	21,641	mg/l	Rat	OECD 422 (Combined Repeated Dose Tox. Study with the Reproduction/Develop m. Tox. Screening Test)

Isobutane Toxicity / effect	Endpoint	Value	Unit	Organism	Test method	Notes
Acute toxicity, by inhalation:	LC50	658	mg/l/4h	Rat		
Acute toxicity, by inhalation:	LC50	260000	ppmV/4h	Rat		Gasses, Male
Serious eye damage/irritation:				Rabbit		Not irritant
Germ cell mutagenicity:				Salmonella typhimurium	OECD 471 (Bacterial Reverse Mutation Test)	Negative
Aspiration hazard:						No
Symptoms:						unconsciousnes s, frostbite, headaches, cramps, dizziness, nausea and vomiting.
Specific target organ toxicity - repeated exposure (STOT- RE), inhalat.:	NOAEL	21,394	mg/l	Rat	OECD 422 (Combined Repeated Dose Tox. Study with the Reproduction/Develop m. Tox. Screening Test)	

11.2. Information on other hazards

Prüfgas 918/5									
Toxicity / effect	Endpoint	Value	Unit	Organism	Test method	Notes			
Endocrine disrupting						Does not apply			
properties:						to mixtures.			
Other information:						No other			
						relevant			
						information			
						available on			
						adverse effects			
						on health.			

SECTION 12: Ecological information

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

Toxicity / effect Endpoint Time Value Unit Organism Test method Notes	
12.1. Toxicity to fish: n.d.a.	

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12.1. Toxicity to		n.d.a.
daphnia:		
12.1. Toxicity to algae:		n.d.a.
12.2. Persistence and		n.d.a.
degradability:		
12.3. Bioaccumulative		n.d.a.
potential:		
12.4. Mobility in soil:		n.d.a.
12.5. Results of PBT		n.d.a.
and vPvB assessment		
12.6. Endocrine		Does not apply
disrupting properties:		to mixtures.
12.7. Other adverse		No information
effects:		available on
		other adverse
		effects on the
		environment.

Toxicity / effect	Endpoint	Time	Value	Unit	Organism	Test method	Notes
12.3. Bioaccumulative	BCF		3,2				Low
potential:	-		- /				-
12.1. Toxicity to fish:	LC50	96h	>100	mg/l	Leuciscus idus		
12.1. Toxicity to fish:	LC50	96h	1400	mg/l	Lepomis		
,				Ū	macrochirus		
12.1. Toxicity to	EC50	48h	2285	mg/l	Daphnia magna		
daphnia:				Ū			
12.1. Toxicity to	EC50	16d	141	mg/l	Daphnia magna		
daphnia:				U			
12.1. Toxicity to algae:	EC50	72h	>100	mg/l	Desmodesmus		
, ,				C C	subspicatus		
12.2. Persistence and		21d	95	%	· ·	OECD 301 E	Readily
degradability:						(Ready	biodegradable
						Biodegradability -	-
						Modified OECD	
						Screening Test)	
12.2. Persistence and			99,9	%		OECD 303 A	Readily
degradability:						(Simulation Test -	biodegradable
						Aerobic Sewage	
						Treatment -	
						Activated Sludge	
						Units)	
12.3. Bioaccumulative	Log Pow		0,05			OECD 107	Slight
potential:						(Partition	
						Coefficient (n-	
						octanol/water) -	
						Shake Flask	
						Method)	
12.4. Mobility in soil:	Koc		1,1				Expert
							judgement
12.5. Results of PBT							No PBT
and vPvB assessment							substance, No
	5050		4				vPvB substance
Toxicity to bacteria:	EC50	4.01	>1000	mg/l	activated sludge		
Toxicity to bacteria:	EC10	16h	1050	mg/l	Pseudomonas		
Other server'	1050	0.1	0404		putida		
Other organisms:	IC50	3d	2104	mg/l	Lactuca sativa		
Other information:	ThOD		2,4	g/g			
Other information:	BOD5		53	%			Defenses
Other information:	COD		96	%			References
Other information:	COD		2,4	g/g			
Other information:	BOD		1171	mg/g			

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Ethyl acetate	Enducint	Time	Value	11	Ormoniom	Teet methed	Nataa
Toxicity / effect	Endpoint	Time	Value	Unit	Organism	Test method	Notes
12.1. Toxicity to fish:	NOEC/NOEL	32d	<9,65	mg/l	Pimephales promelas		
12.1. Toxicity to fish:	LC50	96h	230	mg/l	Pimephales promelas		
12.1. Toxicity to fish:	LC50	48h	333	mg/l	Leuciscus idus		
12.1. Toxicity to	EC50	48h	610	mg/l	Daphnia magna	DIN 38412 T.11	
daphnia:				-			
12.1. Toxicity to daphnia:	NOEC/NOEL	21d	2,4	mg/l	Daphnia magna	OECD 211 (Daphnia magna Reproduction Test)	
12.1. Toxicity to daphnia:	EC50	48h	165	mg/l			Daphnia cucullata
12.1. Toxicity to algae:	EC50	48h	5600	mg/l	Desmodesmus subspicatus	DIN 38412 T.9	
12.1. Toxicity to algae:	NOEC/NOEL	96h	2000	mg/l	Scenedesmus subspicatus	OECD 201 (Alga, Growth Inhibition Test)	
12.1. Toxicity to algae:	EC50	96h	>2000	mg/l	Pseudokirchnerie Ila subcapitata	OECD 201 (Alga, Growth Inhibition Test)	
12.1. Toxicity to algae:	NOEC/NOEL	72h	>100	mg/l	Desmodesmus subspicatus	OECD 201 (Alga, Growth Inhibition Test)	
12.1. Toxicity to algae:	EC50	48h	3300	mg/l	Scenedesmus subspicatus		
12.2. Persistence and degradability:		20d	79	%		OECD 301 D (Ready Biodegradability - Closed Bottle Test)	Readily biodegradable
12.3. Bioaccumulative potential:	BCF	72h	30			, , , , , , , , , , , , , , , , , , ,	(Fish)
12.3. Bioaccumulative potential:	Log Kow		0,68			OECD 107 (Partition Coefficient (n- octanol/water) - Shake Flask Method)	Bioaccumulati n is unlikely (LogPow < 1).25 °C
12.4. Mobility in soil:	H (Henry)		0,00012	atm*m3/ mol			
12.4. Mobility in soil:	Koc		3	-			
12.5. Results of PBT and vPvB assessment							No PBT substance, No vPvB substance
Toxicity to bacteria:	EC10	16h	2900	mg/l	Escherichia coli		
Toxicity to bacteria:	EC50	15min	5870	mg/l	Photobacterium phosphoreum		
Toxicity to bacteria:	EC10	18h	2900	mg/l	Pseudomonas putida	DIN 38412 T.8	

Butane Toxicity / effect	Endpoint	Time	Value	Unit	Organism	Test method	Notes
12.1. Toxicity to fish:	LC50	96h	24,11	mg/l		QSAR	
12.1. Toxicity to	LC50	48h	14,22	mg/l		QSAR	
daphnia:							

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12.3. Bioaccumulative potential:	Log Pow	2,98	A notable biological accumulation potential is not to be expected (LogPow 1-3).
12.4. Mobility in soil:			Not to be expected
12.5. Results of PBT and vPvB assessment			No PBT substance, No vPvB substance

Propane							
Toxicity / effect	Endpoint	Time	Value	Unit	Organism	Test method	Notes
12.3. Bioaccumulative	Log Pow		2,28				A notable
potential:	_						biological
							accumulation
							potential is not
							to be expected
							(LogPow 1-3).
12.5. Results of PBT							No PBT
and vPvB assessment							substance, No
							vPvB substance

Toxicity / effect	Endpoint	Time	Value	Unit	Organism	Test method	Notes
12.3. Bioaccumulative							A notable
potential:							biological
							accumulation
							potential is not
							to be expected
							(LogPow 1-3).
12.1. Toxicity to fish:	LC50	96h	27,98	mg/l			
12.1. Toxicity to algae:	EC50	96h	7,71	mg/l			
12.2. Persistence and							Readily
degradability:							biodegradable
12.5. Results of PBT							No PBT
and vPvB assessment							substance, No
							vPvB substance

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.



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Recycling 15 01 04 metallic packaging

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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 train	ed.			
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)!

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.):

sensitioned deserving to storage, nanamig 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



500 (netto)

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150 (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 2012/18/EU ("Seveso III"), Annex I, Part 2 - This product contains the substances listed below:

Entry Nr	Dangerous substances	Notes to Annex I	Qualifying quantity (tonnes) for the application of - Lower- tier requirements	Qualifying quantity (tonnes) for the application of - Upper- tier requirements
18	Liquefied flammable gases, Category 1 or 2	19	50	200
	(including LPG) and natural gas			

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):

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P3a

99,96 %

Observe incident regulations.

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:

1, 7, 14, 15

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
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 (specified in Section 2 and 3). H225 Highly flammable liquid and vapour.

H319 Causes serious eve irritation.

H336 May cause drowsiness or dizziness.

EUH066 Repeated exposure may cause skin dryness or cracking.

Aerosol — Aerosols Flam. Liq. — Flammable liquid Eye Irrit. — Eye irritation STOT SE — Specific target organ toxicity - single exposure - narcotic effects

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. Page 19 of 20 Safety data sheet according to Regulation (EC) No 1907/2006, Annex II Revision date / version: 10.02.2023 / 0003 Replacing version dated / version: 27.09.2022 / 0002 Valid from: 10.02.2023 PDF print date: 10.02.2023 Prüfgas 918/5

GESTIS Substance Database (Germany).

(GB)

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:

according, according to acc., acc. 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 approximately approx. Article number Art., Art. no. 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 bw body weight 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 dw dry weight for example (abbreviation of Latin 'exempli gratia'), for instance e.g. EbCx, EyCx, EbLx (x = 10, 50) Effect Concentration/Level of x % on reduction of the biomass (algae, plants) European Community EC 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 European Inventory of Existing Commercial Chemical Substances EINECS **ELINCS** European List of Notified Chemical Substances **European Norms** EN United States Environmental Protection Agency (United States of America) EPA ErCx, $E\mu Cx$, ErLx (x = 10, 50) Effect Concentration/Level of x % on inhibition of the growth rate (algae, plants) et cetera etc. EU **European Union** EVAL Ethylene-vinyl alcohol copolymer Fax number Fax. general gen. ĞHS Globally Harmonized System of Classification and Labelling of Chemicals GWP Global warming potential Adsorption coefficient of organic carbon in the soil Koc octanol-water partition coefficient Kow IARC International Agency for Research on Cancer IATA International Air Transport Association International Bulk Chemical (Code) IBC (Code) IMDG-code International Maritime Code for Dangerous Goods incl. including, inclusive IUCLIDInternational 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

HEKATR N Brandschutz

GB Page 20 of 20 Safety data sheet according to Regulation (EC) No 1907/2006, Annex II Revision date / version: 10.02.2023 / 0003 Replacing version dated / version: 27.09.2022 / 0002 Valid from: 10.02.2023 PDF print date: 10.02.2023 Prüfgas 918/5 Log Kow, Log Pow Logarithm of octanol-water partition coefficient LQ Limited Quantities MARPOL International Convention for the Prevention of Marine Pollution from Ships not applicable n.a. n.av. not available not checked n.c. n.d.a. no data available NIOSHNational 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) persistent, bioaccumulative and toxic PBT PE Polyethylene PNEC Predicted No Effect Concentration ppm parts per million PVC Polyvinylchloride Registration, Evaluation, Authorisation and Restriction of Chemicals (REGULATION (EC) No 1907/2006 concerning REACH the Registration, Evaluation, Authorisation and Restriction of Chemicals) 9xx-xxx-x No. is automatically assigned, e.g. to pre-registrations without a CAS No. or other numerical REACH-IT List-No. 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

wwt wet weight

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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