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Safety data sheet according to Regulation (EC) No 1907/2006, Annex II
Revision date / version: 29.03.2023 / 0002
Replacing version dated / version: 18.05.2022 / 0001
Valid from: 29.03.2023
PDF print date: 31.03.2023
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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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1.2 Relevant identified uses of the substance or mixture and uses advised against

Relevant identified uses of the substance or mixture:

Anti-freeze

Heat transfer fluid

Uses advised against:

No information available at present.

1.3 Details of the supplier of the safety data sheet

GB

elumatec AG
Pinacher Straße 61
75417 Mühlacker
Tel.: +49 (0) 7041 / 14 – 0
Fax: +49 (0) 7041 / 14 – 280
Homepage: www.elumatec.com

elumatec UK Ltd
Unit 1 Integra
Thornton Chase
Linford Wood
Milton Keynes
MK14 6FD

Phone +44 1908 580 800
Fax +44 1908 580 830

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

Hazard class	Hazard category	Hazard statement
Acute Tox.	4	H302-Harmful if swallowed.
STOT RE	2	H373-May cause damage to organs through prolonged or repeated exposure.

2.2 Label elements

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



Warning

H302-Harmful if swallowed. H373-May cause damage to organs through prolonged or repeated exposure.

P260-Do not breathe vapours or spray. P264-Wash with plenty of water and soap thoroughly after handling.

P301+P312-IF SWALLOWED: Call a POISON CENTRE / doctor if you feel unwell. P314-Get medical advice / attention if you feel unwell. P330-Rinse mouth.

Ethanediol

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

Ethanediol	Substance for which an EU exposure limit value applies.
Registration number (REACH)	01-2119456816-28-XXXX
Index	603-027-00-1
EINECS, ELINCS, NLP, REACH-IT List-No.	203-473-3
CAS	107-21-1
content %	33-37
Classification according to Regulation (EC) 1272/2008 (CLP), M-factors	Acute Tox. 4, H302 STOT RE 2, H373

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.

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!

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Inhalation

Supply person with fresh air and consult doctor according to symptoms.

Skin contact

Wash thoroughly using copious water - remove contaminated clothing immediately. If skin irritation occurs (redness etc.), consult doctor.

Eye contact

Remove contact lenses.

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

Ingestion

Rinse the mouth thoroughly with water.

Do not induce vomiting. 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.

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

Product is not combustible.

Adapt to the nature and extent of fire.

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

Oxides of nitrogen

Toxic gases

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.

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.

Keep unprotected persons away.

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

If leakage occurs, dam up.

Resolve leaks if this possible without risk.

Prevent from entering drainage system.

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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

Soak up with absorbent material (e.g. universal binding agent, sand, diatomaceous earth) and dispose of according to Section 13.
 Fill the absorbed material into lockable containers.

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 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.
 Store product closed and only in original packing.
 Not to be stored in gangways or stair wells.
 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,
 depending on the application (building materials, wood, chemistry, laboratory, leather, metal).

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

Chemical Name	Ethanediol		
WEL-TWA: 10 mg/m3 (particulate), 52 mg/m3 (vapour) (WEL), 20 ppm (52 mg/m3) (EU)	WEL-STEL: 104 mg/m3 (vapour) (WEL), 40 ppm (104 mg/m3) (EU)	---	
Monitoring procedures:	<ul style="list-style-type: none">- Draeger - Ethylene Glycol 10 (5) (81 01 351)- Compur - KITA-232 SA (502 342)- Compur - KITA-232 SB (550 267)- NIOSH 5500 (ETHYLENE GLYCOL) - 1993- NIOSH 5523 (GLYCOLS) - 1996- OSHA PV2024 (Ethylene glycol) - 1999 - EU project BC/CEN/ENTR/000/2002-16 card 11-2 (2004)- Draeger - Alcohol 100/a (CH 29 701)		
BMGV: ---	Other information: Sk (particulate, vapour)		

Ethanediol						
Area of application	Exposure route / Environmental compartment	Effect on health	Descriptor	Value	Unit	Note

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	Environment - freshwater		PNEC	10	mg/l	
	Environment - marine		PNEC	1	mg/l	
	Environment - sporadic (intermittent) release		PNEC	10	mg/l	
	Environment - sewage treatment plant		PNEC	199,5	mg/l	
	Environment - sediment, freshwater		PNEC	37	mg/kg dw	
	Environment - soil		PNEC	1,53	mg/kg	
	Environment - sediment, marine		PNEC	3,7	mg/kg dw	
Industrial	Human - inhalation	Long term, local effects	DNEL	35	mg/m3	
Industrial	Human - dermal	Long term, systemic effects	DNEL	106	mg/kg bw/d	
Consumer	Human - inhalation	Long term, local effects	DNEL	7	mg/m3	
Consumer	Human - dermal	Long term, systemic effects	DNEL	53	mg/m3	

GB WEL-TWA = Workplace Exposure Limit - Long-term exposure limit (8-hour TWA (= time weighted average) reference period) EH40. AGW = "Arbeitsplatzgrenzwert" (workplace limit value, Germany).
 (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 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:
 Chemical resistant protective gloves (EN ISO 374).
 With short-term contact:
 Protective nitrile gloves (EN ISO 374).
 Minimum layer thickness in mm:

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0,4
Permeation time (penetration time) in minutes:
30
With long-term contact:
Protective gloves made of butyl (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 A (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.
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:	Liquid
Colour:	Light yellow
Odour:	Slightly
Melting point/freezing point:	-22 °C (DIN 51583)
Boiling point or initial boiling point and boiling range:	106 °C (ASTM D 1120)
Flammability:	Not flammable
Lower explosion limit:	There is no information available on this parameter.
Upper explosion limit:	There is no information available on this parameter.
Flash point:	No (ASTM D 6450 (Continuously Closed Cup, CCCFP-Tester))
Auto-ignition temperature:	n.a. (DIN 51794)
Decomposition temperature:	>250 °C
pH:	~8 (100 g/l, 20°C, DIN 19268)
Kinematic viscosity:	2,5 mm ² /s (20°C, DIN 51562, There is no information available on this parameter.)
Solubility:	Mixable 20°C
Partition coefficient n-octanol/water (log value):	Does not apply to mixtures.
Vapour pressure:	< 0,01 kPa (20°C)
Density and/or relative density:	1,0466 g/cm ³ (20°C, DIN 51757)
Relative vapour density:	There is no information available on this parameter.
Particle characteristics:	Does not apply to liquids.

9.2 Other information

Explosives: Product is not explosive.

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Oxidising liquids: No
 Corrosive to metals:
 Bulk density: Does not apply to liquids.
 Surface tension: n.a.

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

None known

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).

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Toxicity / effect	Endpoint	Value	Unit	Organism	Test method	Notes
Acute toxicity, by oral route:	ATE	1423	mg/kg			calculated value
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.

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Toxicity / effect	Endpoint	Value	Unit	Organism	Test method	Notes
Acute toxicity, by oral route:	LD50	7712	mg/kg	Rat	IUCLID Chem. Data Sheet (ESIS)	Does not conform with EU classification.
Acute toxicity, by dermal route:	LD50	9530	mg/kg	Rabbit		
Acute toxicity, by dermal route:	LD50	>3500	mg/kg	Mouse		
Acute toxicity, by inhalation:	LC50	>2,5	mg/l/6h	Rat		
Skin corrosion/irritation:				Rabbit		Not irritant

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Serious eye damage/irritation:				Rabbit		Not irritant
Respiratory or skin sensitisation:				Human being	(Patch-Test)	Negative
Respiratory or skin sensitisation:				Guinea pig	OECD 406 (Skin Sensitisation)	No (skin contact)
Germ cell mutagenicity:				Rat		Negative
Germ cell mutagenicity:				Salmonella typhimurium	OECD 471 (Bacterial Reverse Mutation Test)	Negative
Reproductive toxicity:	NOAEL	>1000	mg/kg	Rat		
Specific target organ toxicity - repeated exposure (STOT-RE), oral:	NOAEL	150	mg/kg/d	Rat	OECD 408 (Repeated Dose 90-Day Oral Toxicity Study in Rodents)	
Specific target organ toxicity - repeated exposure (STOT-RE), oral:	NOAEL	~2200	mg/kg/d	Dog	OECD 410 (Repeated Dose Dermal Toxicity - 90-Day)	
Symptoms:						ataxia, breathing difficulties, unconsciousness, cramps, fatigue

11.2. Information on other hazards

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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.

SECTION 12: Ecological information

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

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Toxicity / effect	Endpoint	Time	Value	Unit	Organism	Test method	Notes
12.1. Toxicity to fish:	LC0		1000	mg/l	Leuciscus idus		Analogous conclusion
12.1. Toxicity to fish:	LL50	96h	>100	mg/l	Brachydanio rerio	OECD 203 (Fish, Acute Toxicity Test)	Analogous conclusion
12.1. Toxicity to daphnia:							n.d.a.
12.1. Toxicity to algae:							n.d.a.
12.2. Persistence and degradability:			90	%		OECD 302 B (Inherent Biodegradability - Zahn-Wellens/EMPA Test)	Readily biodegradable (Analogous conclusion)
12.3. Bioaccumulative potential:							n.d.a.
12.4. Mobility in soil:							n.d.a.

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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.

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Toxicity / effect	Endpoint	Time	Value	Unit	Organism	Test method	Notes
12.1. Toxicity to fish:	LC50	96h	40761	mg/l	Oncorhynchus mykiss		References
12.1. Toxicity to fish:	LC50	96h	>10000	mg/l	Pimephales promelas	IUCLID Chem. Data Sheet (ESIS)	
12.1. Toxicity to daphnia:	NOEC/NOEL	7d	8590	mg/l	Ceriodaphnia spec.		
12.1. Toxicity to daphnia:	EC50	48h	41100	mg/l	Daphnia magna		
12.1. Toxicity to algae:	EC50	96h	6500-7500	mg/l	Pseudokirchneria subcapitata		
12.1. Toxicity to algae:	IC5	7d	> 10000	mg/l	Scenedesmus quadricauda		
12.2. Persistence and degradability:		28d	90-100	%	activated sludge	OECD 301 A (Ready Biodegradability - DOC Die-Away Test)	Readily biodegradable
12.2. Persistence and degradability:		28d	56	%		OECD 301 C (Ready Biodegradability - Modified MITI Test (I))	
12.3. Bioaccumulative potential:	Log Pow		-1,36				Not to be expected
12.4. Mobility in soil:	Log Koc		0				calculated
12.5. Results of PBT and vPvB assessment							No PBT substance, No vPvB substance
Toxicity to bacteria:	EC20	30min	>10000	mg/l	activated sludge	OECD 209 (Activated Sludge, Respiration Inhibition Test (Carbon and Ammonium Oxidation))	
Other information:	BOD5		0,78	g/g			IUCLID
Other information:	COD		1,19	g/g			IUCLID
Other information:	ThOD		1,29	g/g			IUCLID

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

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allocated under certain circumstances. (2014/955/EU)
16 05 08 discarded organic chemicals consisting of or containing hazardous substances
Recommendation:
Sewage disposal shall be discouraged.
Pay attention to local and national official regulations.
E.g. suitable incineration plant.
E.g. dispose at suitable refuse site.

For contaminated packing material

Pay attention to local and national official regulations.
Empty container completely.
Uncontaminated packaging can be recycled.
Dispose of packaging that cannot be cleaned in the same manner as the substance.

SECTION 14: Transport information

General statements

Transport by road/by rail (ADR/RID)

14.1. UN number or ID number:	Not applicable
14.2. UN proper shipping name:	Not applicable
14.3. Transport hazard class(es):	Not applicable
14.4. Packing group:	Not applicable
14.5. Environmental hazards:	Not applicable
Tunnel restriction code:	Not applicable
Classification code:	Not applicable
LQ:	Not applicable
Transport category:	Not applicable

Transport by sea (IMDG-code)

14.1. UN number or ID number:	Not applicable
14.2. UN proper shipping name:	Not applicable
14.3. Transport hazard class(es):	Not applicable
14.4. Packing group:	Not applicable
14.5. Environmental hazards:	Not applicable
Marine Pollutant:	Not applicable
EmS:	Not applicable

Transport by air (IATA)

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

14.6. Special precautions for user

Unless specified otherwise, general measures for safe transport must be followed.

14.7. Maritime transport in bulk according to IMO instruments

Non-dangerous material according to Transport Regulations.

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 national regulations/laws governing maternity protection (national implementation of the Directive 92/85/EEC)!
Comply with trade association/occupational health regulations.

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

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15.2 Chemical safety assessment

A chemical safety assessment is not provided for mixtures.

SECTION 16: Other information

Revised sections: 1, 7, 15
 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
Acute Tox. 4, H302	Classification according to calculation procedure.
STOT RE 2, H373	Classification according to calculation procedure.

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).

H302 Harmful if swallowed.

H373 May cause damage to organs through prolonged or repeated exposure.

Acute Tox. — Acute toxicity - oral
 STOT RE — Specific target organ toxicity - repeated exposure

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
 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
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, EpCx, 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
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. 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

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