

Safety Data Sheet

according to 1907/2006/EC Annex II, revised on 15.02.2024

Trade name: innovatek Protect R - Concentrate



Safety Data Sheet

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

innovatek Protect R - Concentrate

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

1.1 Product identifier

Trade name: innovatek Protect R - Concentrate

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

No information on this is available at present.

Application of the substance / the mixture: Corrosion protection

1.3 Details of the supplier providing the safety data sheet

Manufacturer/Supplier: Innovatek OS GmbH
Stadtweg 9
85134 Stammham
Tel. +49 8405 9259-0
Fax +49 8405 9259-21
E-Mail: info@innovatek.de
Web: <https://www.innovatek.de>

1.4 Emergency number:

Giftinformationszentrum-Nord der Länder Bremen, Hamburg, Niedersachsen und Schleswig-Holstein (GIZ-Nord), Universitätsmedizin Göttingen – Georg-August-Universität, Robert-Koch-Str. 40, D-37075 Göttingen, Telefon: +49 551 19240 (24 Stunden am Tag)

SECTION 2: Possible hazards

2.1 Classification of the substance or mixture

Classification according to Regulation (EC) No 1272/2008

Hazard class	Hazard category	Hazard warning
Acute Tox. 4	H302	Harmful if swallowed.
Repr. 1B	H360D	May cause harm to the unborn child
STOT RE 2	H373	May cause damage to organs through prolonged or repeated exposure (kidneys).

2.2 Labeling elements:

Labeling according to Regulation (EC) No. 1272/2008 (CLP).

The product is classified and labeled according to EC Directives/GefStoffV.



H302 Harmful if swallowed

H360D May cause harm to the unborn child

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

P260 Do not breathe vapour or aerosol.

P264 Wash thoroughly with plenty of soap and water after use.

P270 Do not eat, drink or smoke when using.

P312 If you feel unwell: Call poison control center or doctor.

P301 + P330: If swallowed: Rinse out mouth.

P501 Dispose of contents/container to hazardous or special waste collection point.

Chemical characterization: Ethanediol

Signal word: Danger

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2.3 Other hazards:

Special slip hazard due to leaked/spilled product. The mixture does not contain a vPvB substance (vPvB = very persistent, very bioaccumulative) or does not fall under Annex XIII of Regulation (EC) 1907/2006 (< 0.1 %). The mixture does not contain any PBT substance (PBT = persistent, bioaccumulative, toxic) or does not fall under Annex XIII of Regulation (EC) 1907/2006 (< 0.1 %). The mixture does not contain any substance with endocrine disrupting properties (< 0.1 %). The product does not contain any substance(s) included in the candidate list according to Art. 59 (1, 10) of REACH Regulation EC No. 1907/2006.

SECTION 3: Composition / Information on ingredients

3.1 Substances

n.a.

3.2 Mixtures

Ethanediol	Substance for which an EU exposure limit applies.
Registration No. (REACH)	01-2119456816-28
Index	603-027-00-1
EINECS, ELINCS, NLP, REACH-IT List-No.	203-473-3
CAS	107-21-1
% Range	>= 98
Classification according to Regulation (EC) No 1272/2008 (CLP), M-Factors	Acute Tex. 4, H302 STOT RE 2, H373 (Kidneys)

2-Ethylhexanoic acid	
Registration No. (REACH)	
Index	607-230-00-6
EINECS, ELINCS, NLP, REACH-IT List-No.	205-743-6
CAS	149-57-5
% Range	>=0.5 - <=0.7
Classification according to Regulation (EC) No 1272/2008 (CLP), M-Factors	Repr. 1B; H360D

Water	
Registration No. (REACH)	
Index	
EINECS, ELINCS, NLP, REACH-IT List-No.	231-791-2
CAS	7732-18-5
% Range	<= 1
Classification according to Regulation (EC) No 1272/2008 (CLP), M-Factors	

Text of H-phrases and classification abbreviations (GHS/CLP) see section 16. The substances mentioned in this section are listed with their actual, applicable classification! This means that for substances listed in Table 3.1 of Annex VI to Regulation

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(EC) No. 1272/2008 (CLP Regulation), all notes possibly mentioned there have been taken into account for the classification mentioned here.

SECTION 4: First aid measures

4.1 Description of the first aid measures

First-aiders should pay attention to self-protection!

Never give anything by mouth to an unconscious person!

Inhale: Remove person from danger zone.

Supply person with fresh air and consult doctor depending on symptoms.

Skin contact: Wash thoroughly with plenty of soap and water, remove contaminated, soaked clothing immediately, in case of skin irritation (redness etc.), consult a physician.

Eye contact: Remove contact lenses.

Rinse thoroughly with plenty of water for several minutes, if necessary consult a doctor.

Swallow: Rinse mouth thoroughly with water. Give plenty of water to drink, seek medical attention immediately.

Make drink approx. 100 ml of approx. 40 % ethanol in pourable form.

4.2 Important acute and delayed symptoms and effects

If applicable, delayed symptoms and effects can be found in section 11 or in the routes of absorption under section 4.1.

Other important symptoms and effects are not yet known.

4.3 Reference to immediate medical assistance or special treatment

Symptomatic treatment (decontamination, elemental aid)

SECTION 5: Fire fighting measures

5.1 Extinguishing agent

Suitable extinguishing agents: Water spray; Extinguishing powder; Alcohol resistant foam; Carbon dioxide (CO₂)

Unsuitable extinguishing agents: None known

5.2 Special hazards arising from the substance or mixture

In the event of fire, the following may be formed: Carbon oxides

5.3 Advice for fire fighting

Personal protective equipment see section 8. Do not inhale explosion and fire gases. Depending on fire size, use full protection if necessary. Cool endangered containers with water. Dispose of contaminated extinguishing water according to official regulations.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and procedures to be used in case of emergency

6.1.1 Personnel not trained for emergencies

In case of spillage or accidental release, to prevent contamination, wear personal protective equipment specified in section 8. Ensure adequate ventilation, remove sources of ignition. In case of solid or powdery products, avoid dust formation. If possible leave the danger zone, use existing emergency plans if necessary. Keep unprotected persons away. Ensure sufficient ventilation. Avoid contact with eyes and skin. If necessary, observe the risk of slipping.

6.1.2 Task forces

See section 8 for suitable protective equipment and material specifications.

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6.2 Environmental protection measures

Contain in case of leakage of larger quantities. Eliminate leakage if safe to do so. Do not allow to enter sewage system. Prevent from entering surface and ground water as well as soil. In case of accidental discharge into drains, inform competent authorities.

6.3 Methods and material for retention and cleaning

For large quantities: Pump off product.

For residues: Absorb with liquid-binding material (e.g. universal binder, sand, diatomaceous earth, sawdust) and dispose of according to section 13.

6.4 Reference to other Sections

See section 13 and personal protective equipment see section 8.

SECTION 7: Handling and storage

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

7.1 Protective measures for safe handling

7.1.1 General recommendations

Ensure sufficient ventilation. Avoid contact with eyes and skin. Do not eat, drink, smoke or store food in the work area. Observe the information on the label and the instructions for use. Use working procedures according to operating instructions. Caution: danger of slipping. Electrical equipment must be suitable for temperature class T 2 (Germany). Do not inhale vapor / aerosol.

7.1.2 Notes on general hygiene measures at the workplace

The general hygiene measures for handling chemicals must be applied. Wash hands before breaks and at the end of work. Keep away from food, beverages and feed. Remove contaminated clothing and protective equipment before entering areas where food is consumed.

7.2 Conditions for safe storage taking into account incompatibilities

Store out of reach of unauthorized persons. Store product only in original packaging and closed. Do not store product in passageways and stairways. Store at room temperature. Avoid exposure to humidity and water. Keep containers tightly closed. Store in a dry place. Storage class (TRGS 510): 10-Flammable liquids

7.3 Specific end uses

No information on this is available at present.

SECTION 8: Exposure controls / Personal protective equipment

8.1 Parameters to be monitored

Chem. description	Ethanediol	% Range: > 98
AGW: 10 ppm (26 mg/m ³) (AGW), 20 ppm (52 mg/m ³) (EU)	Spb.-Üf.: 2(l) (AGW), 40 ppm (104 mg/m ³) (EU)	---
Monitoring methods:	- Draeger - Ethylene Glycol 10 (5) (81 01 351) / Alcohol 100/a (CH 29 701) - Compur - KITA-232 SA (502 342) / KITA-232 SB (550 267) - NIOSH 5500 (ETHYLENE GLYCOL) - 1993 / 5523 (GLYCOLS) - 1996 - OSHA PV2024 (Ethylene glycol) - 1999 - EU project BC/CEN/ENTR/000/2002 - 16 card 11-2 (2004)	
BGW: ---	Other information: DFG, H, Y, 11	

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Ethanediol						
Application area	Exposure route / environmental compartment	Health effect	Descriptor	Value	Unit	Remark
	Environment - Soil		PNEC	1.53	mg/kg	
	Environment - Waste water treatment plant		PNEC	199.5	mg/l	
	Environment - Seawater		PNEC	1	mg/l	
	Environment - sediment, seawater		PNEC	3.7	mg/kg	
	Environment - sediment, freshwater		PNEC	37	mg/kg	
	Environment - Freshwater		PNEC	10	mg/l	
Consumer	Man - inhalation	Short-term, systemic effects	DNEL	7	mg/m3	
Consumer	Man - dermal	Long-term, systemic effects	DNEL	53	mg/kg bw/day	
Worker / Employee	Man - inhalation	Short-term, systemic effects	DNEL	35	mg/m3	
Worker / employee	Man - dermal	Long-term, systemic effects	DNEL	106	mg/kg bw/day	

2-Ethylhexanoic acid						
Application area	Exposure route / environmental compartment	Health effect	Descriptor	Value	Unit	Remark
	Environment - Soil		PNEC	1,06	mg/kg	
	Environment - Waste water treatment plant		PNEC	71,7	mg/l	
	Environment - Seawater		PNEC	0,036	mg/l	
	Environment - sediment, seawater		PNEC	0,637	mg/kg	
	Environment - sediment, freshwater		PNEC	6,37	mg/kg	
	Environment - Freshwater		PNEC	0,36	mg/l	
Consumer	Man - inhalation	Short-term, systemic effects	DNEL	3,5	mg/m3	
Consumer	Man - dermal	Long-term, systemic effects	DNEL	53	mg/kg bw/day	
Worker / Employee	Man - inhalation	Short-term, systemic effects	DNEL	14	mg/m3	
Worker / employee	Man - dermal	Long-term, systemic effects	DNEL	1	mg/kg bw/day	

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AGW = Occupational exposure limit, E = Inhalable fraction, A = Alveolar fraction

((8) = Inhalable fraction (Directive 2017/164/EU, Directive 2004/37/EC). (9) = Alveolar fraction (Directive 2017/164/EU, Directive 2004/37/EC). (11) = Inhalable fraction (Directive 2004/37/EC). (12) = Inhalable fraction. Alveolar fraction in Member States implementing a biomonitoring system with a biological limit value not exceeding 0.002 mg Cd/g creatinine in urine on the date of entry into force of this Directive (Directive 2004/37/EC). I Spb.-Üf. = peak limit - exceedance factor (1 to 8) and category (I, II) for short-term values. „= = instantaneous value. Category (1) = Substances for which the local effect determines the limit value or respiratory sensitizing substances, (II) = Respiratively active substances. (8) = Inhalable fraction (2017/164/EU, 2017/2398/EU). (9) = Alveolar fraction (2017/164/EU, 2017/2398/EU). (10) = Short-term exposure limit value for a reference period of one minute (2017/164/EU). I BGW = biological limit value. Sampling time: a) no restriction, b) end of exposure, or end of shift, c) for long-term exposure: at end of shift after several previous shifts, d) before following shift, e) after E months of exposure, g) immediately after exposure, h) before last shift of a working week. Other information: ARW = workplace exposure guideline value. H = skin resorptive. X = carcinogenic substance of cat. 1A or 1B or carcinogenic activity or process according to § 2 paragraph 3 No. 4 of the Ordinance on Hazardous Substances - § 10 GefStoff must also be observed. Y = There is no need to fear a risk of fruit damage if the AGW and BGW are observed. Z = A risk of fruit damage cannot be excluded even if the AGW and BGW are observed (see no. 2.7 TRGS 900). Sa = Respiratory sensitizing. Sh = Skin sensitizing. Sah = Respiratory and skin sensitizing. DFG = German Research Foundation (MAK Commission). AGS = Committee for Hazardous Substances. (10) = The occupational exposure limit refers to the element content of the corresponding metal. (11) = Sum of vapor and aerosols. ** = The limit value for this substance was abolished by TRGS 900 (Germany) of January 2006 with the aim of revision. TRGS 905 - List of carcinogenic, germ cell mutagenic or toxic to reproduction substances (substances not mentioned in Annex VI Part 3 of the CLP Regulation or substances classified differently by the AGS) with K = Carcinogenic, M = Germ cell mutagenic, RF = Reproductive toxic - Harmful to fertility (may impair fertility), RE = Reproductive toxic - Harmful to development (may harm the unborn child), 1A/1B/2 = Categories according to Annex I of the CLP Regulation. (13) = The substance may cause skin and respiratory sensitization (Directive 2004/37/EC), (14) = The substance may cause skin sensitization (Directive 2004/37/EC).

8.2 Exposure controls and monitoring

8.2.1 Suitable technical control equipment

Ensure good ventilation. This can be achieved by local exhaust ventilation or general exhaust air. If this is not sufficient to keep the concentration below the occupational exposure limits (OEL), suitable respiratory protection must be worn.

Applies only if exposure limits are listed here. Appropriate assessment methods for verifying the effectiveness of the protective measures taken include metrological and non-measured methods of determination.

Such methods are described by e.g. EN 14042, TRGS 402 (Germany). EN 14042 „Workplace atmospheres. Guidance for the application and use of methods and equipment for the determination of chemical and biological agents“.

TRGS 402 „Determining and assessing the hazards of activities involving hazardous substances - Inhalation exposure“.

8.2.2 Individual protective measures, for example personal protective equipment

The general hygiene measures for handling chemicals must be applied. Wash hands before breaks and at the end of work. Keep away from food, beverages and feed. Remove contaminated clothing and protective equipment before entering areas where food will be eaten.

Eye/face protection:

Safety glasses tight fitting with side shields (EN 166).

Skin protection - Hand protection:

Chemical resistant protective gloves (EN ISO 374).

Recommended: Protective gloves made of nitrile (EN ISO 374).

Minimum layer thickness in mm: 0.4

Permeation time (breakthrough time) in minutes: ≥ 480

The determined breakthrough times according to EN 16523-1 were not carried out under practical conditions.

A maximum wearing time corresponding to 50% of the breakthrough time is recommended. Hand protection cream recommended.

Skin protection - Other protective measures:

Protective work clothing (e.g. safety shoes EN ISO 20345, long-sleeved work clothing).

Respiratory protection: If the occupational exposure limit value (AGW, Germany) or MAK (Switzerland, Austria) is exceeded.

Filter A P2 (EN 14387), identification color brown, white

Observe wearing time limitations for respirators.

Thermal hazards: Not applicable.

Additional information on hand protection - No tests have been carried out. Selection was made for mixtures to the best of our knowledge and from ingredient information. For substances, the selection was derived from the glove manufacturer's information. The final selection of glove material must be made considering the breakthrough times. Permeation rates and degradation. The 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 calculated in advance and must therefore be checked before use. The exact breakthrough time of the glove material must be obtained from the protective glove manufacturer and must be observed.

8.2.3 Environmental exposure controls and monitoring

No information on this is available at present.

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SECTION 9: Physical and chemical properties

9.1 Information on the basic physical and chemical properties

Physical state:	Liquid
Color:	Colorless
Odor:	Almost odorless
Melting point/freezing point:	≤ -18 °C (ISO 3016).
Boiling point or initial boiling point and boiling range:	> 170 °C (ASTM D 1120).
Flammability:	Not flammable.
Lower explosion limit:	3.2 vol-% (20 °C).
Upper explosion limit:	15 Vol-% (20 °C)
Flash point:	> 110 °C (ISO 2719 (Pensky-Martens, closed cup), ethanediol)
Decomposition temperature:	No information available on this parameter.
pH value:	8.7 (20 °C, ASTM D 1287)
Kinematic viscosity:	20 - 30 mm ² /s (20 °C, DIN 51562)
Miscibility with water:	Miscible
Partition coefficient n-octanol/water (log value):	Not applicable to mixtures.
Vapor pressure:	0.2 hPa (20°C)
Density and/or specific gravity:	1.115 g/cm ³ (20°C, DIN 51757)
Relative vapor density:	No information available on this parameter.
Particle properties:	Not applicable to liquids.

9.2 Other information

Explosive substances/mixtures and articles containing explosives:	Product is not explosive.
Oxidizing liquids:	No
Solubility(ies):	Polar solvents
Hygroscopy:	Hygroscopic

SECTION 10: Stability and reactivity

10.1 Reactivity

No hazardous reactions if the regulations/instructions for storage and handling are observed. Metal corrosion: Does not corrode metals.

10.2 Chemical stability

Stable when properly stored and handled

10.3 Possibility of hazardous reactions

No dangerous reactions 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 intended

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SECTION 11: Toxicological data

11.1 Information on hazard classes according to Regulation (EC) No 1272/2008

For possible further information on health effects see section 2.1 (Classification).

innovatek Protect R - concentrate						
Toxicity / Effect	Endpoint	Value	Unit	Organism	Test method	Remark
Acute toxicity, oral:	LD50	~1,420	mg/kg	Human		Classification based on toxicological studies, conclusion by analogy
Acute toxicity, dermal:						k.D.v.
Acute toxicity, inhalation:						k.D.v.
Skin corrosion/irritation:						k.D.v.
Serious eye damage/irritation:						k.D.v.
Respiratory sensitization/skin:						k.D.v.
Germ cell mutagenicity:						k.D.v.
Carcinogenicity:						k.D.v.
Reproductive toxicity:						k.D.v.
Specific target organ toxicity - single exposure (STOT-SE):						k.D.v.
Specific Target Organ Toxicity - Repeated Exposure (STOT-RE):						k.D.v.
Aspiration hazard:						k.D.v.
Symptoms:						k.D.v.

Ethanediol						
Toxicity / Effect	Endpoint	Value	Unit	Organism	Test method	Remark
Acute toxicity, oral:	LD50	~1,350	mg/kg	Rat	IUCLID Chem. Data Sheet (ESIS)	The EU classification does not agree with this.
Acute toxicity, dermal:	LD50	>3,500	mg/kg	Mouse		
Acute toxicity, inhalation:	LC50	>2.5	mg/l	Rat		
Skin corrosion/irritation:				Rabbit		Non-irritant

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Serious eye damage/irritation:				Rabbit		Non-irritant
Respiratory sensitization/skin:				Guinea pig	(Patch-Test)	Negative
Germ cell mutagenicity:					OECD 471 (Bacterial Reverse Mutation Test)	Negative
Symptoms:						Ataxia, breathing difficulties, unconsciousness, convulsions, fatigue

2-Ethylhexanoic acid						
Toxicity / Effect	Endpoint	Value	Unit	Organism	Test method	Remark
Acute toxicity, oral:	LD50	~2,050	mg/kg	Rat	IUCLID Chem. Data Sheet (ESIS)	
Acute toxicity, dermal:	LD50	> 2,000	mg/kg	Rat	OECD Test Guideline 402	
Acute toxicity, inhalation:						
Skin corrosion/irritation:				Rabbit	OECD Test Guideline 404	Non-irritant
Serious eye damage/irritation:				Rabbit	OECD Test Guideline 405	Non-irritant
Respiratory sensitization/skin:				Guinea pig	(Patch-Test)	Negative
Germ cell mutagenicity:					OECD Test Guideline 474	Negative
Symptoms:						

11.2 Information about other hazards

innovatek Protect R - concentrate						
Toxicity / Effect	Endpoint	Value	Unit	Organism	Test method	Remark
Endocrine disrupting properties:						Not applicable to mixtures.
Other information:						No other relevant information on adverse health effects available.

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SECTION 12: Environmental information

For possible further information on environmental effects see section 2.1 (Classification).

innovatek Protect R - concentrate							
Toxicity / Effect	Endpoint	Time	Value	Unit	Organism	Test method	Remark
12.1 Toxicity, fish:	LD50	96h	> 100	mg/l	Leuciscus idus		
12.1 Toxicity, Daphnia:	EC50	48h	> 100	mg/l	Daphnia magna		
12.1 Toxicity, Algae:	EC50	72h	> 100	mg/l			
12.2 Persistence and degradability:							k.D.v.
12.3 Bioaccumulative potential:							k.D.v.
12.4 Mobility in soil:							k.D.v.
12.5 Results of PBT and vPvB assessment:							k.D.v.
12.6 Endocrine disrupting properties:							k.D.v.
12.7 Other adverse effects:							k.D.v.

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Ethanediol							
Toxicity / Effect	Endpoint	Time	Value	Unit	Organism	Test method	Remark
12.1 Toxicity, fish:	LC50	96h	72,500	mg/l	Primephales promelas	IUCLID Chem. Data Sheet (ESIS)	
12.1 Toxicity, Daphnia:	EC50	48h	> 100	mg/l	Daphnia magna	OECD Test Guideline 202	
12.1 Toxicity, Algae:	EC50	96h	6,500 - 13,000	mg/l	Pseudokirchneriella subcapitata		
12.2 Persistence and degradability:		10d	90 - 100	%		OECD Test Guideline 301 A	
12.3 Bioaccumulative potential:	Log Pow		-1.93				Not expected
Bacterial toxicity:	EC50	16h	> 10,000	mg/l	Pseudomonas putida	IUCLID Chem. Data Sheet (ESIS)	
Other information:	BOD5		0.78	g/g			IUCLID
Other information:	COD		1.19	g/g			IUCLID
Other information:	ThOD		1.29	g/g			IUCLID

2-Ethylhexanoic acid							
Toxizität / Wirkung	Endpunkt	Zeit	Wert	Einheit	Organismus	Prüfmethode	Bemerkung
12.1 Toxicity, fish:	LC50	96h	180	mg/l	Oncorhynchus mykiss	IUCLID Chem. Data Sheet (ESIS)	
12.1 Toxicity, Daphnia:	EC50	48h	106	mg/l	Daphnia magna		
12.1 Toxicity, Algae:	EC50	72h	49	mg/l	Pseudokirchneriella subcapitata		
12.2 Persistence and degradability:		28d	99	%		OECD Test Guideline 301E	
12.3 Bioaccumulative potential:	Log Pow		2,7				

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SECTION 13: Notes on disposal

13.1 Waste treatment process

For the substance / mixture / residual quantities

Waste code no. EC:

The waste codes given are recommendations based on the expected use of this product.

Due to the specific use and disposal conditions at the user's site, other waste codes may be assigned under certain circumstances. [2014/955/EU]

16 01 14 Antifreeze containing dangerous substances.

Recommendation: Disposal via wastewater is not recommended. Observe local official regulations. For example, suitable incineration plant. For example, dispose of at a suitable landfill site.

For contaminated packaging material

Observe local regulations. Empty container completely. Non-contaminated packaging can be reused. Packaging that cannot be cleaned must be disposed of in the same way as the substance itself. Recommended cleaning agent: Water

SECTION 14: Transport details

General data

14.1 UN number or ID number:

Not applicable

Road / rail transport (GGVSEB/ADR/RID)

14.2 UN proper shipping name:

14.3 transport hazard classes:

Not applicable / Not dangerous goods

14.4 packing group:

Not applicable

Classification code:

Not applicable

LQ:

Not applicable

14.5 Environmental hazards:

Not applicable

Tunnel Restriction Code:

Transportation by sea vessels (GGVSee/IMDG-Code)

14.2 UN proper shipping name:

14.3 transport hazard classes:

Not applicable / Not dangerous goods

14.4 packing group:

Not applicable

Marine Pollutant:

Not applicable

14.5 Environmental hazards:

Not applicable

Transportation by aircraft (IATA)

14.2 UN proper shipping name:

14.3 transport hazard classes:

Not applicable / Not dangerous goods

14.4 packing group:

Not applicable

14.5 Environmental hazards:

Not applicable

14.6 Special precautions for the user

Unless otherwise specified, the general measures for carrying out safe transport must be observed. The ambient temperature must be between -20 °C - 60 °C, the pressure between 500 hPa - 1060 hPa.

14.7 Carriage of bulk cargoes by sea in accordance with IMO instruments

Not a hazardous material according to the regulations listed above.

SECTION 15: Legislation

15.1 Regulations on safety, health and environmental protection / specific legislation for the substance or mixture

Observe employment restrictions according to the youth employment protection regulations (94/33/EC).

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Observe employment restrictions according to maternity protection regulations (92/85/EEC).
Observe regulations of the employers' liability insurance association / occupational health.

Water hazard class (Germany): 1

Observe the Youth Employment Protection Act - JArbSchG (Germany).
Observe Maternity Protection Act - MuSchG (Germany).

Storage class according to TRGS 510: 10 Flammable liquids which cannot be assigned to any of the above mentioned LGK.

15.2 Chemical Safety Assessment

A chemical safety assessment is not provided for mixtures.

SECTION 16: Other information

Revised sections: 1 - 16

This information refers to the product as delivered.

Instruction / training of employees required for handling hazardous substances.

Classification and methods used to derive the classification of the mixture according to Regulation (EC) 1272/2008 (CLP)

Classification according to Regulation (EC) No 1272/2008 (CLP)	Valuation method used
Acute Tox. 4, H302	Classification based on toxicological studies
Repr. 1B; H360D	May harm the child in the womb
STOT RE 2, H373	Classification according to calculation method

Important literature and data sources:

Regulation (EC) No 1907/2006 (REACH) and Regulation (EC) No 1272/2008 (CLP) as amended.

Guidance on the compilation of safety data sheets as amended (ECHA).

Guidance on labeling and packaging according to Regulation (EC) No. 1272/2008 (CLP) as amended (ECHA).

Safety data sheets of the ingredients.

ECHA-homepage - Information on chemicals.

GESTIS substance database (Germany).

Federal Environment Agency „Rigoletto“ information page on water-polluting substances (Germany).

EU occupational exposure limit values Directives 91/322/EEC, 2000/39/EC, 2006/15/EC, 2009/161/EU, (EU) 2017/164, (EU) 2019/1831 as amended.

National occupational exposure limit lists of the respective countries in the respective valid version.

Regulations on the transport of dangerous goods by road, rail. Sea and air transport (ADR. RID. IMDG. IATA) in the respective valid version.

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Abbreviations and acronyms possibly used in this document:

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
ASTM	ASTM International (American Society for Testing and Materials)
ATE	Acute Toxicity Estimate
BAFU	Federal Office for the Environment (Switzerland)
BAM	Federal Institute for Materials Research and Testing
BAUA	Federal Institute for Occupational Safety and Health
BCF	Bioconcentration factor
BG	Professional association
BG BAU	Employer's Liability Insurance Association for the Construction Industry (Germany)
BSEF	The International Bromine Council
bw	body weight
CAS	Chemical Abstracts Service
ChemRRV	Chemicals Risk Reduction Ordinance (Switzerland)
CLP	Classification, Labelling and Packaging (VERORDNUNG (EG) Nr. 1272/2008 on classification, labeling and packaging of substances and mixtures)
CMR	carcinogen, mutagen, reproduktionstoxisch
DMEL	Derived Minimum Effect Level
DNEL	Derived No Effect Level
DOC	Dissolved organic carbon
dw	dry weight
EbCx, EyCx, EbLx	(x = 10, 50) Effect Concentration/Level of x % on reduction of the biomass (algae, plants)
ECHA	European Chemicals Agency
ECx, ELX	(x = 0, 3, 5, 10, 20, 50, 80, 100) Effect Concentration/Level for x % effect
EG	European Community
EINECS	European Inventory of Existing Commercial Chemical Substances
ELINCS	European List of Notified Chemical Substances
EN	European standards
EPA	United States Environmental Protection Agency (United States of America)
ErCx, EuCx, ErLx	(x = 10, 50) Effect concentration/Level of x % on inhibition of the growth rate (algae, plants)
EU	European Union
EVAL	Ethylen-Vinylalkohol-Copolymer
EWG	European Economic Community
Fax.	Fax number
GGVSEB	Dangerous Goods Ordinance for Road, Rail and Inland Navigation (Germany)
GGVSee	Gefahrgutverordnung See (Ordinance on the Transport of Dangerous Goods by Sea Vessels, Germany)
GHS	Globally Harmonized System of Classification and Labelling of Chemicals
GISBAU	Hazardous substances information system of BG Bau - Berufsgenossenschaft der Bauwirtschaft (Germany)
GisChem	Hazardous substances information system chemicals of BG RCI - Berufsgenossenschaft Rohstoffe und chemische Industrie and BGHM - Berufsgenossenschaft Holz und Metall (Germany)
GWP	Global warming potential
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
IUCLID	International Uniform Chemical Information Database
IUPAC	International Union for Pure Applied Chemistry
k.D.v.	No data available
Koc	Adsorption coefficient of organic carbon in soil

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Konc.	Concentration
Kow	Octanol/water partition coefficient
LC50	Lethal Concentration to 50 % of a test population
LD50	Lethal Dose to 50% of a test population (Median Lethal Dose)
LGK	Storage class
LOEC, LOEL	Lowest Observed Effect Concentration/Level
Log Koc	Logarithm of the adsorption coefficient of organic carbon in soil
Log Kow, Log Pow	Logarithm of the octanol/water partition coefficient
LQ	Limited Quantities
LRV	Air Pollution Control Ordinance (Switzerland)
LVA	Lists on the movement of waste (Switzerland)
MARPOL	International Convention for the Prevention of Pollution from Ships
n.a.	not applicable
n.g.	not tested
n.v.	not available
NIOSH	National Institute for Occupational Safety and Health
NLP	No-longer-Polymer
NOEC, NOEL	No Observed Effect Concentration/Level
OECD	Organisation for Economic Co-operation and Development
org.	organisch
OSHA	Occupational Safety and Health Administration
PBT	persistent, bioaccumulative and toxic
PE	Polyethylene
PNEC	PredictedNo Effect Concentration
Pt.	Dot/Point
PVC	Polyvinyl chloride
REACH	Registration, Evaluation, Authorisation and Restriction of Chemicals (Regulation (EC) No. 1907/2006)
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.
resp.	respectively
RID	Règlement concernant le transport International ferroviaire de marchandises Dangereuses (= Regulation on the international carriage of dangerous goods by rail)
SVHC	Substances of Very High Concern
Tel.	Phone
TOC	Total organic carbon
TRGS	Technical rules for hazardous substances
UEVK	Federal Department of the Environment, Transport, Energy and Communications (Switzerland)
UN RTDG	United Nations Recommendations on the Transport of Dangerous Goods
UV	Ultraviolet
VbF	Ordinance on Flammable Liquids (Austrian Ordinance)
VeVA	Ordinance on the movement of waste (Switzerland)
VOC	Volatile organic compounds
VPVB	very persistent and very bioaccumulative
WBF	Federal Department of Economic Affairs, Education and Research (Switzerland)
WGK	Ordinance on Installations for the Handling of Substances Hazardous to Water - AWSV (German Ordinance)
WGK1	slightly hazardous to water
WGK2	clearly hazardous to water
WGK3	Highly water polluting
wwt	wet weight
z.Zt.	at this time
z.B.	for example

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The information given here is intended to describe the product with regard to the necessary safety precautions; it is not intended to guarantee specific properties and is based on our current knowledge. Liability excluded.

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