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

Revision date / version: 04.06.2020 / 0008

Replacing version dated / version: 12.09.2018 / 0007

Valid from: 04.06.2020 PDF print date: 04.06.2020 Kuehlerfrostschutz universal 1 L

Art.: 21313

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

Kuehlerfrostschutz universal 1 L

Art.: 21313

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

Anti-freeze

Sector of use [SU]:

SU 3 - Industrial uses: Uses of substances as such or in preparations at industrial sites

SU21 - Consumer uses: Private households (=general public = consumers)

SU22 - Professional uses: Public domain (administration, education, entertainment, services, craftsmen)

Chemical product category [PC]:

PC 4 - Anti-Freeze and de-icing products

PC16 - Heat transfer fluids

Process category [PROC]:

PROC 1 - Chemical production or refinery in closed process without likelihood of exposure or processes with equivalent containment conditions.

PROC 2 - Chemical production or refinery in closed continuous process with occasional controlled exposure or processes with equivalent containment conditions

PROC 8a - Transfer of substance or mixture (charging and discharging) at non-dedicated facilities

PROC 8b - Transfer of substance or mixture (charging and discharging) at dedicated facilities

PROC 9 - Transfer of substance or mixture into small containers (dedicated filling line, including weighing)

PROC20 - Use of functional fluids in small devices

Article Categories [AC]:

AC99 - Not required.

Environmental Release Category [ERC]:

ERC 4 - Use of non-reactive processing aid at industrial site (no inclusion into or onto article)

ERC 7 - Use of functional fluid at industrial site

ERC 9a - Widespread use of functional fluid (indoor)

ERC 9b - Widespread use of functional fluid (outdoor)

Uses advised against:

No information available at present.

1.3 Details of the supplier of the safety data sheet

LIQUI MOLY GmbH Jerg-Wieland-Str. 4 89081 Ulm-Lehr

Tel.: (+49) 0731-1420-0 Fax: (+49) 0731-1420-88

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:

Telephone number of the company in case of emergencies:

+49 (0) 700 / 24 112 112 (LMR)

SECTION 2: Hazards identification



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2.1 Classification of the substance or mixture

Classification according to Regulation (EC) 1272/2008 (CLP) Hazard class Hazard category **Hazard statement**

STOT RE H373-May cause damage to organs through prolonged

or repeated exposure if swallowed (kidneys).

2.2 Label elements

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



Warning

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

P101-If medical advice is needed, have product container or label at hand. P102-Keep out of reach of children.

P260-Do not breathe vapours or spray.

P301+P310-IF SWALLOWED: Immediately call a POISON CENTER / doctor.

P501-Dispose of contents / container to an approved waste disposal facility.

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 %).

SECTION 3: Composition/information on ingredients

3.1 Substance

n.a. **3.2 Mixture**

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	203-473-3
CAS	107-21-1
content %	30-<50
Classification according to Regulation (EC) 1272/2008 (CLP)	Acute Tox. 4, H302
	STOT RE 2, H373 (kidneys) (oral)

Sodium-2-ethylhexanoate	
Registration number (REACH)	
Index	



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EINECS, ELINCS, NLP	243-283-8
CAS	19766-89-3
content %	0,1-<3
Classification according to Regulation (EC) 1272/2008 (CLP)	Repr. 2, H361d

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!

Inhalation

Remove person from danger area.

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

If the person is unconscious, place in a stable side position and consult a doctor.

Skin contact

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

Eye contact

Remove contact lenses.

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

Ingestion

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.

With long-term contact:

Irritation of the eyes

Skin resorption

Effects/damages the central nervous system

Unconsciousness

Kidney damage

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

CO2

Extinction powder

Water jet spray

Large fire:

Water jet spray

Alcohol resistant foam

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

5.3 Advice for firefighters

In case of fire and/or explosion do not breathe fumes.



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Protective respirator with independent air supply.

According to size of fire Full protection, if necessary. Cool container at risk with water.

Dispose of contaminated extinction water according to official regulations.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

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.

6.2 Environmental precautions

If leakage occurs, dam up.

Resolve leaks if this possible without risk.

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

Prevent from entering drainage system.

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.

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 aerosol formation.

Keep away from sources of ignition - Do not smoke.

Take measures against electrostatic charging, if appropriate.

Avoid contact with eyes or skin.

Eating, drinking, smoking, as well as food-storage, is prohibited in work-room.

Observe directions on label and instructions for use.

Use working methods according to operating instructions.

7.1.2 Notes on general hygiene measures at the workplace

General hygiene measures for the handling of chemicals are applicable.

Wash hands before breaks and at end of work.

Keep away from food, drink and animal feedingstuffs.

Remove contaminated clothing and protective equipment before entering areas in which food is consumed.

7.2 Conditions for safe storage, including any incompatibilities

Keep out of access to unauthorised individuals.

Not to be stored in gangways or stair wells.

Store product closed and only in original packing.

Solvent resistant floor

Earth devices.

Protect from direct sunlight and warming.

7.3 Specific end use(s)

No information available at present.

SECTION 8: Exposure controls/personal protection

8.1 Control parameters





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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:	 Compur - KITA-232 SA (502 342) Compur - KITA-232 SB (550 267) Draeger - Ethylene Glycol 10 (5) (81 01 351) NIOSH 5523 (Glycols) - 1996
BMGV:	Other information: Sk (particulate, vapour)

Area of application	Exposure route /	Effect on health	Descriptor	Value	Unit	Note
Area or application	Environmental	Encot on nearth	Descriptor	Value	- Onit	11010
	compartment					
			BNIEG	10	4	
	Environment - freshwater		PNEC	10	mg/l	
	Environment - marine		PNEC	1	mg/l	
	Environment - sediment		PNEC	20,9	mg/kg	
	Environment - soil		PNEC	1,53	mg/kg	
	Environment - sewage		PNEC	199,5	mg/l	
	treatment plant					
	Environment - water,		PNEC	10	mg/l	
	sporadic (intermittent)					
	release					
	Environment - sediment,		PNEC	37	mg/kg dry	
	freshwater				weight	
	Environment - sediment,		PNEC	3,7	mg/kg dry	
	marine		_	-,	weight	
Consumer	Human - inhalation	Long term, local effects	DNEL	7	mg/m3	
Consumer	Human - dermal	Long term, systemic	DNEL	53	mg/kg	
		effects	_		3.9	
Workers / employees	Human - inhalation	Long term, local effects	DNEL	35	mg/m3	
Workers / employees	Human - dermal	Long term, systemic	DNEL	106	mg/kg bw/d	
		effects	_		3.9	

- 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. BS EN 14042.

BS 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



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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 374).

Recommended

Protective Neoprene® / polychloroprene gloves (EN 374).

Protective nitrile gloves (EN 374). Minimum layer thickness in mm:

0.4

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 PVC gloves (EN 374). Protective hand cream recommended.

Skin protection - Other:

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

Respiratory protection:

Normally not necessary.

If OES or MEL is exceeded.

Filter A2 P2 (EN 14387), code colour brown, white

Observe wearing time limitations for respiratory protection equipment.

Thermal hazards:

If applicable, these are included in the individual protective measures (eye/face protection, skin protection, respiratory protection).

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:

Colour:

Odour:

Odour threshold:

Liquid

Red, Clear

Slightly

Not determined

pH-value: 8,65 (20°C, Active substance)

Melting point/freezing point:

Melting point/freezing point:

Not determined

100 °C

Flash point:

Evaporation rate:

Not determined

122 °C

Not determined

122 °C

Not determined

123 °C

134 °C

145 °C

156 °C

167 °C

168 °C

169 °C

160 °C

Lower explosive limit:

Upper explosive limit:

Vapour pressure:

Not determined

Not determined

Not determined



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Vapour density (air = 1):

Not determined
Density:

1-1,113 kg/l (20°C)

Bulk density: n.a.

Solubility(ies):
Water solubility:
Not determined
Mixable

Partition coefficient (n-octanol/water):

Auto-ignition temperature:

Decomposition temperature:

Viscosity:

Not determined

Not determined

Not determined

Explosive properties: Product is not explosive.

Oxidising properties: No

9.2 Other information

Miscibility:

Fat solubility / solvent:

Conductivity:

Not determined

Not determined

Not determined

Not determined

Solvents content:

Not determined

Not determined

SECTION 10: Stability and reactivity

10.1 Reactivity

See also Subsection 10.2 to 10.6.

The product has not been tested.

10.2 Chemical stability

See also Subsection 10.1 to 10.6.

Stable with proper storage and handling.

10.3 Possibility of hazardous reactions

See also Subsection 10.1 to 10.6.

No dangerous reactions are known.

10.4 Conditions to avoid

See also section 7.

Strong heat

10.5 Incompatible materials

See also section 7.

Avoid contact with strong oxidizing agents.

Avoid contact with strong acids.

10.6 Hazardous decomposition products

See also Subsection 10.1 to 10.5.

See also section 5.2

No decomposition when used as directed.

SECTION 11: Toxicological information

11.1 Information on toxicological effects

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

Kuehlerfrostschutz universal 1 L Art.: 21313 Toxicity / effect Endpoint Organism Test method Value Unit Notes Acute toxicity, by oral route: ATE >2000 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 n.d.a. sensitisation: Germ cell mutagenicity: n.d.a. Carcinogenicity: n.d.a. Reproductive toxicity: n.d.a.



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Specific target organ toxicity -			n.d.a.
single exposure (STOT-SE):			
Specific target organ toxicity -			n.d.a.
repeated exposure (STOT-RE):			
Aspiration hazard:			n.d.a.
Symptoms:			n.d.a.

Ethanediol						
Toxicity / effect	Endpoint	Value	Unit	Organism	Test method	Notes
Acute toxicity, by oral route:	LD50	1600	mg/kg	Human being		
Acute toxicity, by dermal route:	LD50	9530	mg/kg	Rabbit		
Acute toxicity, by dermal route:	LD50	>3500	mg/kg	Mouse		
Skin corrosion/irritation:				Rabbit		Not irritant
Serious eye damage/irritation:				Rabbit		Not irritant
Respiratory or skin				Human being	(Patch-Test)	Negative
sensitisation:						
Germ cell mutagenicity:				Salmonella	OECD 471 (Bacterial	Negative
				typhimurium	Reverse Mutation Test)	
Germ cell mutagenicity:				Rat	in vivo	Negative
Reproductive toxicity:	NOAEL	1000	mg/kg	Rat		
			bw/d			
Symptoms:						ataxia, breathing
						difficulties,
						unconsciousness
						, cramps, fatigue

Sodium-2-ethylhexanoate						
Toxicity / effect	Endpoint	Value	Unit	Organism	Test method	Notes
Symptoms:						gastrointestinal
						disturbances,
						mucous
						membrane
						irritation

SECTION 12: Ecological information

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

Kuehlerfrostschutz unive	ersal 1 L						
Art.: 21313							
Toxicity / effect	Endpoint	Time	Value	Unit	Organism	Test method	Notes
12.1. Toxicity to fish:	_						n.d.a.
12.1. Toxicity to daphnia:							n.d.a.
12.1. Toxicity to algae:							n.d.a.
12.2. Persistence and							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. Other adverse							n.d.a.
effects:							

Ethanediol							
Toxicity / effect	Endpoint	Time	Value	Unit	Organism	Test method	Notes
Toxicity to bacteria:	EC20	30min	>1995	mg/l	activated sludge	OECD 209 (Activated Sludge, Respiration Inhibition Test (Carbon and	
						Ammonium Oxidation))	



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12.1. Toxicity to fish:	LC50	96h	>10000	mg/l	Pimephales promelas	IUCLID Chem. Data Sheet (ESIS)	
12.1. Toxicity to fish:	NOEC/NOEL	7d	15380	mg/l	Pimephales	U.S. EPA	
12.1. TOXICITY TO IISTI.	NOEC/NOEL	/ u	15560	IIIg/I	promelas	ECOTOX	
					promeias	Database	
12.1 Toxicity to dophnia:	EC50	48h	>100	ma/l	Donhoio magna	OECD 202	
12.1. Toxicity to daphnia:	EC30	4011	>100	mg/l	Daphnia magna	(Daphnia sp.	
						Acute	
						Immobilisation	
12.1. Toxicity to daphnia:	NOEC/NOEL		8590	m a/l	Daphnia magna	Test) U.S. EPA	
12.1. Toxicity to daprinia.	NOEC/NOEL		0090	mg/l	Daprinia magna	ECOTOX	
						Database	
12.1 Toyicity to algory	EC50	96h	6500-	m a/l	Pseudokirchneriell	Dalabase	
12.1. Toxicity to algae:	EC30	9011	7500	mg/l			
12.2. Persistence and		28d	56	%	a subcapitata	OECD 301 C	
degradability:		Zou	30	70		(Ready	
degradability.						Biodegradability -	
						Modified MITI	
						Test (I))	
12.2. Persistence and		10d	90-100	%		OECD 301 A	Readily
degradability:		100	90-100	/0		(Ready	biodegradable
degradability.						Biodegradability -	biodegradable
						DOC Die-Away	
						Test)	
12.3. Bioaccumulative	Log Pow		-1,36			1631)	Not to be
potential:	Logiow		1,50				expected
12.5. Results of PBT							No PBT
and vPvB assessment							substance, No
and vi vb accessment							vPvB substance
Toxicity to bacteria:	EC50	16h	>10000	mg/l	Pseudomonas	IUCLID Chem.	7. 7D 000000100
Totally to baotoria.		1011	710000	9/.	putida	Data Sheet (ESIS)	
Other information:	BOD5		0.78	g/g	P 444	2 4.4 5501 (2010)	IUCLID
Janes Allomidation.		1	1 0,10	⊥ <i>∃'</i> ∃			

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 01 14 antifreeze fluids 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.

Dispose of packaging that cannot be cleaned in the same manner as the substance.

Do not perforate, cut up or weld uncleaned container.

Residues may present a risk of explosion.

SECTION 14: Transport information

General statements

14.1. UN number:



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Transport by road/by rail (ADR/RID)

14.2. UN proper shipping name:

14.3. Transport hazard class(es):n.a.14.4. Packing group:n.a.Classification code:n.a.LQ:n.a.

14.5. Environmental hazards: Not applicable

Tunnel restriction code:

Transport by sea (IMDG-code)

14.2. UN proper shipping name:

14.3. Transport hazard class(es):n.a.14.4. Packing group:n.a.Marine Pollutant:n.a.

14.5. Environmental hazards: Not applicable

Transport by air (IATA)

14.2. UN proper shipping name:

14.3. Transport hazard class(es):
14.4. Packing group:
n.a.

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. Transport in bulk according to Annex II of MARPOL and the IBC Code

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.

15.2 Chemical safety assessment

A chemical safety assessment is not provided for mixtures.

SECTION 16: Other information

Revised sections:

2, 3, 5, 8, 9, 11, 12, 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	Evaluation method used
(EC) No. 1272/2008 (CLP)	
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).

H361d Suspected of damaging the unborn child.

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

H302 Harmful if swallowed.

STOT RE — Specific target organ toxicity - repeated exposure

Acute Tox. — Acute toxicity - oral



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Repr. — Reproductive toxicity

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)

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)

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

dw dry weight

e.g. for example (abbreviation of Latin 'exempli gratia'), for instance

EC European Community
ECHA European Chemicals Agency
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)

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

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

LQ Limited Quantities

MARPOL International Convention for the Prevention of Marine Pollution from Ships

n.a. not applicablen.av. not availablen.c. not checkedn.d.a. no data available

OECD Organisation for Economic Co-operation and Development

org. organic

PBT persistent, bioaccumulative and toxic

PE Polyethylene

PNEC Predicted No Effect Concentration

ppm parts per million PVC Polyvinylchloride

REACHRegistration, 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)



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

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Art.: 21313

SVHC Substances of Very High Concern

Tel. Telephone

UN RTDG United Nations Recommendations on the Transport of Dangerous Goods

VOC Volatile organic compounds

very persistent and very bioaccumulative vPvB

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: Chemical Check Platz 1-7, D-32839 Steinheim, Tel.: +49 5233 94 17 0, Fax: +49 5233 94 17 90

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