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

1.1.	Product identifier	
	Trade name:	DC Evo
	UFI:	532D-D8NT-H00D-75FD
1.2.	Relevant identified uses of the substance or	mixture and uses advised against
	Relevant identified uses:	Cleaning and disinfecting agent
	Intended purpose:	Liquid concentrate free of aldehydes, phenols and QAC for the non protein fixing cleaning and disinfection of medical and dental instruments, rotating precision instruments and endoscopes.
	Uses advised against:	None at intended use.
	Note:	The product is intended for professional users.
1.3.	Details of the supplier of the safety data shee	et
	Supplier:	Komet Dental Gebr. Brasseler GmbH & Co. KG Trophagener Weg 25 D-32657 Lemgo (Germany) Telephone: +49 5261 701-0 Telefax: +49 5261 701-289 E-mail: info@kometdental.de Internet: www.kometdental.de
	E-mail address for the competent person responsible for the safety data sheet:	doku@alpro-medical.de
1.4.	Emergency telephone number	
	In-house emergency telephone number:	+49 7725 9392-0 Monday – Friday from 08:00 am to 04:30 pm (UTC+1); for chemical information and legal information on hazardous substances only
	Poison centre:	+49 761 19240 Poisoning information centre, Freiburg, Germany (24 h / 7 d), English is spoken

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification in accordance with Regulation (EC) No 1272/2008 [CLP]

Classification	Classification procedure
Flam. Liq. 3; H226	On basis of test data (Flash point)
Acute Tox. 4; H302	Calculation method
Skin Corr. 1B; H314	Calculation method
STOT RE 2; H373	Calculation method
Aquatic Acute 1; H400	Calculation method
Aquatic Chronic 2; H411	Calculation method

Full text of hazard classes as well as H-phrases: see under SECTION 16.1.

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2.2. Label elements

Label elements in accordance with Regulation (EC) No 1272/2008 [CLP]

Hazard pictog	rams:	
Signal word:		Danger
Hazard components for labelling:		Amines, N-C12-14-alkyltrimethylenedi- (90640-43-0); N-(3-aminopropyl)-N-dodecylpropane-1,3-diamine (2372-82-9); 2-Aminoethanol (141-43-5); Guanidine, N,N'''-1,3-propanediylbis-, N-coco alkyl derivatives (98246-84-5)
H-phrases:	H226 H302 H314 H373 H400 H411	Flammable liquid and vapour. Harmful if swallowed. Causes severe skin burns and eye damage. May cause damage to organs through prolonged or repeated exposure if swallowed. Very toxic to aquatic life. Toxic to aquatic life with long lasting effects.
EUH-phrases:	EUH208	Contains piperazine. May produce an allergic reaction.
P-phrases:	P210 P280	Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Wear protective gloves/protective clothing/eye protection/face
	P303+P361+P353	protection. IF SWALLOWED: rinse mouth. Do NOT induce vomiting. IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water [or shower]. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
	R210	Immediately call a POISON CENTER/ doctor.

2.3. Other hazards

The substances in the mixture do not meet the PBT/vPvB criteria according to Regulation (EC) No 1907/2006, Annex XIII.

No further hazards known.

SECTION 3: Composition/information on ingredients

3.2. Mixtures

Chemical characterisation:

Mixture of substances listed below with non-hazardous additions in aqueous solution.

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Hazardous ingredients

Chemical name	Identification numbers	Classification in accordance with Regulation (EC) No 1272/2008	Weight %	
Propan-2-ol CAS No: 67-63-0 EC No: 200-661-7 Index No: 603-117-00-0 REACH Registration No: 01-2119457558-25-XXXX		Flam. Liq. 2; H225 Eye Irrit. 2; H319 STOT SE 3; H336	≥ 5 - < 15	
Amines, N-C12-14- alkyltrimethylene-di- in EC No: 292-562-0 REACH Registration No: 01-2119957843-25-XXXX		Acute Tox. 3; H301 Skin Corr. 1B; H314 STOT RE 1; H372 Aquatic Acute 1; H400 Aquatic Chronic 1; H410 <i>M-Factor acute: 100</i> <i>M-Factor chronic: 1</i>	≥ 5 - < 15	
N-(3-aminopropyl)-N- dodecylpropane-1,3- diamine REACH Registration No: 01-2119980592-29-XXXX		Acute Tox. 3; H301 Skin Corr. 1B; H314 STOT RE 2; H373 Aquatic Acute 1; H400 Aquatic Chronic 1; H410 <i>M-Factor acute: 10</i>	≥1-<5	
2-(2-Butoxyethoxy) ethanol REACH Registration No: 01-2119475104-44-XXXX		Eye Irrit. 2; H319	≥1-<5	
2-Aminoethanol	CAS No: 141-43-5 EC No: 205-483-3 Index No: 603-030-00-8 REACH Registration No: 01-2119486455-28-XXXX	Acute Tox. 4; H332 Acute Tox. 4; H312 Acute Tox. 4; H302 Skin Corr. 1B; H314 STOT SE 3; H335 Specific concentration limits:	≥1-<5	
Guanidine, N,N'''-1,3- propanediyl-bis-, N- coco alkyl derivatives	CAS No: 98246-84-5 EC No: 308-757-1	STOT SE 3; H335: C ≥ 5 % Acute Tox. 4; H302 Skin Corr. 1B; H314 Aquatic Acute 1; H400	≥1-<5	
Edetic acid; CAS No: 60-00-4 (EDTA) EC No: 200-449-4 Index No: 607-429-00-8 Piperazine CAS No: 110-85-0 EC No: 203-803-3 Index No: 612-057-010-4 REACH Registration No: 01-2119480384-35-XXXX		Acute Tox. 4; H332 Eye Irrit. 2; H319	≥1-<5	
		Repr. 2; H361fd Skin Corr. 1B; H314 Resp. Sens. 1; H334 Skin Sens. 1; H317	≥ 0.2 - < 1	

Full text of hazard classes and H-phrases: see SECTION 16.1.

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SECTION 4: First aid measures

4.1. Description of first aid measures

General information:	First aider: Pay attention to self-protection! Remove contaminated, saturated clothing immediately.
Following inhalation:	Move affected person into fresh air and keep still and warm. Seek medical advice.
Following skin contact:	Wash skin immediately with plenty of water and soap. In case of skin reactions, consult a physician.
Following eye contact:	Flush eyes immediately with flowing water for 10 to 15 minutes holding eyelids apart. Remove contact lenses, if present and easy to do. Consult an ophthalmologist.
Following ingestion:	Rinse mouth with water. Let drink only a few sips of water (foaming product). Do not induce vomiting (risk of aspiration and perforation). Consult a physician immediately.

4.2. Most important symptoms and effects, both acute and delayed

Causes severe skin burns and eye damage. Harmful if swallowed. Harmful: May cause damage to organs through prolonged or repeated exposure if swallowed. May produce an allergic reaction.

4.3. Indication of any immediate medical attention and special treatment needed

No information available.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Unsuitable extinguishing media:	Full water jet
Suitable extinguishing media:	Water spray jet, alcohol resistant foam, extinguishing powder, carbon dioxide (CO ₂)

5.2. Special hazards arising from the substance or mixture

Hazardous combustion products: Carl	bon monoxide (CO), carbon dioxide (CO ₂), nitrogen oxides (NO _x)
-------------------------------------	--

5.3. Advice for firefighters

Special protective equipment:	Wear self-contained breathing apparatus.
Further information:	Cool endangered containers with water spray jet. Collect contaminated fire extinguishing water separately. Do not discharge into drains or rivers.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

For non-emergency personnel

Use personal protective equipment. See SECTION 8.2.

Avoid skin and eye contact. Do not breathe vapours. Remove all sources of ignition. Provide adequate ventilation. Special danger of slipping by leaked/spilled product. Evacuate danger area. Observe emergency plans. Consult experts.

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For emergency responders

Use personal protective equipment. See SECTION 8.2.

6.2. Environmental precautions

Do not discharge into drains or rivers.

6.3. Methods and material for containment and cleaning up

Containment

For large spills, dyke spilled material or otherwise contain material to ensure runoff does not reach a waterway. Cover or seal drains.

Cleaning up

Wipe up small amounts with absorbent material (e.g. cloth, fleece). Absorb large amounts with liquidbinding material (sand, diatomaceous earth, universal binder, sawdust). Collect in suitable, closed containers for disposal. Clean contaminated surfaces thoroughly.

Other information

Inappropriate containment and cleaning methods are not known.

6.4. Reference to other sections

Information on safe handling see SECTION 7.1. Information on personal protective equipment see SECTION 8.2. Information on disposal see SECTION 13.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Precautions

Avoid contact with skin and eyes. Avoid breathing aerosols and vapours. Keep away from sources of ignition. Keep container tightly closed. Fill refill packages only in labelled original bottles. Keep disinfection tray with ready-to-use solution covered.

Advice on general occupational hygiene

When using do not eat, drink or smoke. Wash hands before breaks and at end of work. Keep away from food and drink.

7.2. Conditions for safe storage, including any incompatibilities

Requirements for storage rooms and vessels:	Keep only in the original container. Keep container tightly closed and kept upright to prevent any leakage.		
Advice on common storage:	Keep away from food, drink and animal feedingstuffs.		
Further information on storage conditions:	Not necessary		
Storage class ([DE] TRGS 510):	LGK 3 Flammable liquids		

7.3. Specific end use(s)

Apart from the uses mentioned in section 1.2 no other specific end uses are stipulated.

Industry and sector specific guidance

[DE] TRGS 525 – Hazardous substances in medical care facilities (Section 7 Activities with disinfectants); Issue: September 2014;
 Source: GMBI 2014 page 1294-1307 of 13.10.2014 [No 63]; www.baua.de

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[DE] DGUV rules 107-002 (former BGR 206) - Disinfection works in health service Issue: July 1999; Source: www.dguv.de/publikationen

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Occupational exposure limits

	Limit values						
Country	Long term (8 hours)		Short term (15 minutes)		Legal basis	Remarks	
	ррт	mg/m³	ррт	mg/m³			
Propan-2-ol (CAS No: 67-6	53-0)					
EU						no limit value specified	
UK	400	999	500	1250	EH40		
2-Aminoetha	nol (CAS No:	141-43-5)					
EU	1	2.5	3	7.6	2006/15/EC	Skin	
UK	1	2.5	3	7.6	EH40	Sk	
2-(2-Butoxyet	hoxy) ethan:	ol (CAS No: :	112-34-5)				
EU	10	67.5	15	101.2	2006/15/EC	-	
UK	10	67.5	15	101.2	EH40		
Piperazine (CAS No: 110-85-0)							
EU	-	0.1	-	0.1	2000/39/EC	-	
UK		0.1		0.3	EH40	Sen	

Used abbreviations, symbols, numerals and explanations in column "Remarks"

Skin A significant uptake of the substance through the skin is possible.

Sen Capable of causing occupational asthma. See paragraphs 53–56.

Sk Can be absorbed through the skin. The assigned substances are those for which there are concerns that dermal absorption will lead to systemic toxicity.

Biological limit values

Country	Parameter	Limit value	Test material	Sampling time	Legal basis			
Propan-2-ol (Propan-2-ol (CAS No: 67-63-0)							
	Acetone	25 mg/l	Whole	End of exposition, resp. end of shift	TRGS 903			
Germany			blood					
	Acetone	25 mg/l	Urine	End of exposition, resp. end of shift	TRGS 903			

Information on monitoring procedures

BS EN 482:2012-04-30; Title: Workplace exposure - General requirements for the performance of procedures for the measurement of chemical agents; British version of EN 482:2012

BS EN 689:1996-04-15; Title: Workplace atmospheres - Guidance for the assessment of exposure by inhalation to chemical agents for comparison with limit values and measurement strategy; British version of EN 689:1995

BS EN 14042:2003-04-24; Title: Workplace atmospheres - Guide for the application and use of procedures for the assessment of exposure to chemical and biological agents; British version of EN 14042:2003

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8.2. Exposure controls

Appropriate engineering controls

Technical and organisational protective measures

The eyewash station (or eyewash bottle) and emergency shower must be located near the workplace.

Personal protective equipment

Eye/face protection:	Safety glasses with side protection according to EN 166
Skin protection:	
Hand protection:	Protective gloves according to EN 374 <u>Splash guard:</u> Disposable gloves made of nitrile rubber (thickness 0.11 mm) <u>Permanent contact (> 480 min):</u> Protective gloves made of nitrile rubber (thickness 0.40 mm)
Other skin protection:	Long-sleeved protective clothing (lab coat)
Respiratory protection:	Not necessary when used as intended.
Thermal hazards:	No special protective measures necessary.

Environmental exposure controls

Do not discharge into drains.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Appearance:	clear, blue liquid	
Odour:	characteristic	
Odour threshold:	no data available	
pH (undiluted):	10.0 - 11.0	(20 °C)
Melting point/freezing point:	no data available	
Initial boiling point and boiling range:	no data available	
Flash point:	32 °C	(EN ISO 2719:2002)
Evaporation rate:	no data available	
Flammability (solid, gas):	not applicable	
Lower explosive limit:	Propan-2-ol: 2 vol%	
Upper explosive limit:	Propan-2-ol: 13 vol%	
Vapour pressure:	no data available	(°C)
Vapour density:	no data available	
Relative density:	0.970 – 0.990	(20 °C)
Solubility in water:	completely soluble	
Partition coefficient: n-octanol/water	not applicable	
Auto-ignition temperature:	not applicable	
Decomposition temperature:	no data available	

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1			IIdu	
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		no data available	Viscosity:	
	losive. However, formation of explosive possible.	The product is not explo vapour/air mixtures is p	Explosive properties:	
		none	Oxidising properties:	
			2. Other information	9.2.
	(20 °C)	1.3740 - 1.3811	Refractive index nD:	

3500 – 4000 μS/cm

(20 °C)

SECTION 10: Stability and reactivity

Electrical conductivity (undiluted):

10.1. Reactivity

No hazardous reactions when handled and stored as intended.

10.2. Chemical stability

The product is stable when handled and stored as intended.

10.3. Possibility of hazardous reactions

Vapours may form explosive mixtures with air.

10.4. Conditions to avoid

Keep away from heat and sources of ignition.

10.5. Incompatible materials

None known

10.6. Hazardous decomposition products

Does not decompose when used as intended.

SECTION 11: Toxicological information

11.1.Information on toxicological effects

Acute toxicity

Product

Acute toxicity - oral:	Acute Toxicity Estimate ATE _{mix} = 1962 mg/kg => Harmful if swallowed.
Acute toxicity - dermal:	Acute Toxicity Estimate ATE _{mix} > 2000 mg/kg => no classification
Acute toxicity - inhalation:	Acute Toxicity Estimate ATE _{mix} > 20 mg/l => no classification

Ingredients

Amines, N-C12-14-alkyltrimethylenedi- (CAS No: 90640-43-0):		
Acute toxicity - oral:	LD ₅₀ : 200 mg/kg; species: rat; method: OECD 423	
N-(3-aminopropyl)-N-dodecylpropane-1,3-diamine (CAS No: 2372-82-9):		
Acute toxicity - oral:	LD ₅₀ : 261 mg/kg; species: rat; method: OECD 401	
Acute toxicity - dermal:	LD ₅₀ : > 600 mg/kg; species: rat; method: OECD 402	
2-Aminoethanol (CAS No: 141-43-5):		
Acute toxicity - oral:	LD ₅₀ : 1515 mg/kg; species: rat; method: OECD 401	
Acute toxicity - inhalation:	LC ₅₀ : > 1.3 mg/l; species: rat; 6 h; vapour	

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<u>Guanidine, N,N'''-1,3-propanediylbis-, N-coco alkyl derivatives (CAS No: 98246-84-5):</u> Acute toxicity - oral: LD₅₀: 500 - 2000 mg/kg; species: rat

<u>Edetic acid; (EDTA) (CAS No: 60-00-4):</u> Acute toxicity - inhalation: LC₅₀: 1000-5000 mg/m³; species: rat; 6 h

Skin corrosion/irritation

Product

Causes severe skin burns. [calculation method]

Serious eye damage/irritation

Product

Causes serious eye damage. [calculation method]

Respiratory or skin sensitisation

Product

The mixture is not classified as sensitising but it contains piperazine at a concentration between 0.2 and 1.0%. Label elements in accordance with Regulation (EC) No 1272/2008 Annex II, 2.8.: "Contains piperazine. May produce an allergic reaction."

Germ cell mutagenicity

Product

No data available.

Carcinogenicity

Product

No data available.

Reproductive toxicity

Product

No classification. [calculation method]

Ingredients

Piperazine (CAS No: 110-85-0):

Suspected of damaging fertility. Suspected of damaging the unborn child.

STOT-single exposure

Product

No classification. [calculation method]

Ingredients

<u>Propan-2-ol (CAS No: 67-63-0):</u> May cause drowsiness or dizziness.

<u>2-Aminoethanol (CAS No: 141-43-5):</u> May cause respiratory irritation.

STOT-repeated exposure

Product

May cause damage to organs through prolonged or repeated exposure if swallowed. [calculation method]

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Ingredients

<u>Amines, N-C12-14-alkyltrimethylenedi- (CAS No: 90640-43-0):</u> NOAEL: 0.4 mg/kg; Application Route: Gavage; species: rat (male/female)

<u>N-(3-aminopropyl)-N-dodecylpropane-1,3-diamine (CAS No: 2372-82-9):</u> NOAEL: 9 mg/kg; Application Route: Oral; Exposure period: 90 d; species: rat NOAEL: 20 mg/kg; Application Route: Food; Exposure period: 90 d; species: dog NOAEL: 15 mg/kg; Application Route: Skin; Exposure period: 90 d; species: rat

Aspiration hazard

Product

No data available.

SECTION 12: Ecological information

12.1. Toxicity

Very toxic to aquatic life. [calculation method] Toxic to aquatic life with long lasting effects. [calculation method]

12.2. Persistence and degradability

Biodegradability:

The product is biodegradable according to OECD criteria. The statement has been derived from the properties of the ingredients.

12.3. Bioaccumulative potential

No data available.

12.4. Mobility in soil

No data available.

12.5. Results of PBT and vPvB assessment

The substances in the mixture do not meet the PBT/vPvB criteria according to Regulation (EC) No 1907/2006, Annex XIII.

12.6. Other adverse effects

No data available.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Disposal of the product

Product residues must be disposed of as hazardous waste in compliance with the Directive 2008/98/EC on waste as well as national and regional regulations. Do not dispose of via the waste water. Leave product in the original container as possible. Do not mix with other waste materials.

Waste codes / waste designations according to EWC

Product residues: 07 06 01* aqueous washing liquids and mother liquors

Disposal of the packaging

Packaging contaminated with product is considered as hazardous waste and must be disposed of accordingly.

Waste codes / waste designations according to EWC

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Contaminated packaging: 15 01 10* packaging containing residues of or contaminated by hazardous substances

Recommendation

Contaminated packaging must be emptied optimally and can be recycled after appropriate cleaning (rinse with water).

SECTION 14: Transport information

14.0. Transport classification

Dangerous good in sense of the transport regulations in road traffic (ADR), railway traffic (RID), inland waterway traffic (ADN), maritime traffic (IMDG-Code) and air traffic (ICAO-TI/IATA-DGR).

14.1.UN number

UN 2924

14.2. UN proper shipping name

ADR/RID/ADN

FLAMMABLE LIQUID, CORROSIVE, N.O.S. (Isopropanol, Laurylpropylenediamine)

IMDG-Code/ICAO-TI/IATA-DGR

FLAMMABLE LIQUID, CORROSIVE, N.O.S. (Isopropanol, Laurylpropylenediamine)

14.3. Transport hazard class(es)			
Class:	3		
Subsidiary risk(s):	(8)		
14.4. Packing group			
III			
14.5. Environmental hazards			
ADR/RID/ADN			
Environmentally Hazardous:	Yes		
IMDG-Code			
Marine Pollutant:	Yes		
14.6. Special precautions for user			
Not necessary.			
14.7. Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code			
Not applicable for product as supplied.			
14.8. Further information			
Transport category according to ADR section 1.1.3.6:	3		
Maximum total quantity per transport unit according to ADR section 1.1.3.6:	1000 L		
Limited quantity (Maximum quantity per inner packaging) according to ADR/RID/ADN/IMDG-Code:	5 L		
Classification code according to ADR/RID/ADN:	FC		
Hazard identification number according to ADR/RID:	38		

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Tunnel restriction code according to ADR/RID:	D/E
Segregation group according to IMDG-Code section 5.4.1.5.11.1:	IMDG-Code- Segregation group 18 – alkalis
EmS codes:	F-E, S-C

SECTION 15: Regulatory information

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

EU-Regulations

REGULATION (EC) No 1005/2009 on substances that deplete the ozone layer

not applicable

REGULATION (EC) No 850/2004 on persistent organic pollutants and amending Directive 79/117/EEC

not applicable

REGULATION (EU) No 649/2012 concerning the export and import of hazardous chemicals

not applicable

DIRECTIVE 2012/18/EU (Seveso III Directive) on the control of major-accident hazards involving dangerous substances, amending and subsequently repealing Council Directive 96/82/EC

Hazard category	Qualifying quantity (tonnes)	Qualifying quantity (tonnes)
	(lower-tier establishment)	(upper-tier establishment)
P5c FLAMMABLE LIQUIDS	5.000	50.000
E1 ENVIRONMENTAL	100	200
HAZARDS		

DIRECTIVE 2010/75/EU on industrial emissions (integrated pollution prevention and control)

not applicable

REACH - List of substances subject to authorisation (Annex XIV)

not applicable

REACH – Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles (Annex XVII)

not applicable

COUNCIL DIRECTIVE 94/33/EC on the protection of young people at work

Observe employment restrictions for juveniles.

COUNCIL DIRECTIVE 92/85/EEC on the introduction of measures to encourage improvements in the safety and health at work of pregnant workers and workers who have recently given birth or are breastfeeding

Observe employment restrictions for pregnant and nursing mothers.

15.2. Chemical safety assessment

For this mixture no chemical safety assessment has been carried out.

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SECTION 16: Other information

16.1. Full text of hazard classes and H-phrases

Hazard classes

riazaru ciasses	
Acute Tox.	Acute toxicity
Aquatic Acute	Acute aquatic hazard
	Long-term aquatic hazard
Eye Irrit.	Eye irritation
Flam. Liq.	Flammable liquid
Repr.	Reproductive toxicity
Resp. Sens.	Respiratory sensitization
Skin Corr.	Skin corrosion
Skin Sens.	Skin sensitization
STOT RE	Specific target organ toxicity (repeated exposure)
STOT SE	Specific target organ toxicity (single exposure)
H-phrases (Hazard s	tatements)
H225	Highly flammable liquid and vapour.
H226	Flammable liquid and vapour.
H301	Toxic if swallowed.
H302	Harmful if swallowed.
H312	Harmful in contact with skin.
H314	Causes severe skin burns and eye damage.
H317	May cause an allergic skin reaction.
H319	Causes serious eye irritation.
H332	Harmful if inhaled.
H334	May cause allergy or asthma symptoms or breathing difficulties if inhaled.
H335	May cause respiratory irritation.
H336	May cause drowsiness or dizziness.
H361fd	Suspected of damaging fertility. Suspected of damaging the unborn child.
H372	Causes damage to organs <or affected,="" all="" if="" known="" organs="" state=""> through prolonged</or>
	or repeated exposure <state conclusively="" exposure="" if="" is="" it="" no<="" of="" proven="" route="" td="" that=""></state>
	other routes of exposure cause the hazard>.
H373	May cause damage to organs <or affected,="" all="" if="" known="" organs="" state=""> through</or>
	prolonged or repeated exposure <state conclusively="" exposure="" if="" is="" it="" of="" proven<="" route="" td=""></state>
	that no other routes of exposure cause the hazard>.
H400	Very toxic to aquatic life.
H410	Very toxic to aquatic life with long lasting effects.
H411	Toxic to aquatic life with long lasting effects.

16.2. Abbreviations and acronyms

ADN	<u>A</u> ccord européen relatif au transport international des marchandises <u>d</u> angereuses par voie de <u>n</u> avigation intérieure (European Agreement concerning the International Carriage of
	Dangerous Goods by Inland Waterways)
ADR	<u>A</u> ccord européen relatif au transport international des marchandises <u>d</u> angereuses par <u>r</u> oute
	(European Agreement concerning the International Carriage of Dangerous Goods by Road)
BGR	<u>Berufsgenossenschaftliche Regeln (English: Employers' liability insurance association rules)</u>
BS	<u>B</u> ritish <u>S</u> tandards
CAS	<u>C</u> hemical <u>A</u> bstracts <u>S</u> ervice
CLP	Regulation on <u>Classification, Labelling and Packaging</u> of Substances and Mixtures
[DE]	National German regulations
DGUV	<u>D</u> eutsche <u>G</u> esetzliche <u>U</u> nfall <u>v</u> ersicherung (English: German statutory accident insurance)
EC	<u>E</u> uropean <u>C</u> ommunity

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EEC EmS EN EU EWC	<u>European Economic Community</u> <u>Em</u> ergency <u>S</u> chedules (Emergency response procedures for ships carrying dangerous goods) European Standard <u>European Union</u> <u>European Waste Catalogue</u>
GHS	<u>G</u> lobally <u>H</u> armonized <u>System of Classification</u> , Labelling and Packaging of Chemicals
GMBI	<u>G</u> emeinsames <u>M</u> inisterial <u>bl</u> att (English: Joint Ministerial Gazette)
IATA-DGR	International <u>Air Transport Association - Dangerous G</u> oods <u>Regulations</u>
IBC-Code	International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk
ICAO-TI	Technical Instructions For The Safe Transport of Dangerous Goods by Air
IMDG-Code	International Maritime Code for Dangerous Goods
LC ₅₀	Median lethal concentration
LD ₅₀	Median lethal dose
LGK	Lagerklasse (English: Storage class)
MARPOL	International Convention for the Prevention of Marine Pollution from Ships
N.O.S.	Not otherwise specified
NOAEL	<u>No Observed Adverse Effect Level (dose at which no adverse effect is found)</u>
OECD	Organization for Economic Co-operation and Development
PBT	Persistent, <u>b</u> ioaccumulative and <u>t</u> oxic
ppm	<u>P</u> arts <u>p</u> er <u>m</u> illion
QAC	Quaternary ammonium compounds
REACH	<u>Registration, Evaluation, Authorisation and Restriction of Chemicals</u>
RID	<u>R</u> èglement concernant le transport <u>International ferroviaire de marchandises Dangereuses</u> (Regulations Concerning the International Carriage of Dangerous Goods by Rail)
TRGS	Technische Regeln für Gefahrstoffe (English: Technical Rules for Hazardous Substances)
UN	<u>U</u> nited <u>N</u> ations
UTC	Coordinated Universal Time (French: Temps Universel Coordonné)
vPvB	Very persistent and very bioaccumulative
WGK	<u>W</u> assergefährdungs <u>k</u> lasse (English: water hazard class)

16.3. Key literature references and sources for data

- Regulation (EC) No 1907/2006 (REACH), Annex II
- European Chemicals Agency (ECHA) Guidance on the compilation of safety data sheets; Version 2.1 (February 2014); <u>http://echa.europa.eu/documents/10162/13643/sds_en.pdf</u>
- GISBAU (Hazardous substances information system of the BG BAU) course "safety data sheet"; <u>http://www.bgbau.de/gisbau/SDB/lehrgang/lehrgang.htm</u>
- Regulation (EC) No 1272/2008 (CLP regulation)
- European Chemicals Agency (ECHA) Guidance on Labelling and Packaging in accordance with Regulation (EC) No 1272/2008 (04/2011);
- http://echa.europa.eu/documents/10162/13562/clp_labelling_en.pdf
- European Chemicals Agency (ECHA), Registered substances; <u>http://echa.europa.eu/information-on-chemicals/registered-substances</u>
- European Chemicals Agency (ECHA), C&L Classification and Labelling Inventory; <u>http://echa.europa.eu/information-on-chemicals/cl-inventory-database</u>
- Institute for Occupational Safety and Health of the German Social Accident Insurance (IFA):
 GESTIS database on hazardous substances and GESTIS International limit values for chemical agents;
 http://www.dguv.de/dguv/ifa/index.jsp
- German Environmental Agency (Umweltbundesamt), Section IV 2.4: Office of Documentation and Information on Substances Hazardous to Waters RIGOLETTO (catalogue of Substances Hazardous to Waters); <u>http://webrigoletto.uba.de/rigoletto</u>

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16.4. Training advice

Provide adequate information, instructions and training for users.

16.5. Indication of changes

New safety data sheet. No changes so far.

The information given in the safety data sheet only applies to the described product in connection with its intended use. The information is based on the latest state of our knowledge at the time of revision. In particular, it describes our product under the aspect of its hazards and safety measures to be taken. It does not constitute any guarantee of product properties and quality features.