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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

Reactivation Shampoo Art.: 806999

1.2 Relevant identified uses of the substance or mixture and uses advised against Relevant identified uses of the substance or mixture:
Vehicle cleansing
Uses advised against:
No information available at present.

1.3 Details of the supplier of the safety data sheet

Koch-Chemie GmbH Einsteinstrasse 42 59423 Unna Telefon: +49 (0) 2303 / 9 86 70 - 0 Fax: +49 (0) 2303 / 9 86 70 - 26 info@koch-chemie.com www.koch-chemie.com

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: $\ensuremath{\mathbb{R}}$

National Poisons Information Centre, Beaumont Hospital, Dublin 9, Ireland, Tel.: +353 (0)1 809 2166 (Public Poisons Info Line, 8am-10pm, 7 days a week) +353 (0)1 809 2566 (Info for Healthcare Professionals ONLY, 24 h, 7 days a week)

Telephone number of the company in case of emergencies:

+1 872 5888271 (KCC)

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
Eye Dam.	1	H318-Causes serious eye damage.
Aquatic Chronic	3	H412-Harmful to aquatic life with long lasting effects.
Met. Corr.	1	H290-May be corrosive to metals.
Skin Corr.	1	H314-Causes severe skin burns and eye damage.

2.2 Label elements

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



Danger

H412-Harmful to aquatic life with long lasting effects. H290-May be corrosive to metals. H314-Causes severe skin burns and eye damage.

P260-Do not breathe vapours or spray. P273-Avoid release to the environment. P280-Wear protective gloves / protective clothing / eye protection / face protection.

P301+P330+P331-IF SWALLOWED: Rinse mouth. Do NOT induce vomiting. P303+P361+P353-IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water or shower. P305+P351+P338-IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. P310-Immediately call a POISON CENTER / doctor. P390-Absorb spillage to prevent material damage.

Methanesulphonic acid Myristyl dimethyl aminoxide Phosphoric acid

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.

Index

3.2 Mixtures	
Myristyl dimethyl aminoxide	
Registration number (REACH)	
Index	
EINECS, ELINCS, NLP, REACH-IT List-No.	222-059-3
CAS	3332-27-2
content %	5-<10
Classification according to Regulation (EC) 1272/2008 (CLP), M-	Acute Tox. 4, H302
factors	Skin Irrit. 2, H315
	Eye Dam. 1, H318
	Aquatic Acute 1, H400 (M=1)
	Aquatic Chronic 2, H411
2-Butoxyethanol	Substance for which an EU exposure limit value
	applies.
Registration number (REACH)	01-2119475108-36-XXXX

603-014-00-0

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EINECS, ELINCS, NLP, REACH-IT List-No.	203-905-0
CAS	111-76-2
content %	5-<10
Classification according to Regulation (EC) 1272/2008 (CLP), M-	Acute Tox. 4, H302
factors	Acute Tox. 4, H332
	Skin Irrit. 2, H315
	Eye Irrit. 2, H319
Specific Concentration Limits and ATE	ATE (oral): 1200 mg/kg

Phosphoric acid	Substance for which an EU exposure limit value
	applies.
Registration number (REACH)	01-2119485924-24-XXXX
Index	015-011-00-6
EINECS, ELINCS, NLP, REACH-IT List-No.	231-633-2
CAS	7664-38-2
content %	1-<5
Classification according to Regulation (EC) 1272/2008 (CLP), M-	Met. Corr. 1, H290
factors	Acute Tox. 4, H302
	Skin Corr. 1B, H314
	Eye Dam. 1, H318
Specific Concentration Limits and ATE	Skin Corr. 1B, H314: >=25 %
	Skin Irrit. 2, H315: >=10 %
	Eye Dam. 1, H318: >=25 %
	Eye Irrit. 2, H319: >=10 %

Methanesulphonic acid	
Registration number (REACH)	01-2119491166-34-XXXX
Index	607-145-00-4
EINECS, ELINCS, NLP, REACH-IT List-No.	200-898-6
CAS	75-75-2
content %	1-<5
Classification according to Regulation (EC) 1272/2008 (CLP), M-	Met. Corr. 1, H290
factors	Acute Tox. 4, H302
	Acute Tox. 4, H312
	Skin Corr. 1B, H314
	Eye Dam. 1, H318
	STOT SE 3, H335

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.

Skin contact

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

Cauterizations not treated lead to wounds difficult to heal.

Eye contact

Remove contact lenses.

Wash thoroughly for several minutes using copious water - call doctor immediately, have Data Sheet available. Protect uninjured eye.

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Follow-up examination by an ophthalmologist.

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. In certain cases, the symptoms of poisoning may only appear after an extended period / after several hours. Corrosive burns on skin as well as mucous membrane possible.

Necrosis Risk of serious damage to eyes. Corneal damage. Danger of blindness. Pain in the mouth and throat Gastrointestinal disturbances Oesophageal perforation Gastric perforation

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

SECTION 5: Firefighting measures

5.1 Extinguishing media

Suitable extinguishing media

Water jet spray / alcohol resistant foam / CO2 / dry extinguisher.

Unsuitable extinguishing media

High volume water jet

5.2 Special hazards arising from the substance or mixture

In case of fire the following can develop: Oxides of nitrogen Oxides of carbon Oxides of sulphur 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.

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 surface and ground-water infiltration, as well as ground penetration. Prevent from entering drainage system.

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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.

Neutralising is possible (only from a specialist).

Diluting with water is possible.

Flush residue using copious water.

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.

Handle and open container with care.

There should be an eyewash station and safety shower located near the area of use.

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.

Do not use acid sensitive materials.

Acid-resistant floor necessary.

Do not store with alkalis. Store at room temperature.

Store in a dry place.

7 2 Specific and up

7.3 Specific end use(s) No information available at present.

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	2-Butoxyethanol				
WEL-TWA: 25 ppm (123 mg/m3	3) (WEL), 20 ppm	WEL-STEL:	50 ppm (246 mg	g/m3) (WEL, EU)	
(98 mg/m3) (EU)					
Monitoring procedures:			190 U(C) (548 87		
	D	FG MethNr. 2	2 (D) (Loesungsm	nittelgemische 3), DFG	G (E) (Solvent mixtures 3) -
	- 20	014, 2002 - EU	project BC/CEN	/ENTR/000/2002-16 c	ard 32-2 (2004)
	- N	IOSH 1403 (AI	LCOHOLS IV) - 2	2003	
	- N	IOSH 2549 (V	OLATILE ORGAN	VIC COMPOUNDS (S	CREENING)) - 1996
	- 0	SHA 83 (2-But	oxyethanol (Buty	l Cellosolve)) - 1990	
BMGV: 240 mmol butoxyacetic	acid/mol creatinine i	in urine, post s	hift (BMGV)	Other information:	Sk (WEL)

(B) (RI) (M)

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Chemical Name	2-Butoxyethance						
OELV-8h: 20 ppm (98 mg/m	3) (OELV-8h, EU)	OELV-15min: 15min, EU)	50 ppm (24	6 mg/m3) (OE	LV-		
Monitoring procedures:	-	Compur - KITA-1	90 LI(C) (548	873)			
Monitoring procedures.		DFG MethNr. 2			10 3) DEC	G (F) (Solv	ent mixtures 3
	_	2014, 2002 - EU					
	-	NIOSH 1403 (AL			2002-10 0	aiu 52-2 (2	2004)
	-	NIOSH 2549 (VC			ס) איראר אירא		C)) 1006
	-	OSHA 83 (2-But					6)) - 1990
BLV: 200 mg/g creatinine (B	- Jutoxyacetic acid (BA					Sk IOELV	
Chemical Name	2-Butoxyethance						
OELV-8h: 20 ppm (98 mg/m	2-Builoxyeinand	OELV-ST: 5	0 ppm (246 m	a/m3) (OELV-	ST LIF)		
Monitoring procedures:	<u></u>	Compur - KITA-1			01, UL)		
Monitoring procedures.		DFG MethNr. 2			10 3) DEC	E (E) (Solv	ont mixturos 3
		2014, 2002 - EU					
		NIOSH 1403 (AL			2002-10 0	aiu 52-2 (2	2004)
	-	NIOSH 2549 (VC			ס) פרואו ונ		$(C_{1}) = 1006$
		OSHA 83 (2-But					6)) - 1990
BMGV: 240 mmol butoxyace	- atic acid/mol creatiniu	Do in urine nost st	off (BMCV)	Other infor		Skin	
•		· •			mation.	SKIII	
Chemical Name	Phosphoric acid						
WEL-TWA: 1 mg/m3 (WEL,		WEL-STEL:					
Monitoring procedures:	-	INSHT MTA/MA-					in air)
	-	OSHA ID-111 (P					
		OSHA ID-165SG	(Acid Mist In			1	
BMGV:				Other infor	mation:		
Chemical Name	Phosphoric acid	Ł					
OELV-8h: 1 mg/m3 (OELV-8	3h, EU)	OELV-15min:					
Monitoring procedures:	-	INSHT MTA/MA-	019/A90 (Det	ermination of i	norganic a	acid anions	in air)
	-	OSHA ID-111 (P					
	-	OSHA ID-165SG	(Acid Mist In	Workplace At	mosphere	s) - 1985	
BLV:				Other infor	mation:	IOELV	
Chemical Name	Phosphoric acid	1 L					
OELV-8h: 1 mg/m3 (OELV-8		OELV-ST: 2	mg/m3 (OEL)	V-ST, UE)			
Monitoring procedures:	-	INSHT MTA/MA-			norganic a	acid anions	in air)
51	-	OSHA ID-111 (P					- /
	-	OSHA ID-165SG					
BMGV:			<u>,</u>	Other infor			
B Chemical Name	Glycerol						
WEL-TWA: 10 mg/m3 (mist)		WEL-STEL:					
Monitoring procedures:							
BMGV:				Other infor	mation:		
Manifest discover in the second							
Myristyl dimethyl aminoxide Area of application		Effort	a boalth	Descripto	Value	Unit	Noto
Area of application	Exposure route /	Effect or	ineaith	Descripto	value	Unit	Note

Area of application	Exposure route /	Effect on health	Descripto	Value	Unit	Note
	Environmental		r			
	compartment					
	Environment - freshwater		PNEC	0,034	mg/l	
	Environment - marine		PNEC	0,003	mg/l	
	Environment - sediment,		PNEC	5,24	mg/kg dry	
	freshwater				weight	
	Environment - sediment,		PNEC	0,524	mg/kg dry	
	marine				weight	
	Environment - soil		PNEC	1,02	mg/kg dry	
					weight	
	Environment - sewage		PNEC	24	mg/Ī	
	treatment plant				-	

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	Environment - oral (animal feed)		PNEC	1,1	mg/kg bw/day	
	Environment - sporadic (intermittent) release		PNEC	0,034	mg/l	
Consumer	Human - inhalation	Long term, systemic effects	DNEL	1,53	mg/m3	
Consumer	Human - dermal	Long term, systemic effects	DNEL	5,5	mg/kg bw/day	
Consumer	Human - oral	Long term, systemic effects	DNEL	0,44	mg/kg bw/day	
Workers / employees	Human - inhalation	Long term, systemic effects	DNEL	6,2	mg/m3	
Workers / employees	Human - dermal	Long term, systemic effects	DNEL	11	mg/kg bw/day	

Area of application	Exposure route / Environmental compartment	Effect on health	Descripto r	Value	Unit	Note
	Environment - freshwater		PNEC	8,8	mg/l	
	Environment - marine		PNEC	0,88	mg/l	
	Environment - sediment, freshwater		PNEC	34,6	mg/kg dw	
	Environment - soil		PNEC	2,8	mg/kg dw	
	Environment - sewage treatment plant		PNEC	463	mg/l	
	Environment - sediment, marine		PNEC	3,46	mg/kg dw	
	Environment - sporadic (intermittent) release		PNEC	9,1	mg/l	
	Environment - soil		PNEC	2,33	mg/kg	
	Environment - oral (animal feed)		PNEC	20	mg/kg	
Consumer	Human - inhalation	Long term, local effects	DNEL	147	mg/m3	
Consumer	Human - dermal	Short term, systemic effects	DNEL	44,5	mg/kg bw/d	
Consumer	Human - inhalation	Short term, systemic effects	DNEL	426	mg/m3	
Consumer	Human - oral	Short term, systemic effects	DNEL	13,4	mg/kg bw/d	
Consumer	Human - inhalation	Short term, local effects	DNEL	123	mg/m3	
Consumer	Human - dermal	Long term, systemic effects	DNEL	38	mg/kg bw/d	
Consumer	Human - inhalation	Long term, systemic effects	DNEL	49	mg/m3	
Consumer	Human - oral	Long term, systemic effects	DNEL	3,2	mg/kg bw/d	
Workers / employees	Human - dermal	Short term, systemic effects	DNEL	89	mg/kg bw/d	
Workers / employees	Human - inhalation	Short term, systemic effects	DNEL	663	mg/m3	
Workers / employees	Human - inhalation	Short term, local effects	DNEL	246	mg/m3	
Workers / employees	Human - dermal	Long term, systemic effects	DNEL	75	mg/kg bw/d	
Workers / employees	Human - inhalation	Long term, systemic effects	DNEL	98	mg/m3	

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Phosphoric acid						
Area of application	Exposure route / Environmental compartment	Effect on health	Descripto r	Value	Unit	Note
Consumer	Human - inhalation	Long term, local effects	DNEL	0,73	mg/m3	
Consumer	Human - inhalation	Short term, local effects	DNEL	2	mg/m3	
Consumer	Human - inhalation	Long term, systemic effects	DNEL	4,57	mg/m3	
Consumer	Human - inhalation	Long term, local effects	DNEL	0,36	mg/m3	
Consumer	Human - oral	Long term, systemic effects	DNEL	0,1	mg/kg bw/day	
Workers / employees	Human - inhalation	Long term, local effects	DNEL	2,92	mg/m3	
Workers / employees	Human - inhalation	Long term, systemic effects	DNEL	10,7	mg/m3	
Workers / employees	Human - inhalation	Long term, local effects	DNEL	1	mg/m3	

Area of application	Exposure route /	Effect on health	Descripto	Value	Unit	Note
	Environmental		r			
	compartment					
	Environment - freshwater		PNEC	0,012	mg/l	
	Environment - marine		PNEC	0,0012	mg/l	
	Environment - water,		PNEC	0,12	mg/l	
	sporadic (intermittent)					
	Environment - sediment, freshwater		PNEC	0,0251	mg/kg	
	Environment - soil		PNEC	0,00183	mg/kg	
	Environment - sewage treatment plant		PNEC	100	mg/l	
	Environment - sediment, marine		PNEC	0,0044	mg/kg	
Consumer	Human - dermal	Long term, systemic effects	DNEL	8,33	mg/kg	
Consumer	Human - inhalation	Long term, systemic effects	DNEL	1,44	mg/m3	
Consumer	Human - inhalation	Short term, systemic effects	DNEL	1,44	mg/m3	
Consumer	Human - inhalation	Long term, local effects	DNEL	0,42	mg/m3	
Consumer	Human - oral	Long term, systemic effects	DNEL	8,33	mg/kg	
Workers / employees	Human - inhalation	Long term, systemic effects	DNEL	6,76	mg/m3	
Workers / employees	Human - inhalation	Long term, local effects	DNEL	0,7	mg/m3	
Workers / employees	Human - dermal	Long term, systemic effects	DNEL	19,44	mg/kg	

Glycerol

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Area of application	Exposure route / Environmental compartment	Effect on health	Descripto r	Value	Unit	Note
	Environment - freshwater		PNEC	0,885	mg/l	
	Environment - marine		PNEC	0,088	mg/l	
	Environment - sewage treatment plant		PNEC	1000	mg/l	
	Environment - sediment, freshwater		PNEC	3,3	mg/kg dw	
	Environment - sediment, marine		PNEC	0,33	mg/kg dw	
	Environment - soil		PNEC	0,141	mg/kg dw	
	Environment - water, sporadic (intermittent) release		PNEC	8,85	mg/l	
Consumer	Human - inhalation	Long term, local effects	DNEL	33	mg/m3	
Consumer	Human - oral	Long term, systemic effects	DNEL	229	mg/kg bw/day	
Workers / employees Human - inhalation		Long term, local effects	DNEL	56	mg/m3	

WEL-TWA = Workplace Exposure Limit - Long-term exposure limit (8-hour TWA (= time weighted average) reference period) EH40. AGW = "Arbeitsplatzgrenzwert" (workplace limit value, Germany).

(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).

OELV-8h = Occupational Exposure Limit Value (8-hour reference period). (IFV) = Inhalable Fraction and Vapour. (I) = Inhalable Fraction. (R) = Respirable Fraction.

(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). |

OELV-15min = Occupational Exposure Limit Value (15-minute reference period). (IFV) = Inhalable Fraction and Vapour. (I) = Inhalable Fraction. (R) = Respirable Fraction.

(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).

BLV = Biological limit value |

Other information: Carc1A, Carc1B = carcinogenic substance, Cat. 1A or 1B. Muta1A, Muta1B = mutagenic substance, Cat. 1A or 1B. Repr1A, Repr1B = Substances known to be toxic for reproduction, Cat. 1A or 1B. Sk = can be absorbed through skin. Asphx = asphyxiant. Sen = Respiratory sensitizer. BOELV = Binding Occupational Exposure Limit Values. IOELV = Indicative Occupational Exposure Limit Values.

(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).

OELV-8h = Occupational Exposure Limit Value - 8 h (8-hour reference period as a time-weighted average)
 [9] = Inhalable fraction (S.L.424.24), [10] = Respirable fraction (S.L.424.24).

(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). |

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OELV-ST = Occupational Exposure Limit Value - Short-term (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).

[8] = Short-term exposure limit value in relation to a reference period of 1 minute. (S.L.424.24), [9] = Inhalable fraction (S.L.424.24), [10] = Respirable fraction (S.L.424.24) |

BMGV = Biological monitoring guidance value EH40. BGW = "Biologischer Grenzwert" (biological limit value, Germany) | Other information: Skin = Possibility of a significant uptake through the skin.

[11] = When selecting an appropriate exposure monitoring method, account should be taken of potential limitations and interferences that may arise in the presence of other sulphur compounds. (S.L.424.24), [12] = The mist is defined as the thoracic fraction. (S.L.424.24), [13] = Established in accordance with the Annex to Directive 91/322/EEC. (S.L.424.24), [14] = During exposure monitoring for mercury and its divalent inorganic compounds, account should be taken of relevant biological monitoring techniques that complement the OELV. (S.L.424.24).

(EU13) = The substance can cause sensitisation of the skin and of the respiratory tract (Directive 2004/37/CE), (EU14) = The substance can cause sensitisation of the skin (Directive 2004/37/CE).

8.2 Exposure controls

8.2.1 Appropriate engineering controls

Ensure good ventilation. This can be achieved by local suction or general air extraction.

If this is insufficient to maintain the concentration under the WEL or AGW values, suitable breathing protection should be worn. Applies only if maximum permissible exposure values are listed here.

Suitable assessment methods for reviewing the effectiveness of protection measures adopted include metrological and nonmetrological investigative techniques.

These are specified by e.g. EN 14042.

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). If applicable Face protection (EN 166).

Skin protection - Hand protection: Use acid resistant protective gloves (EN ISO 374). If applicable Protective gloves in butyl rubber (EN ISO 374). Protective Neoprene® / polychloroprene gloves (EN ISO 374). Protective nitrile gloves (EN ISO 374). Protective PVC gloves (EN ISO 374). Minimum layer thickness in mm: 0,5 Permeation time (penetration time) in minutes: 480 Protective hand cream recommended. The breaktbrough times determined in accordance with EN 165

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.

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. Filter A P2 (EN 14387), code colour brown, white Observe wearing time limitations for respiratory protection equipment.

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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:	Colourless
Odour:	Characteristic
Melting point/freezing point:	There is no information available on this parameter.
Boiling point or initial boiling point and boiling range:	There is no information available on this parameter.
Flammability:	There is no information available on this parameter.
Lower explosion limit:	There is no information available on this parameter.
Upper explosion limit:	There is no information available on this parameter.
Flash point:	There is no information available on this parameter.
Auto-ignition temperature:	There is no information available on this parameter.
Decomposition temperature:	There is no information available on this parameter.
pH:	1
Kinematic viscosity:	There is no information available on this parameter.
Solubility:	There is no information available on this parameter.
Partition coefficient n-octanol/water (log value):	Does not apply to mixtures.
Vapour pressure:	There is no information available on this parameter.
Density and/or relative density:	1,03 g/cm3
Relative vapour density:	There is no information available on this parameter.
Particle characteristics:	Does not apply to liquids.
9.2 Other information	
Corrosive to metals:	Corrosive to aluminium and steel

SECTION 10: Stability and reactivity

10.1 Reactivity Product corrodes metals.
10.2 Chemical stability
Stable with proper storage and handling.
10.3 Possibility of hazardous reactions
Avoid contact with strong alkalis (exothermic reaction possible).
Avoid contact with certain metals e.g. aluminium (development of hydrogen gas possible).
10.4 Conditions to avoid
None known
10.5 Incompatible materials
Avoid contact with strong alkalis.
Avoid contact with strong oxidizing agents.
Avoid contact with certain metals e.g. aluminium.
Avoid contact with acid sensitive materials.
10.6 Hazardous decomposition products

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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). Reactivation Shampoo

Toxicity / effect	Endpoint	Value	Unit	Organism	Test method	Notes
Acute toxicity, by oral route:	ATE	>2000	mg/kg	<u> </u>		calculated value
Acute toxicity, by dermal route:	ATE	>2000	mg/kg			calculated value
Acute toxicity, by inhalation:	ATE	>20	mg/l/4h			Vapours, calculated value
Acute toxicity, by inhalation:	ATE	>5	mg/l/4h			Dusts or mist, calculated value
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.

Myristyl dimethyl aminoxide)					
Toxicity / effect	Endpoint	Value	Unit	Organism	Test method	Notes
Acute toxicity, by oral route:	LD50	>300-2000	mg/kg	Rat	OECD 401 (Acute	
					Oral Toxicity)	
Skin corrosion/irritation:				Rabbit	OECD 404 (Acute	Irritant
					Dermal	
					Irritation/Corrosion)	
Serious eye				Rabbit	OECD 405 (Acute	Risk of serious
damage/irritation:					Eye	damage to
					Irritation/Corrosion)	eyes.
Respiratory or skin				Guinea pig	OECD 406 (Skin	Not sensitizising
sensitisation:					Sensitisation)	
Germ cell mutagenicity:				Salmonella	OECD 471 (Bacterial	Negative
				typhimurium	Reverse Mutation	-
					Test)	
Germ cell mutagenicity:				Mammalian	Regulation (EC)	Negative
					440/2008 B.17 (IN	
					VITRO MAMMALIAN	
					CELL GENE	
					MUTATION TESTS	
					USING HPRT +	
					XPRT GENES)	
Germ cell mutagenicity:				Mouse	OECD 478 (Genetic	Negative
					Toxicology - Rodent	
					dominant Lethal Test)	
Carcinogenicity:				Rat	OECD 451	Negative
					(Carcinogenicity	
					Studies)	

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Specific target organ toxicity - repeated exposure (STOT- RE), oral:	NOEL	100	mg/kg bw/d	Rat	OECD 422 (Combined Repeated Dose Tox. Study with the Reproduction/Develop m. Tox. Screening Test)	Negative
Specific target organ toxicity - repeated exposure (STOT- RE), dermal:				Mouse	OECD 411 (Subchronic Dermal Toxicity - 90-day Study)	Negative

2-Butoxyethanol						
Toxicity / effect	Endpoint	Value	Unit	Organism	Test method	Notes
Acute toxicity, by oral route:	ATE	1200	mg/kg			
Acute toxicity, by oral route:	LD50	1746	mg/kg	Rat		
Acute toxicity, by dermal route:	LD50	2275	mg/kg	Rabbit	OECD 402 (Acute Dermal Toxicity)	
Skin corrosion/irritation:				Rabbit		Irritant, Product removes fat.
Serious eye damage/irritation:				Rabbit		Intensively irritant
Respiratory or skin sensitisation:				Guinea pig		Not sensitizising
Symptoms:						acidosis, ataxia, breathing difficulties, respiratory distress, drowsiness, unconsciousnes s, annoyance, coughing, headaches, gastrointestinal disturbances, insomnia, mucous membrane irritation, dizziness

Toxicity / effect	Endpoint	Value	Unit	Organism	Test method	Notes
Acute toxicity, by oral route:	LD50	500	mg/kg			
Acute toxicity, by oral route:	LD50	300-2000	mg/kg	Rat	OECD 423 (Acute	
					Oral Toxicity - Acute	
					Toxic Class Method)	
Acute toxicity, by oral route:	LD50	1530	mg/kg	Rat		GESTIS
Skin corrosion/irritation:				Rabbit		Skin Corr. 1B
Serious eye				Rabbit		Eye Dam. 1
damage/irritation:						
Germ cell mutagenicity:				Salmonella	OECD 471 (Bacterial	Negative
				typhimurium	Reverse Mutation	
					Test)	
Germ cell mutagenicity:					OECD 473 (In Vitro	Negative
					Mammalian	
					Chromosome	
					Aberration Test)	

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Germ cell mutagenicity:	Mouse	OECD 476 (In Vitro Mammalian Cell Gene Mutation Test)	Negative
Symptoms:			respiratory distress, vomiting, coughing, collapse, cramps, mucous membrane irritation, shock

Toxicity / effect	Endpoint	Value	Unit	Organism	Test method	Notes
Acute toxicity, by oral route:	LD50	648,7	mg/kg	Rat	OECD 401 (Acute Oral Toxicity)	The toxicity is determined by the corrosivity of the product.
Acute toxicity, by dermal route:	LD50	>1000-<2000	mg/kg	Rabbit	OECD 402 (Acute Dermal Toxicity)	The toxicity is determined by the corrosivity of the product.
Acute toxicity, by inhalation:	LC50	1,1-1,4	mg/l/6h	Rat		•
Skin corrosion/irritation:				Rabbit	(Draize-Test)	Skin Corr. 1B
Serious eye damage/irritation:				Rabbit	OECD 405 (Acute Eye Irritation/Corrosion)	Eye Dam. 1
Respiratory or skin sensitisation:				Guinea pig	OECD 406 (Skin Sensitisation)	Not sensitizisino
Germ cell mutagenicity:				Mouse	OECD 474 (Mammalian Erythrocyte Micronucleus Test)	Negative
Reproductive toxicity:	NOAEL	>=1000	mg/kg bw/d	Rat	OECD 421 (Reproduction/Develop mental Toxicity Screening Test)	
Specific target organ toxicity - repeated exposure (STOT- RE):	NOAEL	1805	mg/kg	Rat	v /	
Symptoms:						asthmatic symptoms, respiratory distress, burning of the membranes of the nose and throat, cornea opacity, coughing, headaches, dizziness, nausea and vomiting.

Glycerol						
Toxicity / effect	Endpoint	Value	Unit	Organism	Test method	Notes
Acute toxicity, by oral route:	LD50	>2000	mg/kg	Rat		
Acute toxicity, by dermal route:	LD50	>10000	mg/kg	Rabbit		

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Skin corrosion/irritation:				Rabbit	IUCLID Chem. Data Sheet (ESIS)	Not irritant
Serious eye				Rabbit	OECD 405 (Acute	Not irritant
damage/irritation:					Eye	
Respiratory or skin				Guinea pig	Irritation/Corrosion)	No (skin
sensitisation:				Curred pig		contact)
Germ cell mutagenicity:				Salmonella	OECD 471 (Bacterial	Negative
				typhimurium	Reverse Mutation Test)	
Reproductive toxicity:	NOAEL	2000	mg/kg/d			Negative
Specific target organ toxicity - repeated exposure (STOT- RE):	NOAEL	3,91	mg/l	Rat		(14d)
Aspiration hazard:						Negative
Symptoms:						abdominal
						pain,
						drowsiness,
						diarrhoea,
						vomiting, headaches,
						mucous
						membrane
						irritation,
						nausea

11.2. Information on other hazards

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

SECTION 12: Ecological information

Possibly more information on environmental effects, see Section 2.1 (classification).							
Reactivation Shampoo							
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Toxicity / effect	Endpoint	Time	Value	Unit	Organism	Test method	Notes
12.1. Toxicity to fish:							n.d.a.
12.1. Toxicity to							n.d.a.
daphnia:							
12.1. Toxicity to algae:							n.d.a.

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12.2. Persistence and				The
degradability:				surfactant(s)
				contained in
				this mixture
				complies(compl
				y) with the
				biodegradability
				criteria as laid
				down in
				Regulation
				(EC)
				No.648/2004
				on detergents.
				Data to support
				this assertion
				are held at the
				disposal of the
				competent
				authorities of
				the Member
				States and will
				be made
				available to
				them, at their
				direct request
				or at the
				request of a
				detergent
				manufacturer.
12.3. Bioaccumulative				n.d.a.
potential:				
12.4. Mobility in soil:				n.d.a.
12.5. Results of PBT				n.d.a.
and vPvB assessment				
12.6. Endocrine				Does not apply
disrupting properties:				to mixtures.
12.7. Other adverse				No information
effects:				available on
				other adverse
				effects on the
				environment.
Other information:				DOC-
				elimination
				degree(complex
				ing organic
				substance)>=
				80%/28d: n.a.
	AOX	%		According to
Other information:				
Other information:				the recipe,
Other information:				the recipe, contains no

Myristyl dimethyl aminoxide							
Toxicity / effect	Endpoint	Time	Value	Unit	Organism	Test method	Notes
12.1. Toxicity to fish:	LC50	96h	>1-10	mg/l	Brachydanio rerio	OECD 203	
-				-		(Fish, Acute	
						Toxicity Test)	

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12.1. Toxicity to daphnia:	EC50	48h	>1-10	mg/l	Daphnia magna	OECD 202 (Daphnia sp. Acute Immobilisation Test)	
12.1. Toxicity to algae:	EC50	72h	>0,1-1	mg/l	Pseudokirchnerie Ila subcapitata	OECD 201 (Alga, Growth Inhibition Test)	
12.2. Persistence and degradability:						OECD 301 D (Ready Biodegradability - Closed Bottle Test)	Readily biodegradable
12.2. Persistence and degradability:		28d	67,5	%	activated sludge	OECD 301 B (Ready Biodegradability - Co2 Evolution Test)	Readily biodegradable
12.3. Bioaccumulative potential:	Log Pow		2,7				calculated value
12.3. Bioaccumulative potential:							Not to be expected
12.5. Results of PBT and vPvB assessment							No PBT substance, No vPvB substance

Toxicity / effect	Endpoint	Time	Value	Unit	Organism	Test method	Notes
12.1. Toxicity to fish:	LC50	96h	1474	mg/l	Oncorhynchus mykiss	OECD 203 (Fish, Acute Toxicity Test)	
12.1. Toxicity to fish:	LC50	96h	1490	mg/l	Lepomis macrochirus		
12.1. Toxicity to fish:	NOEC/NOEL	21d	>100	mg/l	Brachydanio rerio	OECD 204 (Fish, Prolonged Toxicity Test - 14-Day Study)	
12.1. Toxicity to daphnia:	NOEC/NOEL	21d	100	mg/l	Daphnia magna	OECD 211 (Daphnia magna Reproduction Test)	
12.1. Toxicity to daphnia:	EC50	48h	1550	mg/l	Daphnia magna	OECD 202 (Daphnia sp. Acute Immobilisation Test)	
12.2. Persistence and degradability:		28d	95	%		OECD 301 E (Ready Biodegradability - Modified OECD Screening Test)	
12.2. Persistence and degradability:		28d	>99	%		OECD 302 B (Inherent Biodegradability - Zahn- Wellens/EMPA Test)	
12.3. Bioaccumulative potential:	Log Pow		0,83				Negative
12.4. Mobility in soil:	Koc		67				Expert judgement

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12.4. Mobility in soil:	H (Henry)		0,00000	atm*m3/			
			16	mol			
12.5. Results of PBT							No PBT
and vPvB assessment							substance, No
							vPvB
							substance
Toxicity to bacteria:	EC0	16h	>700	mg/l	Pseudomonas	DIN 38412 T.8	
-				-	putida		

Phosphoric acid							
Toxicity / effect	Endpoint	Time	Value	Unit	Organism	Test method	Notes
12.1. Toxicity to fish:	LC50	96h	3,0 - 3,25	mg/l	Lepomis macrochirus		
12.1. Toxicity to daphnia:	EC50	48h	>100	mg/l	Daphnia magna	OECD 202 (Daphnia sp. Acute Immobilisation Test)	
12.1. Toxicity to algae:	EC50	72h	>100	mg/l	Desmodesmus subspicatus	OECD 201 (Alga, Growth Inhibition Test)	
12.2. Persistence and degradability:							Not relevant for inorganic substances.

Toxicity / effect	Endpoint	Time	Value	Unit	Organism	Test method	Notes
12.1. Toxicity to fish:	LC50	96h	73	mg/l	Oncorhynchus mykiss	OECD 203 (Fish, Acute Toxicity Test)	
12.1. Toxicity to daphnia:	EC50	48h	70	mg/l	Daphnia magna	OECD 202 (Daphnia sp. Acute Immobilisation Test)	
12.1. Toxicity to algae:	EC50	96h	7,2-20	mg/l	Selenastrum capricornutum	OECD 201 (Alga, Growth Inhibition Test)	
12.2. Persistence and degradability:		10d	84	%		OECD 301 F (Ready Biodegradability - Manometric Respirometry Test)	
12.2. Persistence and degradability:		28d	90-100	%		OECD 301 A (Ready Biodegradability - DOC Die-Away Test)	Readily biodegradable
12.3. Bioaccumulative potential:	Log Pow		-2,38				Not to be expectedcacula ed
Toxicity to bacteria:	EC50	30min	>1000	mg/l	activated sludge	OECD 209 (Activated Sludge, Respiration Inhibition Test (Carbon and Ammonium Oxidation))	

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Toxicity / effect	Endpoint	Time	Value	Unit	Organism	Test method	Notes
12.1. Toxicity to fish:	LC50	96h	> 5000	mg/l	Carassius		
					auratus		
12.1. Toxicity to daphnia:	EC50	48h	>10000	mg/l	Daphnia magna		
12.1. Toxicity to daphnia:	EC5	72h	3200	mg/l			Entosiphon sulcatum
12.1. Toxicity to algae:	EC50		2900	mg/l	Chlorella vulgaris		
12.2. Persistence and degradability:		14d	63	%		OECD 301 C (Ready Biodegradability - Modified MITI Test (I))	
12.2. Persistence and degradability:	BOD/COD		>60	%			
12.2. Persistence and degradability:	BOD5/COD		> 50	%			
12.2. Persistence and degradability:	DOC		>70	%			Readily biodegradable
12.2. Persistence and degradability:	BOD5		0,87	g/g			
12.2. Persistence and degradability:	COD		1,16	g/g			
12.3. Bioaccumulative potential:	Log Pow		-1,75			OECD 107 (Partition Coefficient (n- octanol/water) - Shake Flask Method)	Bioaccumulatio n is unlikely (LogPow < 1).
12.5. Results of PBT and vPvB assessment							No PBT substance, No vPvB substanc
Toxicity to bacteria:	EC5	16h	> 10000	mg/l	Pseudomonas putida		

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)

20 01 29 detergents 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.

Uncontaminated packaging can be recycled.

SECTION 14: Transport information

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General statements		
Transport by road/by rail (ADR/RID)	4700	
14.1. UN number or ID number: 14.2. UN proper shipping name:	1760	
UN 1760 CORROSIVE LIQUID, N.O.S. (METHANESU		
14.3. Transport hazard class(es):	8	
14.4. Packing group:	Ű.	v
14.5. Environmental hazards:	Not applicable	
Tunnel restriction code:	E	
Classification code:	C9	
LQ:	5 L	
Transport category:	3	
Transport by sea (IMDG-code)		
14.1. UN number or ID number:	1760	
14.2. UN proper shipping name:		^
UN 1760 CORROSIVE LIQUID, N.O.S. (METHANESU	-	
14.3. Transport hazard class(es):	8	•
14.4. Packing group: 14.5. Environmental hazards:	III Not applicable	
IMDG Code segregation group 1 - Acids	Not applicable	
Marine Pollutant:	Not applicable	
EmS:	F-A, S-B	
Transport by air (IATA)	,	
14.1. UN number or ID number:	1760	
14.2. UN proper shipping name:		
UN 1760 Corrosive liquid, n.o.s. (METHANESULFONIC	C ACID, PHOSPHORIC ACID)	
14.3. Transport hazard class(es):	8	T
14.4. Packing group:	III	
14.5. Environmental hazards:	Not applicable	
14.6. Special precautions for user		
Persons employed in transporting dangerous goods mu		
All persons involved in transporting must observe safet	y regulations.	
Precautions must be taken to prevent damage.		
14.7. Maritime transport in bulk according		
Freighted as packaged goods rather than in bulk, there		
Minimum amount regulations have not been taken into	account.	
Danger code and packing code on request.		
Comply with special provisions.		
SECTION	15: Regulatory information	
SECTION		

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.

Directive 2010/75/EU (VOC): **REGULATION (EC) No 648/2004** 5 % or over but less than 15 %

~ 5,37 %

5 % or over but less than 15 cationic surfactants less than 5 % phosphates

perfumes CITRAL

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LIMONENE

National rules/regulation for the compliance with maximum quantities with regard to phosphates and or phosphorous compounds must be observed and complied with.

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

15.2 Chemical safety assessment

A chemical safety assessment is not provided for mixtures.

SECTION 16: Other information

Revised sections:

n.a.

Employee training in handling dangerous goods is required. These details refer to the product as it is delivered. Employee instruction/training in handling hazardous materials is required.

Classification and processes used to derive the classification of the mixture in accordance with the ordinance (EG) 1272/2008 (CLP):

Classification in accordance with regulation (EC) No. 1272/2008 (CLP)	Evaluation method used
Eye Dam. 1, H318	Classification based on the pH value.
Aquatic Chronic 3, H412	Classification according to calculation procedure.
Met. Corr. 1, H290	Classification based on test data.
Skin Corr. 1, H314	Classification based on the pH value.

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).

H290 May be corrosive to metals.

H302 Harmful if swallowed.

H312 Harmful in contact with skin.

H314 Causes severe skin burns and eye damage.

H315 Causes skin irritation.

H318 Causes serious eye damage.

H319 Causes serious eye irritation. H332 Harmful if inhaled.

H335 May cause respiratory irritation. H400 Very toxic to aquatic life.

H411 Toxic to aquatic life with long lasting effects.

Eye Dam. — Serious eye damage Aquatic Chronic — Hazardous to the aquatic environment - chronic Met. Corr. — Substance or mixture corrosive to metals Skin Corr. — Skin corrosion Acute Tox. - Acute toxicity - oral Skin Irrit. — Skin irritation Aquatic Acute — Hazardous to the aquatic environment - acute Acute Tox. — Acute toxicity - inhalation Eye Irrit. - Eye irritation Acute Tox. — Acute toxicity - dermal STOT SE — Specific target organ toxicity - single exposure - respiratory tract irritation

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).

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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:

according, according to acc., acc. to ADR Accord européen relatif au transport international des marchandises Dangereuses par Route (= European Agreement concerning the International Carriage of Dangerous Goods by Road) AOX Adsorbable organic halogen compounds approximately approx. Article number Art., Art. no. ASTM ASTM International (American Society for Testing and Materials) Acute Toxicity Estimate ATE 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 body weight bw CAS **Chemical Abstracts Service** Classification, Labelling and Packaging (REGULATION (EC) No 1272/2008 on classification, labelling and packaging of CLP substances and mixtures) CMR carcinogenic, mutagenic, reproductive toxic DMEL Derived Minimum Effect Level DNEL Derived No Effect Level DOC Dissolved organic carbon dw dry weight for example (abbreviation of Latin 'exempli gratia'), for instance e.g. EbCx, EyCx, EbLx (x = 10, 50) Effect Concentration/Level of x % on reduction of the biomass (algae, plants) European Community EC ECHA European Chemicals Agency ECx, ELx (x = 0, 3, 5, 10, 20, 50, 80, 100) Effect Concentration/Level for x % effect EEC European Economic Community EINECS European Inventory of Existing Commercial Chemical Substances **ELINCS** European List of Notified Chemical Substances **European Norms** ΕN EPA United States Environmental Protection Agency (United States of America) Effect Concentration/Level of x % on inhibition of the growth rate (algae, plants) ErCx, $E\mu Cx$, ErLx (x = 10, 50) etc. et cetera EU **European Union** EVAL Ethylene-vinyl alcohol copolymer Fax. Fax number general gen. 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 IUCLIDInternational Uniform Chemical Information Database IUPAC International Union for Pure Applied Chemistry

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These statements were made by:

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

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