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

1.1 Product identifier

Trade name/designation elma clean 224 (EC 224)

Unique Formula Identifier UFI: FT10-T08E-D00S-QUE7

Product category PC-CLN-OTH Other cleaning, care and maintenance products (excludes biocidal products)

Hazard components
2-(2-aminoethoxy)ethanol, sodium hydroxide, 2-butoxyethanol

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

Sector of uses [SU]
SU22 Professional uses: Public domain (administration, education, entertainment, services, craftsmen)
SU3 Industrial uses

* **Product Categories [PC]**
PC35 Washing and cleaning products

Use of the substance/mixture
Aqueous mildly alkaline cleaning concentrate with corrosion-inhibiting component.

1.3 Details of the supplier of the safety data sheet

Supplier
Elma Schmidbauer GmbH
Gottlieb-Daimler-Str. 17
D-78224 Singen (Htwl.)
Telephone +49 7731 882-0
Telefax +49 7731 882-266
E-mail info@elma-ultrasonic.com
Website www.elma-ultrasonic.com

Department responsible for information:
Chemie/Labor: Email: chemlab@elma-ultrasonic.com

1.4 Emergency telephone number

Vergiftungs-Informations-Zentrale Freiburg (Sprache/Language: DE, EN) +49 761 19240

* SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Classification according to Regulation (EC) No 1272/2008 [CLP]	Classification procedure
Met. Corr. 1, H290	On basis of test data.
Skin Irrit. 2, H315	Calculation method.
Eye Dam. 1, H318	Calculation method.

Hazard statements for physical hazards
H290 May be corrosive to metals.

Hazard statements for health hazards
H315 Causes skin irritation.
H318 Causes serious eye damage.

2.2 Label elements

Labelling according to Regulation (EC) No 1272/2008 [CLP]

Hazard components
2-(2-aminoethoxy)ethanol, sodium hydroxide, 2-butoxyethanol

Hazard pictograms



GHS05

Signal word
Danger

Hazard statements
H290 May be corrosive to metals.
H315 Causes skin irritation.
H318 Causes serious eye damage.

Precautionary statements
P102 Keep out of reach of children.
P234 Keep only in original packaging.
P280 Wear protective gloves/eye protection.
P312 Call a POISON CENTER/doctor if you feel unwell.
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 doctor.
P302 + P352 IF ON SKIN: Wash with plenty of water.
P301 + P330 + P331 IF SWALLOWED: rinse mouth. Do NOT induce vomiting.

Other labelling
Labelling for contents according to regulation (EC) No. 648/2004:
< 5% anionic surfactants
< 5% non-ionic surfactants
< 5% soap
< 5% phosphates

* 2.3 Other hazards

*** Adverse human health effects and symptoms**
This product does not contain a substance that has endocrine disrupting properties with respect to humans as no components meets the criteria.

*** Adverse environmental effects**
Aquatic Acute 3 H402: Harmful to aquatic life.
This product does not contain a substance that has endocrine disrupting properties with respect to non-target organisms as no components meets the criteria.

Results of PBT and vPvB assessment
The product does not contain any PBT-/vPvB-substances according to the recipe.

* SECTION 3: Composition / information on ingredients

3.1 Substances

not applicable

* 3.2 Mixtures

Hazardous ingredients

CAS No	EC No	Index No	Substance name	Concentration	Classification according to Regulation (EC) No 1272/2008 [CLP]	SCL/ M/ ATE
15763-76-5	239-854-6		sodium cumenesulphonate	< 5 weight-%	Eye Irrit. 2; H319	
164524-02-1	629-764-9		potassium cumenesulphonate	< 5 weight-%	Eye Irrit. 2; H319	
111798-26-6			Na-alkyl-PEG-ether ester of phosphoric acid	< 5 weight-%	Skin Irrit. 2; H315 Eye Irrit. 2; H319 Aquatic Chronic 3; H412	
102-71-6	203-049-8		triethanolamine [2,2',2''-nitrilotriethanol]	< 5 weight-%		

CAS No	EC No	Index No	Substance name	Concentration	Classification according to Regulation (EC) No 1272/2008 [CLP]	SCL/ M/ ATE
929-06-6	213-195-4		2-(2-aminoethoxy)ethanol	< 2 weight-%	Skin Corr. 1B; H314 Eye Dam. 1; H318	
1310-73-2	215-185-5	011-002-00-6	sodium hydroxide	< 2 weight-%	Met. Corr. 1; H290 Skin Corr. 1A; H314 Eye Dam. 1; H318	Skin Corr. 1A;H314: C>=5% Skin Corr. 1B;H314: 2%<=C<5% Skin Irrit. 2;H315: 0.5%<=C<2% Eye Dam. 1;H318: C>=2% Eye Irrit. 2;H319: 0.5%<=C<2%
111-76-2	203-905-0	603-014-00-0	2-butoxyethanol	< 2 weight-%	Acute Tox. 4 ; H302 Acute Tox. 3 ; H311 Acute Tox. 3 ; H331 Skin Irrit. 2; H315 Eye Dam. 1; H318 STOT RE 2; H373	ATE(oral): 1200 mg/kg ATE(inhalation vapour): 3 mg/L

REACH No.	Substance name
01-2119489411-37	sodium cumenesulphonate
01-2119489427-24	potassium cumenesulphonate
Not relevant (polymer).	Na-alkyl-PEG-ether ester of phosphoric acid
01-2119486482-31	triethanolamine [2,2',2''-nitrilotriethanol]
01-2119520701-52	2-(2-aminoethoxy)ethanol
01-2119457892-27	sodium hydroxide
01-2119475108-36	2-butoxyethanol

Additional information
Aqueous alkaline mixture from anionic und nonionic surfactants, sodium hydroxide, complexing agents, phosphates, cosolvent and amines.

SECTION 4: First aid measures

4.1 Description of first aid measures

General information
Remove contaminated, saturated clothing immediately.

Following inhalation
Provide fresh air.
In case of inhaling spray mist, consult a physician.
In the event of symptoms refer for medical treatment.

Following skin contact
In case of contact with skin wash off with warm water.
In case of skin irritation, consult a physician.

After eye contact
After contact with the eyes, rinse with water with the eyelids open for a sufficient length of time, then consult an ophthalmologist immediately.

Following ingestion
Do NOT induce vomiting.
Seek medical advice immediately.
Rinse mouth immediately and drink plenty of water.
In the event of persistent symptoms receive medical teatment.

4.2 Most important symptoms and effects, both acute and delayed

Symptoms
No further informations available.

4.3 Indication of any immediate medical attention and special treatment needed

Notes for the doctor
No further informations available.

SECTION 5: Firefighting measures

5.1 Extinguishing media

Suitable extinguishing media
Water
Extinguishing powder
Carbon dioxide (CO_2)

5.2 Special hazards arising from the substance or mixture

Hazardous combustion products
In case of fire formation of dangerous gases possible.
In the event of fire the following can be released:
Nitrogen oxides (NO_x)
Carbon monoxide
Phosphorus oxides
Sulphur dioxide (SO_2)

5.3 Advice for firefighters

Special protective equipment for firefighters
Do not inhale explosion and combustion gases.

Additional information
Co-ordinate fire-fighting measures to the fire surroundings.
The product itself does not burn.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

For non-emergency personnel
Use personal protection equipment.
Special danger of slipping by leaking/spilling product.

For emergency responders
Ensure adequate ventilation.
Personal protection equipment
Use personal protection.
Special danger of slipping by leaking/spilling product.

6.2 Environmental precautions

Do not allow to enter into surface water or drains.

6.3 Methods and material for containment and cleaning up

For containment
Suitable material for taking up:
Universal binder
Flush away residues with water.
Take up mechanically and send for disposal.

6.4 Reference to other sections

Safe handling: see section 7
Personal protection equipment: see section 8

SECTION 7: Handling and storage

7.1 Precautions for safe handling

Protective measures
Handle and open container with care.
Do not inhale aerosols
Avoid contact with eyes and skin.
The product is not combustible.

Advices on general occupational hygiene
Make available sufficient washing facilities
Keep away from food and drink.

7.2 Conditions for safe storage, including any incompatibilities

Requirements for storage rooms and vessels
Suitable floor material:
Alkali-resistant
Keep/Store only in original container.
Keep container tightly closed.

Materials to avoid
Do not store together with:
Acid

Further information on storage conditions
Keep locked up and out of reach of children.
Protect from heat and direct solar radiation.
Storage temperature between 0°C to 30°C (=32°F to 86°F).
Do not keep at temperatures below -5°C.
Storage time: 4 years.

7.3 Specific end use(s)

Recommendation
no further

* SECTION 8: Exposure controls/personal protection

* 8.1 Control parameters

* **Occupational exposure limit values**

CAS No	EC No	Substance name	occupational exposure limit value
111-76-2	203-905-0	2-Butoxyethanol	20 [ml/m³(ppm)] 98 [mg/m³] Short-term(ml/m³) 50 Short-term(mg/m³) 246 skin resorptive 2000/39/EC
111-76-2	203-905-0	2-Butoxyethanol	20 [ml/m³(ppm)] 98 [mg/m³] Short-term(ml/m³) 50 (1) Short-term(mg/m³) 246 (1) (1) 15 minutes reference period (IE)
1310-73-2	215-185-5	Sodium hydroxide	Short-term(mg/m³) 2 (1) (1) 15 minutes reference period (IE)
102-71-6	203-049-8	Triethanolamine	5 [mg/m³] (IE)

CAS No	EC No	Substance name	occupational exposure limit value
111-76-2	203-905-0	2-Butoxyethanol	25 [ml/m³(ppm)] 123 [mg/m³] Short-term(ml/m³) 50 Short-term(mg/m³) 246 (UK)
1310-73-2	215-185-5	Sodium hydroxide	Short-term(mg/m³) 2 (UK)

* **DNEL worker**

CAS No	Substance name	DNEL value	DNEL type	Remark
102-71-6	triethanolamine [2,2',2''-nitrilotriethanol]	7.5 mg/kg bw/day	long-term dermal (systemic)	Assessment factor 50
102-71-6	triethanolamine [2,2',2''-nitrilotriethanol]	1 mg/m³	long-term inhalative (local)	
111-76-2	2-butoxyethanol	125 mg/kg bw/day	long-term dermal (systemic)	
111-76-2	2-butoxyethanol	98 mg/m³	long-term inhalative (systemic)	Assessment factor 9
1310-73-2	sodium hydroxide	1 mg/m³	long-term inhalative (local)	Assessment factor 1
15763-76-5	sodium cumenesulphonate	191 mg/kg bw/day	long-term dermal (systemic)	Assessment factor 100
15763-76-5	sodium cumenesulphonate	37.4 mg/m³	long-term inhalative (systemic)	Assessment factor 25
164524-02-1	potassium cumenesulphonate	191 mg/kg bw/day	long-term dermal (systemic)	Assessment factor 100
164524-02-1	potassium cumenesulphonate	37.4 mg/m³	long-term inhalative (systemic)	Assessment factor 25
929-06-6	2-(2-aminoethoxy)ethanol	4.8 mg/kg bw/day	long-term dermal (systemic)	Assessment factor 100
929-06-6	2-(2-aminoethoxy)ethanol	0.15 mg/m³	long-term inhalative (local)	Assessment factor 75
929-06-6	2-(2-aminoethoxy)ethanol	16.8 mg/m³	long-term inhalative (systemic)	Assessment factor 25

* **PNEC**

CAS No	Substance name	PNEC Value	PNEC type	Remark
102-71-6	triethanolamine [2,2',2''-nitrilotriethanol]	0.32 mg/L	aquatic, freshwater	Assessment factor 50
102-71-6	triethanolamine [2,2',2''-nitrilotriethanol]	10 mg/L	sewage treatment plant (STP)	Assessment factor 100
111-76-2	2-butoxyethanol	8.8 mg/L	aquatic, freshwater	Assessment factor 10
111-76-2	2-butoxyethanol	463 mg/L	sewage treatment plant (STP)	Assessment factor 1
15763-76-5	sodium cumenesulphonate	0.1 mg/L	aquatic, freshwater	Assessment factor 1000
15763-76-5	sodium cumenesulphonate	100 mg/L	sewage treatment plant (STP)	Assessment factor 10
164524-02-1	potassium cumenesulphonate	0.1 mg/L	sediment, freshwater	Assessment factor 1000
164524-02-1	potassium cumenesulphonate	100 µg/kg	sewage treatment plant (STP)	Assessment factor 10

8.2 Exposure controls

Appropriate engineering controls

Technical measures to prevent exposure
Technical exhaustion if there is a long-term exposition

Personal protection equipment

Eye/face protection
tightly fitting goggles

Hand protection
Gloves (alkali- and solvent-resistant)
Glove material specification [make/type, thickness]: FKM, 0.4mm.
Glove material specification [make/type, thickness]: Butyl, 0.5mm.

Environmental exposure controls

Technical measures to prevent exposure
Neutralization is normally necessary before a waste water is discharged into sewage treatment plants.
Avoid penetration into the subsoil/soil.
Do not discharge into surface waters.

Additional information
Occupational exposure limits for triethanolamine.
Occupational exposure limits for sodium hydroxide.

* SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Physical state
liquid

Colour
light yellow

Odour
mild

Safety relevant basis data

	Value	Method	Source, Remark
Odour threshold:			2-butoxyethanol: 0.48 - 288 mg/m3 (0.1 - 58.6 ppm).
Melting point/freezing point	solidifying range ≤ -5 °C		
Boiling point or initial boiling point and boiling range	≥ 100 °C		
flammability	solid		not applicable
flammability	gaseous		not applicable
Lower and upper explosion limit	Upper explosion limit 10.6 Vol-%		Value of 2-butoxyethanol.
Lower and upper explosion limit	Lower explosion limit 1.1 Vol-%		Value of 2-butoxyethanol.
Flash point			No flash point up to 100 °C.
Auto-ignition temperature	230 °C		Value of 2-butoxyethanol.
Decomposition temperature	≥ 100 °C		
pH	in delivery state 12.7 (20°C)		
Viscosity	dynamic 2.7 mPa*s (20°C)		
Solubility(ies)	Water solubility		miscible
Partition coefficient n-octanol/water (log value)	0.83		Value of 2-butoxyethanol.
Vapour pressure	approx. 24 hPa (20°C)		
Density and/or relative density	1.07 g/cm³ (20°C)		
Relative vapour density	4.1		Value of 2-butoxyethanol.

	Value	Method	Source, Remark
particle characteristics			not applicable (liquid).

*** 9.2 Other information**

Information with regard to physical hazard classes

Explosives

Assessment/classification
The mixture does not contain any explosive substances (CLP I 2.1.4.3 a).
CLP I 2.1.4.3 a: The classification procedure needs not to be applied because there are no chemical groups present in the molecule which are associated with explosive properties.

flammable gases

Assessment/classification
not applicable (liquid).

Aerosols

Assessment/classification
not relevant - no aerosol.
The classification criteria for this hazard class are not met by definition.

Oxidising gas

Assessment/classification
not applicable (liquid).

Gases under pressure

Assessment/classification
not applicable (liquid - no dissolved gas).

flammable liquids

Assessment/classification
not flammable, not combustible (No flash point below 100°C).

flammable solids

Assessment/classification
not applicable (liquid).

Self-reactive substances and mixtures

Assessment/classification
The mixture does not contain any self-reactive substances (CLP I 2.8.4.2 a).
CLP I 2.8.4.2 a: There are no chemical groups present in the molecule associated with explosive or self reactive properties.

Pyrophoric liquids

Assessment/classification
The mixture does not contain any pyrophoric substances - not spontaneously flammable (CLP I 2.9.4.1).
CLP I 2.9.4.1: The classification procedure for pyrophoric liquids need not be applied when experience in manufacture or handling shows that the substance or mixture does not ignite spontaneously on coming into contact with air at normal temperatures (i.e. the substance is known to be stable at room temperature for prolonged periods of time (days)).

Pyrophoric solids

Assessment/classification
not applicable (liquid).

self-heating substances and mixtures

Assessment/classification
The mixture does not contain any self-heating substances.

Substances or mixtures which, in contact with water, emit flammable gases

Assessment/classification
not relevant - in contact with water releases no flammable gases (CLP I 2.12.4.1).
CLP I 2.12.4.1: The classification procedure for this class need not be applied if: (a) the chemical structure of the substance or mixture does not contain metals or metalloids; or (b) experience in production or handling shows that the substance or mixture does not react with water, e.g. the substance is manufactured with water or washed with water; or (c) the substance or mixture is known to be soluble in water to form a stable mixture.

Oxidising liquids

Assessment/classification
The mixture does not contain any oxidising substances.

Oxidising solids

Assessment/classification
not applicable (liquid).

Organic peroxides

Assessment/classification
The mixture does not contain any organic peroxides.

Corrosive to metals

Safety characteristics

	Value	Method, Result	Source, Remark
Corrosion rate (mm aluminium/year)	59.6 mm/a	UN Test, Part III of sub-section 37.4	
Corrosion rate (mm steel/year)	0.02 mm/a	UN Test, Part III of sub-section 37.4	

Assessment/classification
The mixture is classified as corrosive to metals (Met. Corr. 1 H290).

Desensitised explosives

Assessment/classification
The mixture does not contain any desensitised explosive substances.

* **Other safety characteristics**

	Value	Method	Source, Remark
Evaporation rate			Water: 0.36 (ASTM D3539).
Evaporation rate			2-butoxyethanol: 0.07 (ASTM D3539) / 163 (DIN 53170).
Solvent content	< 2 %		
Explosive properties			none
Oxidising properties			none

* **Other information**
No further relevant informations available.

SECTION 10: Stability and reactivity

10.1 Reactivity

Exothermic reaction with:
Acid
No further hazardous reactions known if used as directed.

10.2 Chemical stability

Stable at ambient temperature.

10.3 Possibility of hazardous reactions

Reactions with oxidising agents.
Reactions with strong acids.
Reaction with nitric acid

10.4 Conditions to avoid

Heat and direct solar radiation.

10.5 Incompatible materials

Reactions with strong acids.
Oxidising agent
Nitric acid
Acid chlorides, inorganic
Corrodes aluminium.

10.6 Hazardous decomposition products

No decomposition if used as directed.

* SECTION 11: Toxicological information

11.1 Information on hazard classes as defined in Regulation (EC) No 1272/2008

Acute toxicity

Animal data

	Effective dose	Method,Evaluation	Source, Remark
Acute oral toxicity	> 5000 mg/kg	ATE: Acute Toxicity Estimate	
	CAS No929-06-6 2-(2-aminoethoxy)ethanol LD50: 2558 mg/kg Species Rat		
	CAS No111-76-2 2-butoxyethanol 1200 mg/kg	ATE: Acute Toxicity Estimate	
	CAS No111-76-2 2-butoxyethanol LD50: 320 mg/kg Species Rabbit		
Acute dermal toxicity	> 5000 mg/kg	ATE: Acute Toxicity Estimate	
	CAS No929-06-6 2-(2-aminoethoxy)ethanol LD50: > 3000 mg/kg Species Rabbit		
	CAS No111-76-2 2-butoxyethanol LD50: 220 mg/kg Species Rabbit		
Acute inhalation toxicity	Acute inhalation toxicity (vapour) > 50 mg/L	ATE: Acute Toxicity Estimate	
	CAS No111-76-2 2-butoxyethanol Acute inhalation toxicity (vapour) LC50: 3 mg/L	ATE: Acute Toxicity Estimate	

	Effective dose	Method,Evaluation	Source, Remark
	CAS No111-76-2 2-butoxyethanol Acute inhalation toxicity (vapour) LC50: 2.2 mg/L Species Rat Exposure time 4 h		

Assessment/classification
Based on available data, the classification criteria are not met.

Skin corrosion/irritation

Animal data

Result / Evaluation	Method	Source, Remark
Irritant.	Calculation method.	

Serious eye damage/irritation

Animal data

Result / Evaluation	Method	Source, Remark
Risk of serious damage to eyes.	Calculation method.	

Sensitisation to the respiratory tract

Assessment/classification
Based on available data, the classification criteria are not met.

Skin sensitisation

Animal data

Result / Evaluation	Dose / Concentration	Method	Source, Remark
The mixture is not classified as skin sensitiser.		Calculation method.	

Germ cell mutagenicity

Assessment/classification
Based on available data, the classification criteria are not met.

Carcinogenicity

Assessment/classification
Based on available data, the classification criteria are not met.

Reproductive toxicity

Assessment/classification
Based on available data, the classification criteria are not met.

Overall Assessment on CMR properties

The mixture is not classified as mutagen / not classified as carcinogen / not classified as reproductive toxicant.

STOT-single exposure

STOT SE 1 and 2

Assessment/classification
The mixture is not classified as specific target organ toxicant (single exposure).
Based on available data, the classification criteria are not met.

STOT SE 3

Irritation to respiratory tract

Assessment/classification
Based on available data, the classification criteria are not met.

Narcotic effects

Assessment/classification
Based on available data, the classification criteria are not met.

STOT-repeated exposure

Other information
Contains 2-butoxyethanol.

Assessment/classification
The mixture is not classified as specific target organ toxicant (repeated exposure).
Based on available data, the classification criteria are not met.

Aspiration hazard

Assessment/classification
The mixture is not classified as aspiration hazardous.
Based on available data, the classification criteria are not met.

11.2 Information on other hazards

Information on other hazards

	Effective dose	Method,Evaluation	Source, Remark
Endocrine disrupting properties			This product does not contain a substance that has endocrine disrupting properties with respect to humans as no components meets the criteria.

* **Other information**

Has a degreasing effect on the skin.

SECTION 12: Ecological information

12.1 Toxicity

Aquatic toxicity

	Effective dose	Method,Evaluation	Source, Remark
Acute (short-term) fish toxicity	LC50: 66.7 mg/L	calculated.	
	CAS No111798-26-6 Na-alkyl-PEG-ether ester of phosphoric acid LC50: 64 mg/L Test duration 96 h		
Chronic (long-term) fish toxicity	not determined		
Acute (short-term) toxicity to crustacea	EC50 65.9 mg/L	calculated.	
	CAS No111798-26-6 Na-alkyl-PEG-ether ester of phosphoric acid EC50 227 mg/L Test duration 48 h		
Chronic (long-term) toxicity to aquatic invertebrate	not determined		
Acute (short-term) toxicity to algae and cyanobacteria	EC50 20.5 mg/L	calculated.	

	Effective dose	Method,Evaluation	Source, Remark
Chronic (long-term) toxicity to aquatic algae and cyanobacteria	not determined		
Toxicity to other aquatic plants/organisms	not determined		
Toxicity to microorganisms	not determined		

Assessment/classification
Harmful to aquatic life.

12.2 Persistence and degradability

	Value	Method	Source, Remark
Biodegradation	Degradation rate > 80 %	calculated.	DOC reduction Readily biodegradable (according to OECD criteria).
Biodegradation	Degradation rate 100 %	Neutralization, pH-measurement	Alkaline properties can be eliminated up to 100% by neutralization.
Biodegradation	Degradation rate 96 % Test duration 19 d	OECD 301E/ EEC 92/69/V, C.4-B	CAS No102-71-6 triethanolamine [2,2',2''-nitrilotriethanol]
Biodegradation			CAS No1310-73-2 sodium hydroxide Inorganic product which is not eliminable from water through biological cleaning processes.
Biodegradation	Degradation rate 62 % Test duration 28 d	OECD 301A/ ISO 7827/ EEC 92/69/V, C.4-A	CAS No111798-26-6 Na-alkyl-PEG-ether ester of phosphoric acid
Biodegradation	Degradation rate > 60 % Test duration 28 d	OECD 301B/ ISO 9439/ EEC 92/69/V, C.4-C	CAS No111798-26-6 Na-alkyl-PEG-ether ester of phosphoric acid
Biodegradation	Degradation rate 62 % Test duration 28 d	OECD 301E/ EEC 92/69/V, C.4-B	CAS No111798-26-6 Na-alkyl-PEG-ether ester of phosphoric acid
Biodegradation	Degradation rate 65.1 % Test duration 28 d	OECD 302B/ ISO 9888/ EEC 92/69/V, C.9	CAS No111798-26-6 Na-alkyl-PEG-ether ester of phosphoric acid
Biodegradation	Degradation rate 99 % Test duration 28 d	OECD 301B/ ISO 9439/ EEC 92/69/V, C.4-C	CAS No15763-76-5 sodium cumenesulphonate
Biodegradation	Degradation rate > 60 % Test duration 28 d	OECD 301B/ ISO 9439/ EEC 92/69/V, C.4-C	CAS No164524-02-1 potassium cumenesulphonate
Biodegradation	Degradation rate 84 % Test duration 28 d	OECD 302B/ ISO 9888/ EEC 92/69/V, C.9	CAS No929-06-6 2-(2-aminoethoxy)ethanol
Biodegradation	Degradation rate 90.4 % Test duration 28 d	OECD 301B/ ISO 9439/ EEC 92/69/V, C.4-C	CAS No111-76-2 2-butoxyethanol
Biodegradation	Degradation rate 95 % Test duration 28 d	OECD 301E/ EEC 92/69/V, C.4-B	CAS No111-76-2 2-butoxyethanol

12.3 Bioaccumulative potential

Assessment/classification
2-butoxyethanol: Significant accumulation in organisms is not expected (log Pow: 0.83).
sodium cumenesulphonate: Bioaccumulation is improbable.
potassium cumenesulphonate: Bioaccumulation is improbable.
sodium hydroxide: No bioaccumulation.
2-(2-aminoethoxy)ethanol: Accumulation in organisms is not expected (log Pow: -1.89).
Na-alkyl-PEG-ether ester of phosphoric acid: not available.
triethanolamine: Accumulation in organisms is not expected (BCF: <0,4).

12.4 Mobility in soil

Assessment/classification
sodium cumenesulphonate: Adsorption on soil is not expected.
potassium cumenesulphonate: Adsorption on soil is not expected.
sodium hydroxide: Mobile in an aqueous ambience.
2-(2-aminoethoxy)ethanol: Adsorption on soil is not expected.
Na-alkyl-PEG-ether ester of phosphoric acid: not available.
2-butoxyethanol: Low adsorption on soil (Koc: 67).
triethanolamine: Adsorption on soil is not expected (Koc: 10).

12.5 Results of PBT and vPvB assessment

The product does not contain any PBT-/vPvB-substances according to the recipe.

12.6 Endocrine disrupting properties

	Effective dose	Method,Evaluation	Source, Remark
Endocrine disrupting properties			This product does not contain a substance that has endocrine disrupting properties with respect to non-target organisms as no components meets the criteria.

12.7 Other adverse effects

	Value	Method	Source, Remark
Ozone depletion potential (ODP):			Based on available data, the classification criteria are not met.

Additional ecotoxicological information

	Value	Method	Source, Remark
Chemical oyxgen demand (COD)	318 mgO2/g	calculated.	
AOX			The product does not contain any organically bound halogens according to the recipe.

Additional information
The surfactants in our product meet the criteria for biodegradation as laid down in Annex III of the Regulation (EC) No 648/2004 on detergents.
Acute aquatic environmental hazards: Aquatic Acute 3 H402: Harmful to aquatic life.
The mixture is not classified as chronic hazardous to the aquatic environment.
Do not allow uncontrolled discharge of product into the environment.
No further relevant informations available.

* SECTION 13: Disposal considerations

* 13.1 Waste treatment methods

Waste codes/waste designations according to EWC/AVV

Waste code product	Waste name
200129 *	detergents containing hazardous substances

Waste code packaging	Waste name
150110 *	packaging containing residues of or contaminated by hazardous substances

* **Appropriate disposal / Product**
Do not dispose with household waste. Do not discharge into the drains.
Dispose of waste according to applicable legislation.

Appropriate disposal / Package
Non-contaminated packages may be recycled.
Handle contaminated packages in the same way as the substance itself.

* **Other disposal recommendations**
Application solution / cleaning solution :
Suitable for neutralization are acetic acid (60%, liquid) or citric acid (solid powder, crystallized) if a stainless steel bath is used.
Product is allowed to discharge into sewage treatment plants, but in accordance with official regulations.

SECTION 14: Transport information

	Land transport (ADR/RID)	Sea transport (IMDG)	Air transport (ICAO-TI / IATA-DGR)
14.1 UN number or ID number	UN 1824	UN 1824	UN 1824
14.2 UN proper shipping name	SODIUM HYDROXIDE SOLUTION	SODIUM HYDROXIDE SOLUTION	Sodium hydroxide solution
14.3 Transport hazard class(es)	8	8	8
14.4 Packing group	III	III	III
14.5 Environmental hazards	No	No	No

14.6 Special precautions for user

none

14.7 Maritime transport in bulk according to IMO instruments

not relevant

Land transport (ADR/RID)

UN number or ID number	UN 1824
UN proper shipping name	SODIUM HYDROXIDE SOLUTION
Transport hazard class(es)	8
Hazard label(s)	8
Classification code	C5
Packing group	III
Environmental hazards	No
Limited quantity (LQ)	5 L
Special provisions	-
Tunnel restriction code	E

Sea transport (IMDG)

UN number or ID number	UN 1824
UN proper shipping name	SODIUM HYDROXIDE SOLUTION
Transport hazard class(es)	8
Packing group	III
Environmental hazards	No
Limited quantity (LQ)	5 L
Marine pollutant	No
EmS	F-A, S-B

Air transport (ICAO-TI / IATA-DGR)

UN number or ID number	UN 1824
UN proper shipping name	Sodium hydroxide solution
Transport hazard class(es)	8
Packing group	III
Environmental hazards	No

* SECTION 15: Regulatory information

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

*** EU legislation**

Authorisations
not relevant

*** Restrictions on use**
Regulation (EC) No 1907/2006 (REACH), Annex XVII No 3 - not relevant if used as directed.
Regulation (EC) No 1907/2006 (REACH), Annex XVII No 75 - not relevant if used as directed.

Restrictions of occupation
Observe restrictions to employment for juvenils according to the 'juvenile work protection guideline' (94/33/EC).

*** Other regulations (EU)**

*** To follow:**
Regulation (EC) No. 648/2004 (Detergents regulation)
Directive 2012/18/EU, Annex I: not mentioned.

Directive 2010/75/EU on industrial emissions [Industrial Emissions Directive] VOC
VOC content, delivery state < 2 %

15.2 Chemical Safety Assessment

National regulations

For this mixture a chemical safety assessment were not carried out.

* SECTION 16: Other information

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Abbreviations and acronyms
For abbreviations and acronyms, see: ECHA Guidance on information requirements and chemical safety assessment, chapter R.20 (Table of terms and abbreviations).
ADR: European Agreement concerning the International Carriage of Dangerous Goods by Road
ASTM: American Society for Testing and Materials
ATE: Acute Toxicity Estimate
AVV: Waste Shipment Ordinance (DE)
DGR: Dangerous Goods Regulations (IATA)
DNEL: derived no-effect level
DOC: Dissolved Organic Carbon
EmS: emergency procedures
IATA: International Air Transport Association
ICAO: International Civil Aviation Organization
IMDG: International Maritime Dangerous Goods
IMO: International Maritime Organization
JArbSchG: Youth Labor Protection Act (DE)
OECD: Organisation for Economic Cooperation and Development
PBT: persistent and bioaccumulative and toxic
RID: Dangerous goods regulations for transport by rail
SCL: Specific concentration limit
TI: Technical Instruction
TRGS: Technical Rules for Hazardous Substances
VOC: Volatile organic compounds
vPvB: very persistent, very bioaccumulative
Met. Corr. 1: Corrosive to metals, Category 1
Acute Tox. 4, H302: Acute Toxicity (oral), Category 4
Acute Tox. 3, H311: Acute toxicity (dermal), Category 3
Acute Tox. 3, H331: Acute Toxicity (inhalation), Category 3
Skin Corr. 1A: Skin corrosion, Sub-category 1A
Skin Irrit. 2: Skin irritation, Category 2
Eye Dam. 1: Serious eye damage, Category 1
Eye Irrit. 2: Eye irritation, Category 2
STOT RE 2: Specific target organ toxicity (repeated exposure), Category 2
Aquatic Chronic 3: Long-term (chronic) aquatic hazard, Category 3

Key literature references and sources for data
Own measurements.
European Chemicals Agency, http://echa.europa.eu/.
Informations from our suppliers.

Additional information
National and local regulations concerning chemicals shall be observed.
These data are given according to our actual knowledge about this product.This data sheet does not correspond to an assurance by virtue of a contract for properties of the product.

Relevant H- and EUH-phrases (Number and full text)

H290	May be corrosive to metals.
H302	Harmful if swallowed.
H311	Toxic 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.
H331	Toxic if inhaled.
H373	May cause damage to organs through prolonged or repeated exposure.
H412	Harmful to aquatic life with long lasting effects.

Indication of changes
* Data changed compared with the previous version