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

* 1.1 Product identifier

Trade name/designation EC 95

Unique Formula Identifier UFI: 3360-30S8-Q00H-TWJF

Hazard components
Sulfonic acids, C14-17-sec-alkane, sodium salts, Amides, C8-18 (even numbered) and C18-unsatd., N,N-bis(hydroxyethyl), 2-aminoethanol, Alcohols, secondary C11-15, ethoxylated, C10- fatty alcohol, ethoxylated

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

Use of the substance/mixture
Ultrasonic cleaning concentrate for jewellery and watch components to remove polishing pastes and general contamination for workshop and industry.

Uses advised against
Do not use for injecting or spraying.

1.3 Details of the supplier of the safety data sheet

IMPORTED BY:
PRECISION TOOLS & TECHNOLOGY
57 Caswell Street. East Brisbane. QLD. 4169.
EMERGENCY PHONE: 1300 852 999

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 Corr. 1B, H314	Calculation method.
Eye Dam. 1, H318	Calculation method.
STOT SE 3, H335	Calculation method.
Aquatic Chronic 3, H412	Calculation method.

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

Hazard statements for health hazards
H314 Causes severe skin burns and eye damage.
H318 Causes serious eye damage.
H335 May cause respiratory irritation.

Hazard statements for environmental hazards
H412 Harmful to aquatic life with long lasting effects.

* **2.2 Label elements**

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

Hazard components
Sulfonic acids, C14-17-sec-alkane, sodium salts, Amides, C8-18 (even numbered) and C18-unsatd., N,N-bis(hydroxyethyl), 2-aminoethanol, Alcohols, secondary C11-15, ethoxylated, C10- fatty alcohol, ethoxylated

Hazard pictograms

GHS05 GHS07

Signal word
Danger

Hazard statements
H290 May be corrosive to metals.
H314 Causes severe skin burns and eye damage.
H335 May cause respiratory irritation.
H412 Harmful to aquatic life with long lasting effects.

Precautionary statements
P261 Avoid breathing mist/vapours/spray.
P280 Wear protective gloves/protective clothing and eye/face protection.
P301 + P330 + P331 IF SWALLOWED: rinse mouth. Do NOT induce vomiting.
P301 + P310 IF SWALLOWED: Immediately call a POISON CENTER/doctor.
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.
P332 + P313 If skin irritation occurs: Get medical advice/attention.
P312 Call a POISON CENTER/doctor if you feel unwell.

* **Other labelling**
Labelling for contents according to regulation (EC) No. 648/2004:
5 - 15% anionic surfactants
15 - 30% non-ionic surfactants
< 5% soap

* **2.3 Other hazards**

* **Adverse human health effects and symptoms**
Acute Tox. 5 (oral) H303: May be harmful if swallowed.
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 2 H401: Toxic 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.	Substance name	Concentration	Classification according to Regulation (EC) No 1272/2008 [CLP]	SCL/ M/ ATE
34590-94-8	252-104-2	(2-methoxymethylethoxy)-propanol	10 - 20 weight-%		
97489-15-1	307-055-2	Sulfonic acids, C14-17-sec-alkane, sodium salts	5 - 15 weight-%	Acute Tox. 4; H302 Skin Irrit. 2; H315 Eye Dam. 1; H318 Aquatic Chronic 3; H412	Skin Irrit. 2;H315: C>10% Eye Dam. 1;H318: C>15% Eye Irrit. 2;H319: 10%<C=<15%
68155-07-7	931-329-6	Amides, C8-18 (even numbered) and C18-unsatd., N,N-bis(hydroxyethyl)	5 - 15 weight-%	Skin Irrit. 2; H315 Eye Dam. 1; H318 Aquatic Chronic 2; H411	
141-43-5	205-483-3	2-aminoethanol	5 - 15 weight-%	Met. Corr. 1 ; H290 Acute Tox. 4; H302 Acute Tox. 4 ; H312 Acute Tox. 4 ; H332 Skin Corr. 1B; H314 Eye Dam. 1; H318 STOT SE 3; H335 Aquatic Chronic 3; H412	STOT SE 3;H335: C>=5%
68131-40-8		Alcohols, secondary C11-15, ethoxylated	< 5 weight-%	Acute Tox. 4; H302 Acute Tox. 4; H332 Skin Irrit. 2; H315 Eye Dam. 1; H318	
102-71-6	203-049-8	triethanolamine [2,2',2''-nitrilotriethanol]	< 5 weight-%		
160875-66-1		C10- fatty alcohol, ethoxylated	< 5 weight-%	Acute Tox. 4; H302 Eye Dam. 1; H318	ATE(oral): 500 mg/kg

REACH No.	Substance name
01-2119450011-60	(2-methoxymethylethoxy)-propanol
01-2119489924-20	Sulfonic acids, C14-17-sec-alkane, sodium salts
01-2119490100-53	Amides, C8-18 (even numbered) and C18-unsatd., N,N-bis(hydroxyethyl)
01-2119486455-28	2-aminoethanol
Not relevant (polymer	Alcohols, secondary C11-15, ethoxylated
01-2119486482-31	triethanolamine [2,2',2''-nitrilotriethanol]
Not relevant (polymer	C10- fatty alcohol, ethoxylated

Additional information
Aqueous alkaline mixture from anionic and non-ionic surfactants, complexing agent, cosolvent, amines and dye.

* SECTION 4: First aid measures

* 4.1 Description of first aid measures

General information
Remove contaminated, saturated clothing immediately.
In the event of persistent symptoms receive medical treatment.

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 immediately with plenty of water.
In case of skin irritation, consult a physician.
Get medical advice/attention if you feel unwell.

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.
If swallowed seek medical advice immediately and show the doctor packing or label.
Rinse mouth immediately and drink plenty of water.
Medical treatment necessary.

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
alcohol resistant foam
Extinguishing powder
Carbon dioxide (CO2)
Water spray jet

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:
Pyrolysis products, toxic
Ammonia (NH3)
Nitrogen oxides (NOx)
Carbon monoxide

* 5.3 Advice for firefighters

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

* **Additional information**
Fire class
B (Fires of liquids or liquid turning substances).
Co-ordinate fire-fighting measures to the fire surroundings.

* SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

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

For emergency responders
Ensure adequate ventilation.
Personal protection equipment
Use personal protection.
Use breathing apparatus if exposed to vapours/dust/aerosol.
Forms slippery surfaces with water.
Special danger of slipping by leaking/spilling product.

6.2 Environmental precautions

Do not allow to enter into surface water or drains.
Do not allow to enter into soil/subsoil.

6.3 Methods and material for containment and cleaning up

For containment
Suitable material for taking up:
Sand
Sawdust
Universal binder
Kieselguhr
Flush away residues with water.
After taking up the material dispose according to regulation.

* 6.4 Reference to other sections

Safe handling: see section 7
Personal protection equipment: see section 8
Disposal: see section 13

* SECTION 7: Handling and storage

* 7.1 Precautions for safe handling

*

Protective measures
Handle and open container with care.
Care for thoroughly room ventilation.
Avoid:
generation/formation of aerosols
Do not inhale vapours/aerosols.
Avoid contact with eyes and skin.
Keep the packing dry and well sealed to prevent contamination and absorbtion of humidity.
The product is:
Not readily flammable.
Usual measures for fire prevention.

Advices on general occupational hygiene
Make available sufficient washing facilities
Remove contaminated, saturated clothing immediately.
Keep separated from food and feed.
Wash hands before breaks and after work.

7.2 Conditions for safe storage, including any incompatibilities

Requirements for storage rooms and vessels
Keep only in unopened original container.
Keep container tightly closed.

Storage class
8A Combustible corrosive substances

Materials to avoid
Do not store together with:
Acid
Oxidising agent

Further information on storage conditions
Keep locked up and out of reach of children.
Protect from heat and direct solar radiation.
Do not keep at temperatures below 5°C.
Do not keep at temperatures above 30°C.
Storage time: 24 months.

7.3 Specific end use(s)

Recommendation
Care for thoroughly room ventilation for higher bath temperatures.
See section 1.2
see section 8.

* SECTION 8: Exposure controls/personal protection

* 8.1 Control parameters

Occupational exposure limit values

CAS No.	EC No.	Substance name	occupational exposure limit value
34590-94-8	252-104-2	(2-Methoxymethylethoxy)-propanol	50 [ml/m³(ppm)] 308 [mg/m³] skin resorptive 2000/39/EC
141-43-5	205-483-3	2-Aminoethanol	1 [ml/m³(ppm)] 2,5 [mg/m³] Short-term(ml/m³) 3 Short-term(mg/m³) 7,6 skin resorptive 2006/15/EC
34590-94-8	252-104-2	(2-Methoxymethylethoxy)propanol	50 [ml/m³(ppm)] 308 [mg/m³] (IE)
141-43-5	205-483-3	2-Aminoethanol	1 [ml/m³(ppm)] 2,5 [mg/m³] Short-term(ml/m³) 3 (1) Short-term(mg/m³) 7,6 (1) (1) 15 minutes reference period (IE)
102-71-6	203-049-8	Triethanolamine	5 [mg/m³] (IE)
34590-94-8	252-104-2	(2-Methoxymethylethoxy)propanol	50 [ml/m³(ppm)] 308 [mg/m³] (UK)
141-43-5	205-483-3	2-Aminoethanol	1 [ml/m³(ppm)] 2,5 [mg/m³] Short-term(ml/m³) 3 (1) Short-term(mg/m³) 7,6 (1) (1) 15 minutes average value (UK)

*** DNEL worker**

CAS No.	Substance name	DNEL value	DNEL type	Remark
97489-15-1	Sulfonic acids, C14-17-sec-alkane, sodium salts	5 mg/kg bw/day	long-term dermal (systemic)	Assessment factor 40
68155-07-7	Amides, C8-18 (even numbered) and C18-unsatd., N,N-bis(hydroxyethyl)	4.16 mg/kg bw/day	long-term dermal (systemic)	Assessment factor 12
141-43-5	2-aminoethanol	3 mg/kg bw/day	long-term dermal (systemic)	Assessment factor 100

CAS No.	Substance name	DNEL value	DNEL type	Remark
141-43-5	2-aminoethanol	0.51 mg/m³	long-term inhalative (local)	
102-71-6	triethanolamine [2,2',2''-nitrilotriethanol]	1 mg/m³	long-term inhalative (local)	
102-71-6	triethanolamine [2,2',2''-nitrilotriethanol]	7.5 mg/kg bw/day	long-term dermal (systemic)	Assessment factor 50
97489-15-1	Sulfonic acids, C14-17-sec-alkane, sodium salts	35 mg/m³	long-term inhalative (systemic)	Assessment factor 10
141-43-5	2-aminoethanol	1 mg/m³	long-term inhalative (systemic)	Assessment factor 75

* **PNEC**

CAS No.	Substance name	PNEC Value	PNEC type	Remark
97489-15-1	Sulfonic acids, C14-17-sec-alkane, sodium salts	0.06 mg/L	aquatic, freshwater	Assessment factor 10
97489-15-1	Sulfonic acids, C14-17-sec-alkane, sodium salts	600 mg/L	sewage treatment plant (STP)	Assessment factor 1
68155-07-7	Amides, C8-18 (even numbered) and C18-unsatd., N,N-bis(hydroxyethyl)	0.007 mg/L	aquatic, freshwater	Assessment factor 10
68155-07-7	Amides, C8-18 (even numbered) and C18-unsatd., N,N-bis(hydroxyethyl)	830 mg/L	sewage treatment plant (STP)	Assessment factor 1
141-43-5	2-aminoethanol	0.07 mg/L	aquatic, freshwater	Assessment factor 10
141-43-5	2-aminoethanol	100 mg/L	sewage treatment plant (STP)	Assessment factor 10
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

8.2 Exposure controls

Appropriate engineering controls

Technical measures to prevent exposure
Technical exhaustion for long-term expositions or higher bath temperatures.

Personal protection equipment

Eye/face protection
tightly fitting goggles

Hand protection
chemical-resistant gloves
Glove material specification [make/type, thickness]: FKM, 0.4mm.
Glove material specification [make/type, thickness]: Butyl, 0.5mm.

Body protection:
Light protective clothing.

Respiratory protection
Respiratory protection necessary at:
aerosol or mist formation
Suitable respiratory protection apparatus:
Short term: filter apparatus, Filter A/P2

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.

* SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Physical state
liquid

Colour
dark blue

Odour
mild

Safety relevant basis data

	Value	Method	Source, Remark
Odour threshold:			(2-methoxymethylethoxy)-propanol: 210 - 600mg/m3 (34 - 97 ppm).
Odour threshold:			2-aminoethanol: 5.3 - 11 mg/m3 (2.1 - 4.3 ppm).
Melting point/freezing point	Solidifying point		not determined
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 14 Vol-%		Value of (2-methoxymethylethoxy)-propanol.
Lower and upper explosion limit	Lower explosion limit 1.1 Vol-%		Value of (2-methoxymethylethoxy)-propanol.
Flash point			No flash point up to 100 °C.
Auto-ignition temperature	205 °C		Value of (2-methoxymethylethoxy)-propanol.
Decomposition temperature	≥ 100 °C		
pH	in delivery state approx. 11.5 (20°C)		
Viscosity			not determined
Solubility(ies)	Water solubility		miscible
Partition coefficient n-octanol/water (log value)	3.5- 4.2		Value of Amides, C8-18 (even numbered) and C18-unsatd., N,N-bis(hydroxyethyl).
Vapour pressure	approx. 24 hPa (20°C)		
Density and/or relative density	1.05 g/cm³ (20°C)		
Relative vapour density	5.12		Value of (2-methoxymethylethoxy)-propanol.
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**

Safety characteristics

	Value	Method, Result	Source, Remark
Flash point (°C)	> 100		

* **Assessment/classification**
The mixture is not classified as flammable liquids.

* **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)	> 6.25 mm/a	Expert judgement and weight of evidence determination.	
Corrosion rate (mm steel/year)			not available

* **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-methoxymethylethoxy)-propanol: ~0.02 (ASTM D3539).
Solvent content	10- 20 %		
Explosive properties			none
Oxidising properties			none

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

SECTION 10: Stability and reactivity

10.1 Reactivity

Exothermic reaction with:
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 acids.
Reactions with oxidising agents.
Reaction with nitric acid
Reactions with light metals, with evolution of hydrogen.

10.4 Conditions to avoid

Heat and direct solar radiation.

10.5 Incompatible materials

Acid
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	3147 mg/kg	ATE: Acute Toxicity Estimate	The acute oral toxicity is corresponding to GHS-category 5.
	CAS No.141-43-5 2-aminoethanol LD50: 1089 mg/kg Species Rat		
	CAS No.97489-15-1 Sulfonic acids, C14-17-sec-alkane, sodium salts LD50: approx. 1250 mg/kg Species Rat		
	CAS No.68131-40-8 Alcohols, secondary C11-15, ethoxylated LD50: > 412 mg/kg Species Rat		
	CAS No.160875-66-1 C10-fatty alcohol, ethoxylated 500 mg/kg	ATE: Acute Toxicity Estimate	
Acute dermal toxicity	> 5000 mg/kg	ATE: Acute Toxicity Estimate	
	CAS No.141-43-5 2-aminoethanol LD50: 1025 mg/kg Species Rabbit		
Acute inhalation toxicity	Acute inhalation toxicity (vapour) > 50 mg/L	ATE: Acute Toxicity Estimate	

	Effective dose	Method,Evaluation	Source, Remark
	CAS No.141-43-5 2-aminoethanol Acute inhalation toxicity (vapour) 11 mg/L	ATE: Acute Toxicity Estimate	
	CAS No.68131-40-8 Alcohols, secondary C11-15, ethoxylated Acute inhalation toxicity (dust/mist) LC50: 1.06 mg/L Species Rat Exposure time 4 h		

* **Assessment/classification**
May be harmful if swallowed.

Skin corrosion/irritation

Animal data

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

Serious eye damage/irritation

Animal data

Result / Evaluation	Method	Source, Remark
Corrosive	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**
Based on available data, the classification criteria are not met.

* **STOT SE 3**

* **Irritation to respiratory tract**

* **Assessment/classification**
Respiratory irritant effect: STOT SE 3 H335: May cause respiratory irritation.

* **Narcotic effects**

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

* **STOT-repeated exposure**

* **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

Symptoms related to the physical, chemical and toxicological characteristics

	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**

Causes burns.
Aerosols of product effect toxic in case of inhaling (Acute Tox. 4 H332: Harmful if inhaled.).

* SECTION 12: Ecological information

* **12.1 Toxicity**

Aquatic toxicity

	Effective dose	Method,Evaluation	Source, Remark
Acute (short-term) fish toxicity	LC50: 8.6 mg/L	calculated.	
	CAS No.97489-15-1 Sulfonic acids, C14-17-sec-alkane, sodium salts LC50: 2.8 mg/L		
	CAS No.68155-07-7 Amides, C8-18 (even numbered) and C18-unsatd., N,N-bis(hydroxyethyl) LC50: 2.4 mg/L Species Oncorhynchus mykiss (Rainbow trout) Test duration 96 h	OECD 203	
	CAS No.141-43-5 2-aminoethanol LC50: 150 mg/L Species Oncorhynchus mykiss (Rainbow trout) Test duration 96 h		

	Effective dose	Method,Evaluation	Source, Remark
Chronic (long-term) fish toxicity	CAS No.97489-15-1 Sulfonic acids, C14-17-sec-alkane, sodium salts NOEC 0.85 mg/L Species Oncorhynchus mykiss (Rainbow trout) Test duration 28 d	OECD 204	
	CAS No.68155-07-7 Amides, C8-18 (even numbered) and C18-unsatd., N,N-bis(hydroxyethyl) NOEC 0.32 mg/L Species Oncorhynchus mykiss (Rainbow trout) Test duration 28 d	OECD 215	
	CAS No.141-43-5 2-aminoethanol NOEC 1.24 mg/L Species Oryzias latipes (Ricefish) Test duration 41 d	OECD 210	
Acute (short-term) toxicity to crustacea	EC50 9.1 mg/L	calculated.	
	CAS No.97489-15-1 Sulfonic acids, C14-17-sec-alkane, sodium salts EC50 9.2 mg/L Species Daphnia magna (Big water flea) Test duration 48 h	OECD 202	
	CAS No.68155-07-7 Amides, C8-18 (even numbered) and C18-unsatd., N,N-bis(hydroxyethyl) EC50 2.25 mg/L Species Ceriodaphnia spec Test duration 48 h		
	CAS No.141-43-5 2-aminoethanol EC50 65 mg/L Species Daphnia magna (Big water flea) Test duration 48 h		
Chronic (long-term) toxicity to aquatic invertebrate	CAS No.97489-15-1 Sulfonic acids, C14-17-sec-alkane, sodium salts NOEC 0.36 mg/L Species Daphnia magna (Big water flea) Test duration 22 d		
	CAS No.68155-07-7 Amides, C8-18 (even numbered) and C18-unsatd., N,N-bis(hydroxyethyl) NOEC 0.07 mg/L Species Daphnia magna (Big water flea) Test duration 21 d	OECD 211	
	CAS No.141-43-5 2-aminoethanol NOEC 0.85 mg/L Species Daphnia magna (Big water flea) Test duration 21 d		

	Effective dose	Method,Evaluation	Source, Remark
Acute (short-term) toxicity to algae and cyanobacteria	EC50 9.3 mg/L	calculated.	
	CAS No.97489-15-1 Sulfonic acids, C14-17-sec-alkane, sodium salts EC50 62.1 mg/L Species Scenedesmus subspicatus Test duration 72 h		
	CAS No.68155-07-7 Amides, C8-18 (even numbered) and C18-unsatd., N,N-bis(hydroxyethyl) EC50 2.2 mg/L Species Scenedesmus subspicatus Test duration 96 h		
	CAS No.141-43-5 2-aminoethanol EC50 2.8 mg/L Species Pseudokirchneriella subcapitata Test duration 72 h		
Chronic (long-term) toxicity to aquatic algae and cyanobacteria	CAS No.68155-07-7 Amides, C8-18 (even numbered) and C18-unsatd., N,N-bis(hydroxyethyl) NOEC: 0.32 mg/L Species Desmodesmus subspicatus Test duration 72 h	OECD 201	
	CAS No.141-43-5 2-aminoethanol NOEC: 1 mg/L Species Selenastrum capricornutum Test duration 72 h		
	CAS No.141-43-5 2-aminoethanol EC5: 0.75 mg/L Species Scenedesmus quadricauda Test duration 8 d		
Toxicity to other aquatic plants/organisms	not determined		
Toxicity to microorganisms	not determined		

* **Assessment/classification**
Toxic to aquatic life.
Harmful to aquatic life with long lasting effects.

12.2 Persistence and degradability

	Value	Method	Source, Remark
Biodegradation	Degradation rate > 85 %	calculated.	DOC reduction Biodegradable.
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 No.102-71-6 triethanolamine [2,2',2''-nitrilotriethanol]
Biodegradation	Degradation rate 89 % Test duration 28 d	OECD 301E/ EEC 92/69/V, C.4-B	CAS No.97489-15-1 Sulfonic acids, C14-17-sec-alkane, sodium salts

	Value	Method	Source, Remark
Biodegradation	Degradation rate 78 % Test duration 28 d	OECD 301B/ ISO 9439/ EEC 92/69/V, C.4-C	CAS No.97489-15-1 Sulfonic acids, C14-17-sec-alkane, sodium salts
Biodegradation	Degradation rate > 70 % Test duration 28 d	OECD 301E/ EEC 92/69/V, C.4-B	CAS No.34590-94-8 (2-methoxymethylethoxy)-propanol
Biodegradation	Degradation rate 90- 100 % Test duration 28 d	OECD 302B/ ISO 9888/ EEC 92/69/V, C.9	CAS No.34590-94-8 (2-methoxymethylethoxy)-propanol
Biodegradation	Degradation rate 84 % Test duration 28 d	OECD 301D/ EEC 92/69/V, C.4-E	CAS No.68155-07-7 Amides, C8-18 (even numbered) and C18-unsatd., N,N-bis(hydroxyethyl)
Biodegradation	Degradation rate 92.5 % Test duration 28 d	OECD 301B/ ISO 9439/ EEC 92/69/V, C.4-C	CAS No.68155-07-7 Amides, C8-18 (even numbered) and C18-unsatd., N,N-bis(hydroxyethyl)
Biodegradation	Degradation rate > 90 % Test duration 21 d	OECD 301A/ ISO 7827/ EEC 92/69/V, C.4-A	CAS No.141-43-5 2-aminoethanol
Biodegradation	Degradation rate 90- 100 % Test duration 28 d	OECD 301F/ ISO 9408/ EEC 92/69/V, C.4-D	CAS No.141-43-5 2-aminoethanol
Biodegradation	Degradation rate > 60 % Test duration 28 d	OECD 301F/ ISO 9408/ EEC 92/69/V, C.4-D	CAS No.68131-40-8 Alcohols, secondary C11-15, ethoxylated
Biodegradation	Degradation rate > 60 % Test duration 28 d	OECD 301D/ EEC 92/69/V, C.4-E	CAS No.160875-66-1 C10-fatty alcohol, ethoxylated

12.3 Bioaccumulative potential

Assessment/classification
(2-methoxymethylethoxy)-propanol: Accumulation in organisms is not expected (log Pow: 0.004).
Sulfonic acids, C14-17-sec-alkane, sodium salts: Accumulation in organisms is not expected (log Pow: 0.24).
Amides, C8-18 (even numbered) and C18-unsatd., N,N-bis(hydroxyethyl): Because of the n-octanol/water partition coefficient accumulation in organisms is possible (log Pow >3).
2-aminoethanol: Accumulation in organisms is not expected (log Pow: -1.3).
Alcohols, secondary C11-15, ethoxylated: Significant accumulation in organisms is not expected (log Pow: 2.72).
triethanolamine: Accumulation in organisms is not expected (BCF: <0,4).
C10- fatty alcohol, ethoxylated: Accumulation in organisms is not expected.

12.4 Mobility in soil

Assessment/classification
(2-methoxymethylethoxy)-propanol: Dissolves in water. Highly mobile in soil.
Sulfonic acids, C14-17-sec-alkane, sodium salts: Moderate adsorption on soil.
Amides, C8-18 (even numbered) and C18-unsatd., N,N-bis(hydroxyethyl): Koc: 243, moderately mobile in soil.
2-aminoethanol: Adsorption on soil is not expected.
Alcohols, secondary C11-15, ethoxylated: not available.
triethanolamine: Adsorption on soil is not expected (Koc: 10).
C10- fatty alcohol, ethoxylated: Adsorption on soil is possible.

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)	1189 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 2 H401: Toxic to aquatic life.
Chronic aquatic environmental hazards: Aquatic Chronic 3 H412: Harmful to aquatic life with long lasting effects.
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
070604 *	other organic solvents, washing liquids and mother liquors
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.
Suitable for neutralization are acetic acid (60%, liquid) or citric acid (solid powder, crystallized) if a stainless steel bath is used.
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.

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 2491	UN 2491	UN 2491
14.2 UN proper shipping name	ETHANOLAMINE, SOLUTION	ETHANOLAMINE SOLUTION	Ethanolamine solution

	Land transport (ADR/RID)	Sea transport (IMDG)	Air transport (ICAO-TI / IATA-DGR)
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 2491
UN proper shipping name	ETHANOLAMINE, SOLUTION
Transport hazard class(es)	8
Hazard label(s)	8
Classification code	C7
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 2491
UN proper shipping name	ETHANOLAMINE 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 2491
UN proper shipping name	Ethanolamine 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 23 %

15.2 Chemical Safety Assessment

*** National regulations**

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

* SECTION 16: Other information

* **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

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.
H312	Harmful in contact with skin.
H314	Causes severe skin burns and eye damage.
H315	Causes skin irritation.
H318	Causes serious eye damage.
H332	Harmful if inhaled.
H335	May cause respiratory irritation.
H411	Toxic to aquatic life with long lasting effects.
H412	Harmful to aquatic life with long lasting effects.

Indication of changes
* Data changed compared with the previous version