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

1.1. Product identifier

Name of product EC 95

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

Identified uses

Sector of uses [SU]
SU22 - Professional uses: Public domain (administration, education, entertainment, services, craftsmen)
SU3 - Industrial uses: Uses of substances as such or in preparations at industrial sites

Uses advised against

Remark
Do not use for injecting or spraying.

Recommended intended purpose(s)
Ultrasonic cleaning concentrate for jewellery and watch components to remove polishing pastes and general contamination for workshop and industry.

1.3. Details of the supplier of the safety data sheet

Manufacturer/distributor
Elma Schmidbauer GmbH
Gottlieb-Daimler-Str. 17, D-78224 Singen (Htwl.)
Phone +49 7731 882-0, Fax +49 7731 882-266
E-Mail info@elma-ultrasonic.com
Internet www.elma-ultrasonic.com

Advice Chemie/Labor: Email: chemlab@elma-ultrasonic.com

1.4. Emergency telephone number

Emergency advice
Vergiftungs-Informations-Zentrale Freiburg
(Sprache/Language: D, GB)
Phone +49 761 19240

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

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

Hazard classes and Hazard categories	Hazard Statements	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

H290	May be corrosive to metals.
H314	Causes severe skin burns and eye damage.
H318	Causes serious eye damage.
H335	May cause respiratory irritation.
H412	Harmful to aquatic life with long lasting effects.

2.2. Label elements
Labelling according to Regulation (EC) No 1272/2008 [CLP/GHS]


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/eye protection/face protection.
P301 + P310	IF SWALLOWED: Immediately call a POISON CENTER/doctor.
P301 + P330 + P331	IF SWALLOWED: rinse mouth. Do NOT induce vomiting.
P302 + P352	IF ON SKIN: Wash with plenty of water.
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.
P312	Call a POISON CENTER/doctor if you feel unwell.
P332 + P313	If skin irritation occurs: Get medical advice/attention.

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

2.3. Other hazards
Acute Tox. 5 (oral) H303: May be harmful if swallowed.

Aquatic Acute 2 H401: Toxic to aquatic life.

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

Hazardous ingredients

Hazardous ingredients (continued)

CAS No	EC No	Name	[% weight]	Classification according to Regulation (EC) No 1272/2008 [CLP/ GHS]
68154-97-2	935-890-8	fattyalkohol, C10-12, propoxylated, ethoxylated	< 5	Eye Irrit. 2, H319
166736-08-9		C10- fatty alcohol, ethoxylated	< 5	Acute Tox. 4, H302 / Eye Dam. 1, H318
34590-94-8	252-104-2	(2-methoxymethylethoxy)-propanol	10 - 20	
97489-15-1	307-055-2	Sulfonic acids, C14-17-sec-alkane, sodium salts	5 - 15	Acute Tox. 4, H302 / Skin Irrit. 2, H315 / Eye Dam. 1, H318 / Aquatic Chronic 3, H412
68155-07-7	931-329-6	Amides, C8-18 (even numbered) and C18-unsatd., N,N-bis(hydroxyethyl)	5 - 15	Skin Irrit. 2, H315 / Eye Dam. 1, H318 / Aquatic Chronic 2, H411
141-43-5	205-483-3	2-aminoethanol	5 - 15	Met. Corr. 1, H290 / Acute Tox. 4, H332 / Acute Tox. 4, H312 / Acute Tox. 4, H302 / Skin Corr. 1B, H314 / Eye Dam. 1, H318 / STOT SE 3, H335 / Aquatic Chronic 3, H412
68131-40-8		Alcohols, secondary C11-15, ethoxylated	< 5	Acute Tox. 4, H302 / Acute Tox. 4, H332 / Skin Irrit. 2, H315 / Eye Dam. 1, H318

REACH

CAS No	Name	REACH registration number
68154-97-2	fattyalkohol, C10-12, propoxylated, ethoxylated	Not relevant (polymer).
166736-08-9	C10- fatty alcohol, ethoxylated	Not relevant (polymer).
34590-94-8	(2-methoxymethylethoxy)-propanol	01-2119450011-60
97489-15-1	Sulfonic acids, C14-17-sec-alkane, sodium salts	01-2119489924-20
68155-07-7	Amides, C8-18 (even numbered) and C18-unsatd., N,N-bis(hydroxyethyl)	Not yet available from supplier.
141-43-5	2-aminoethanol	Not yet available from supplier.
68131-40-8	Alcohols, secondary C11-15, ethoxylated	Not relevant (polymer).

SECTION 4: First aid measures

4.1. Description of first aid measures

General information
Remove contaminated soaked clothing immediately and dispose it safely.
In the event of persistent symptoms receive medical treatment.

In case of inhalation
Ensure of fresh air.
In case of inhalation of mist seek medical advice.
In the event of symptoms refer for medical treatment.

In case of skin contact
In case of contact with skin wash off immediately with plenty of water.
Consult a doctor if skin irritation persists.
Get medical advice/attention if you feel unwell.

In case of eye contact
In case of contact with eyes rinse thoroughly with plenty of water and seek medical advice.

In case of ingestion
Do not induce vomiting.
Medical treatment.
If swallowed seek medical advice immediately and show the doctor packing or label.
Rinse out mouth and give plenty of water to drink.

4.2. Most important symptoms and effects, both acute and delayed
Physician's information / possible symptoms
No further informations available.

4.3. Indication of any immediate medical attention and special treatment needed
Treatment (Advice to doctor)
No further informations available.

SECTION 5: Firefighting measures

5.1. Extinguishing media
Suitable extinguishing media
Fire-extinguishing activities according to surrounding.
Alcohol-resistant foam
Dry powder
Carbon dioxide
Water spray jet

5.2. Special hazards arising from the substance or mixture
Risk of formation of toxic pyrolyse products.
In case of fire formation of dangerous gases possible.
In the event of fire the following can be released:
Ammonia
Nitrogen oxides (NOx)
Carbon monoxide (CO)

5.3. Advice for firefighters
Special protective equipment for fire-fighters
Do not inhale explosion and/or combustion gases.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures
For non-emergency personnel
Ensure adequate ventilation.
Use personal protection.
High risk of slipping due to leakage/spillage of product.

For emergency responders
Ensure adequate ventilation.
Use personal protective clothing.
Use personal protection.
Use breathing apparatus if exposed to vapours/dust/aerosol.
Forms slippery surfaces with water.
High risk of slipping due to leakage/spillage of product.

6.2. Environmental precautions
Do not discharge into the drains/surface waters/groundwater.
Do not discharge into the subsoil/soil.

6.3. Methods and material for containment and cleaning up
Take up with absorbent material (e.g. sand, sawdust, general-purpose binder, kieselguhr).
Flush away residues with water.
After taking up the material dispose according to regulation.

6.4. Reference to other sections
Informations for safe handling see chapter 7.
Informations for personal protective equipment see chapter 8.
Informations for disposal see chapter 13.

SECTION 7: Handling and storage

7.1. Precautions for safe handling
Advice on safe handling
Avoid formation of aerosols.
Care for thoroughly room ventilation.
Open and handle container with care!

General protective measures
Avoid contact with eyes and skin
Do not inhale vapours/aerosols.

Hygiene measures
Provide washing facilities at place of work.
Remove soiled or soaked clothing immediately.
Keep separated from food and feed.
Wash hands before breaks and after work.

Advice on protection against fire and explosion
The product is combustible.

7.2. Conditions for safe storage, including any incompatibilities
Requirements for storage rooms and vessels
Keep only in unopened original container.

Advice on storage compatibility
Do not store with acids.
Do not store together with oxidizing agents.

Further information on storage conditions
Keep container tightly closed.
Keep locked up, out of reach of children
Protect from heat and direct solar radiation.
Store in a dry place.
Do not keep at temperatures below 5°C.
Do not keep at temperatures above 30°C.

Information on storage stability
Storage time: 24 months.

7.3. Specific end use(s)
Recommendation(s) for intended use
See section 1.2
Care for thoroughly room ventilation for higher bath temperatures.
see section 8.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Indicative occupational exposure limit values (91/322/EEC, 2000/39/EC, 2006/15/EC or 2009/161/EU)

CAS No	Name	Code	[mg/m3]	[ppm]	Remark
141-43-5	2-aminoethanol	8 hours	2,5	1	skin
		Short-term	7,6	3	
34590-94-8	(2-methoxymethylethoxy)-propanol	8 hours	308	50	skin

DNEL-/PNEC-values
DNEL worker

CAS No	Substance name	Value	Code	Remark
141-43-5	2-aminoethanol	3,3 mg/m3	DNEL long-term inhalative (local)	
		1 mg/kg bw/day	DNEL long-term dermal (systemic)	
68155-07-7	Amides, C8-18 (even numbered) and C18-unsatd., N,N-bis(hydroxyethyl)	4,16 mg/kg bw/day	DNEL long-term dermal (systemic)	
97489-15-1	Sulfonic acids, C14-17-sec-alkane, sodium salts	5 mg/kg bw/day	DNEL long-term dermal (systemic)	

PNEC

CAS No	Substance name	Value	Code	Remark
141-43-5	2-aminoethanol	100 mg/l	PNEC sewage treatment plant (STP)	
		0,085 mg/l	PNEC aquatic, freshwater	
68155-07-7	Amides, C8-18 (even numbered) and C18-unsatd., N,N-bis(hydroxyethyl)	830 mg/l	PNEC sewage treatment plant (STP)	
		0,007 mg/l	PNEC aquatic, freshwater	
97489-15-1	Sulfonic acids, C14-17-sec-alkane, sodium salts	600 mg/l	PNEC sewage treatment plant (STP)	
		0,04 mg/l	PNEC aquatic, freshwater	

Additional advice

8.2. Exposure controls
Respiratory protection
Breathing apparatus in the event of aerosol or mist formation.
Short term: filter apparatus, Filter A/P2

Hand protection
chemical-resistant gloves
Glove material specification [make/type, thickness]: FKM, 0.4mm.
Glove material specification [make/type, thickness]: NBR, 0.35mm.

Eye protection
tightly fitting goggles

Other protection measures
Light protective clothing.

Limitation and surveillance of the environment
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.

Appropriate engineering controls
Technical exhaustion for long-term expositions or higher bath temperatures.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Appearance	Colour	Odour
liquid	dark blue	mild

Odour threshold
(2-methoxymethylethoxy)-propanol: 210 - 600mg/m3 (34 - 97 ppm).
2-aminoethanol: 5.3 - 11 mg/m3 (2.1 - 4.3 ppm).

Important health, safety and environmental information

	Value	Temperature	at	Method	Remark
pH value	ca. 11,5	20 °C			
boiling point	>= 100 °C				
solidifying point	not determined				
Flash point					No flash point below 100°C.
Flammable (solid)	not applicable				
Flammability (gas)	not applicable				
Ignition temperature	205 °C				Value of (2-methoxymethylethoxy)-propanol.
Self ignition temperature					not spontaneously flammable
Lower explosion limit	1,1 Vol-%				Value of (2-methoxymethylethoxy)-propanol.
Upper explosion limit	14 Vol-%				Value of (2-methoxymethylethoxy)-propanol.
Vapour pressure	ca. 24 hPa	20 °C			
Relative density	1,05 g/cm3	20 °C			
Vapour density	5,12				Value of (2-methoxymethylethoxy)-propanol.
Solubility in water					miscible
Solubility/other	not determined				

	Value	Temperature	at	Method	Remark
Partition coefficient n-octanol/water (log P O/W)	3,5 - 4,2				Value of Amides, C8-18 (even numbered) and C18-unsatd., N,N-bis(hydroxyethyl).

Decomposition temperature >= 100 °C

Viscosity not determined

Solvent content 10 - 20 %

Vapourisation rate
Water: 0.36 (ASTM D3539).
(2-methoxymethylethoxy)-propanol: ~0.02 (ASTM D3539).

Oxidising properties
no

Explosive properties
no

9.2. Other information
No further relevant informations available.

SECTION 10: Stability and reactivity

10.1. Reactivity
Evolution of heat under influence of acids.
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
Substances to avoid
Reactions with acids.
Reactions with oxidising agents.
Reaction with nitric acid
Reactions with inorganic acid chlorides.
Corrodes aluminium.

10.6. Hazardous decomposition products
No decomposition if used as directed.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity/Irritation/Sensitization

	Value/Validation	Species	Method	Remark
LD50 acute oral	3033 mg/kg		ATE (acute toxicity estimate)	
LD50 acute dermal	> 5000 mg/kg		ATE (acute toxicity estimate)	
LC50 acute inhalation	> 50 mg/l ()		ATE (acute toxicity estimate)	vapours
Skin irritation	corrosive			
Eye irritation	corrosive			
Skin sensitization	The mixture is not classified as skin sensitiser.			

Specific target organ toxicity (single exposure)
Respiratory irritant effect: STOT SE 3 H335: May cause respiratory irritation.

Specific target organ toxicity (repeated exposure)
The mixture is not classified as specific target organ toxicant (repeated exposure).

Aspiration hazard
The mixture is not classified as aspiration hazardous.

Toxicity test (Additional information)
The mixture is not classified as mutagen / not classified as carcinogen / not classified as reproductive toxicant.
Aerosols of product effect toxic in case of inhaling (Acute Tox. 4 H332: Harmful if inhaled.).

Experiences made from practice
Has a degreasing effect on the skin.
Causes corrosions.

SECTION 12: Ecological information

12.1. Toxicity

Ecotoxicological effects

	Value	Species	Method	Validation
Fish	LC50 7,6 mg/l		calculated	
Daphnia	EC50 8,3 mg/l		calculated	
Algae	EC50 7,2 mg/l		calculated	

12.2. Persistence and degradability

Physico-chemical degradability	100 %		Neutralization, pH-measurement	Alkaline properties can be eliminated up to 100% by neutralization.
Biological degradability	> 85 %	DOC decrease	calculated	Biodegradable

12.3. Bioaccumulative potential
Sulfonic acids, C14-17-sec-alkane, sodium salts: Accumulation in organisms is not expected (log Pow: 0.24).
C10- fatty alcohol, ethoxylated: Accumulation in organisms is not expected.
fattyalkohol, C10-12, propoxylated, ethoxylated: not available.
(2-methoxymethylethoxy)-propanol: Accumulation in organisms is not expected (log Pow: 0.004).
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).

12.4. Mobility in soil
Sulfonic acids, C14-17-sec-alkane, sodium salts: Moderate adsorption on soil.
C10- fatty alcohol, ethoxylated: Adsorption on soil is possible.
fattyalkohol, C10-12, propoxylated, ethoxylated: not available.
(2-methoxymethylethoxy)-propanol: Dissolves in water. Highly mobile in 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.

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

12.6. Other adverse effects
No further relevant informations available.

Additional ecological information

	Value	Method	Remark
COD	1283 mgO2/g	calculated	
AOX	The product does not contain any organically bound halogens according to the recipe.		

General regulation
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 leakage of product into the environment.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Waste code No.	**Name of waste**
07 06 04*	other organic solvents, washing liquids and mother liquors
20 01 29*	detergents containing hazardous substances

Wastes marked with an asterisk are considered to be hazardous waste pursuant to Directive 2008/98/EC on hazardous waste.

Recommendations for the 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.
Remove in accordance with local official regulations.

Recommendations for packaging
Contaminated packaging should be emptied as far as possible and after appropriate cleansing may be taken for reuse.

Recommended cleansing agent
Water

SECTION 14: Transport information

	ADR/RID	IMDG	IATA-DGR
14.1. UN number	UN 2491	UN 2491	UN 2491
14.2. UN proper shipping name	ETHANOLAMINE SOLUTION	ETHANOLAMINE SOLUTION	ETHANOLAMINE 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
no

14.7. Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code
not relevant

Land and inland navigation transport ADR/RID
Hazard label(s) 8
tunnel restriction code E

SECTION 15: Regulatory information

15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture
Authorizations
not relevant

Application restrictions
Regulation (EC) No 1907/2006 (REACH), Annex XVII No 3 - not relevant if used as directed.

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

VOC standard
VOC content 23 %

15.2. Chemical Safety Assessment
For this mixture a chemical safety assessment were not carried out.

SECTION 16: Other information

Recommended uses and restrictions
National and local regulations concerning chemicals shall be observed.

Further information
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.

Sources of key data used
Own measurements.
European Chemicals Agency, http://echa.europa.eu/.
Informations from our suppliers.

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.
H411	Toxic to aquatic life with long lasting effects.
H412	Harmful to aquatic life with long lasting effects.