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

### 1.1. Product identifier

Name of product EC 10

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

#### Identified uses

#### Sector of uses [SU]

SU20 - Health services

SU22 - Professional uses: Public domain (administration, education, entertainment, services, craftsmen)

SU3 - Industrial uses: Uses of substances as such or in preparations at industrial sites

#### ! Recommended intended purpose(s)

Aqueous-alkaline universal cleaning concentrate for ultrasonic and immersion cleaning of alkali-resistant parts and medical devices.

### 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](mailto:info@elma-ultrasonic.com)  
Internet [www.elma-ultrasonic.com](http://www.elma-ultrasonic.com)

#### Advice

Chemie/Labor: Email: [chemlab@elma-ultrasonic.com](mailto:chemlab@elma-ultrasonic.com)

### 1.4. Emergency telephone number

#### Emergency advice

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

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## 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
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Met. Corr. 1	H290	Expert judgement and weight of evidence determination.
Skin Irrit. 2	H315	Calculation method.
Eye Dam. 1	H318	Calculation method.

#### Hazard Statements

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

### 2.2. Label elements



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



GHS05

**! Signal word**

Danger

**Hazard Statements**

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

**Precautionary Statements**

P280 Wear protective gloves/eye protection.  
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.

**Hazardous ingredients for labeling**

n-propanol, sodium-hydroxide

**2.3. Other hazards**

Aquatic Acute 3 H402: Harmful 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 with sodium hydroxide, non-ionic surfactants, alkaliphosphates, -carbonates, -borates and corrosion inhibitors with cosolvent.

**Hazardous ingredients**

CAS No	EC No	Name	[% weight]	Classification according to Regulation (EC) No 1272/2008 [CLP/GHS]
1303-96-4	215-540-4	Disodium tetraborate, decahydrate	< 3	Eye Irrit. 2, H319 / Repr. 1B, H360FD / SVHC
1310-73-2	215-185-5	sodium-hydroxide	< 1	Met. Corr. 1, H290 / Skin Corr. 1A, H314 / Eye Dam. 1, H318
71-23-8	200-746-9	n-propanol	< 5	Flam. Liq. 2, H225 / Eye Dam. 1, H318 / STOT SE 3, H336



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## REACH

CAS No	Name	REACH registration number
1303-96-4	Disodium tetraborate, decahydrate	01-2119490790-32
1310-73-2	sodium-hydroxide	01-2119457892-27
71-23-8	n-propanol	01-2119486761-29

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## SECTION 4: First aid measures

### 4.1. Description of first aid measures

#### General information

Remove contaminated soaked clothing immediately, don't leave to dry.

#### In case of inhalation

Ensure of fresh air.

In case of inhalation of mist seek medical advice.

#### 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.

#### 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.

If swallowed seek medical advice immediately and show the doctor packing or label.

In the event of persistent symptoms receive medical treatment.

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)

Keep under medical supervision for at least 48 hours.

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## SECTION 5: Firefighting measures

### 5.1. Extinguishing media

#### Suitable extinguishing media

Alcohol-resistant foam

Dry powder

Carbon dioxide

Water spray jet

#### Unsuitable extinguishing media

no

### 5.2. Special hazards arising from the substance or mixture

In case of fire formation of dangerous gases possible.

In the event of fire the following can be released:

Diboron trioxide

Nitrogen oxides (NO<sub>x</sub>)

Carbon monoxide (CO)

Phosphorus oxides (e.g. phosphoruspentoxide)

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### 5.3. Advice for firefighters

#### Special protective equipment for fire-fighters

Do not inhale explosion and/or combustion gases.

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## SECTION 6: Accidental release measures

### 6.1. Personal precautions, protective equipment and emergency procedures

#### For non-emergency personnel

Use personal protection.

High risk of slipping due to leakage/spillage of product.

#### For emergency responders

Use personal protective clothing.

Use personal protection.

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.

### 6.4. Reference to other sections

Informations for safe handling see chapter 7.

Informations for personal protective equipment see chapter 8.

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## SECTION 7: Handling and storage

### 7.1. Precautions for safe handling

#### Advice on safe handling

Open and handle container with care!

#### General protective measures

Avoid contact with eyes and skin

Do not inhale aerosols

#### Hygiene measures

Provide washing facilities at place of work.

Keep away from food and drink.

#### Advice on protection against fire and explosion

The product is not combustible.

### 7.2. Conditions for safe storage, including any incompatibilities

#### Requirements for storage rooms and vessels

Provide alkali-resistant floor.

Keep only in original container.

#### Advice on storage compatibility

Do not store with acids.

#### Further information on storage conditions

Keep locked up, 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.



**Information on storage stability**

Storage time: 4 years.

**7.3. Specific end use(s)**

**Recommendation(s) for intended use**

no further

**! SECTION 8: Exposure controls/personal protection**

**8.1. Control parameters**

**! Ingredients with occupational exposure limits to be monitored**

CAS No	Name	Code	[mg/m3]	[ppm]	Remark
71-23-8	propan-1-ol	WEL, 8 hours	500	200	Sk, R11-41-67
1303-96-4	Disodium tetraborate, decahydrate	WEL, 8 hours	5		
1310-73-2	Sodium hydroxide	8 hours Short-term	2		R35

**DNEL-/PNEC-values**

**DNEL worker**

CAS No	Substance name	Value	Code	Remark
1303-96-4	Disodium tetraborate, decahydrate	12,8 mg/m3	DNEL long-term inhalative (systemic)	
		599,6 mg/kg bw/day	DNEL long-term dermal (systemic)	
1310-73-2	sodium-hydroxide	1 mg/m3	DNEL long-term inhalative (local)	
71-23-8	n-propanol	268 mg/m3	DNEL long-term inhalative (systemic)	
		136 mg/kg bw/day	DNEL long-term dermal (systemic)	

**DNEL Consumer**

CAS No	Substance name	Value	Code	Remark
1303-96-4	Disodium tetraborate, decahydrate	1,5 mg/kg bw/day	DNEL long-term oral (repeated)	

**PNEC**

CAS No	Substance name	Value	Code	Remark
1303-96-4	Disodium tetraborate, decahydrate	1,75 mg/l	PNEC sewage treatment plant (STP)	
		1,35 mg/l	PNEC aquatic, freshwater	
1310-73-2	sodium-hydroxide			No data available
71-23-8	n-propanol	10 mg/l	PNEC aquatic, freshwater	
		96 mg/l	PNEC sewage treatment plant (STP)	

**! Additional advice**

Occupational exposure limits for sodium hydroxide.

Occupational exposure limits of n-propanol.



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## 8.2. Exposure controls

### Hand protection

Gloves (alkali-resistant)

Glove material specification [make/type, thickness, permeation time/life]: Butyl, 0,5mm, >=8h.

Glove material specification [make/type, thickness, permeation time/life]: NBR, 0,35mm, >=8h.

Glove material specification [make/type, thickness, permeation time/life]: FKM, 0,4mm, >=8h.

### Eye protection

tightly fitting goggles

### 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.

## SECTION 9: Physical and chemical properties

### 9.1. Information on basic physical and chemical properties

#### Appearance

liquid

#### Colour

colourless up to yellowish

#### Odour

alcoholic

#### Odour threshold

1-propanol: 0.075 - 150 mg/m<sup>3</sup> (0.03 - 60 ppm).

#### Important health, safety and environmental information

	Value	Temperature	at	Method	Remark
<b>pH value</b>	ca. 12,3	20 °C			
<b>starts to boil</b>	>= 100 °C				
<b>solidifying range</b>	not determined				
<b>Flash point</b>	52 °C			DIN EN ISO 13736	Does not maintain the combustion.
<b>Flammable (solid)</b>	not applicable				
<b>Flammability (gas)</b>	not applicable				
<b>Ignition temperature</b>	not determined				
<b>Self ignition temperature</b>					not spontaneously flammable
<b>Lower explosion limit</b>	2,1 Vol-%				Value of 1-propanol.
<b>Upper explosion limit</b>	13,5 Vol-%				Value of 1-propanol.
<b>Vapour pressure</b>	ca. 24 hPa	20 °C			
<b>Relative density</b>	1,05 g/cm <sup>3</sup>	20 °C			



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	Value	Temperature	at	Method	Remark
<b>Vapour density</b>	2,07				Value of 1-propanol.
<b>Solubility in water</b>					miscible
<b>Solubility/other</b>	not determined				
<b>Partition coefficient n-octanol/water (log P O/W)</b>	0,34				Value of 1-propanol.
<b>Decomposition temperature</b>	>= 100 °C				
<b>Viscosity dynamic</b>	1,4 mPa*s	20 °C			
<b>Solvent content</b>	< 5 %				
<b>Vapourisation rate</b>	Water: 0.36 (ASTM D3539). 1-propanol: 0.89 (ASTM D3539) / 16 (DIN 53170) .				
<b>Oxidising properties</b>	no				
<b>Explosive properties</b>	no				
<b>9.2. Other information</b>	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 strong acids.

### 10.4. Conditions to avoid

Heat and direct solar radiation.

### 10.5. Incompatible materials

#### Substances to avoid

Reactions with strong acids.  
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
<b>LD50 acute oral</b>	> 5000 mg/kg		ATE (acute toxicity estimate)	
<b>LD50 acute dermal</b>	> 5000 mg/kg		ATE (acute toxicity estimate)	
<b>LC50 acute inhalation</b>	> 50 mg/l ()		ATE (acute toxicity estimate)	vapours
<b>Skin irritation</b>	irritant			
<b>Eye irritation</b>	risk of strong eye injuries			
<b>Skin sensitization</b>	The mixture is not classified as skin sensitiser.			

#### Specific target organ toxicity (single exposure)

The mixture is not classified as specific target organ toxicant (single exposure).

#### 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.  
OECD 435: not corrosive to skin.

disodium tetraborate: toxicity to reproduction: NOAEL(oral, rat, three-generation study): 17.5 mg Bor /kg bw/day;  
developmental toxicity: NOAEL(oral, rat, OECD 414): 9.6 mg Bor /kg bw/day; [European Chemicals Agency, <http://echa.europa.eu/>].

## ! SECTION 12: Ecological information

### 12.1. Toxicity

#### Ecotoxicological effects

	Value	Species	Method	Validation
<b>Fish</b>	LC50 > 300 mg/l		calculated	
<b>Daphnia</b>	EC50 > 400 mg/l		calculated	
<b>Algae</b>	EC50 34 mg/l		calculated	After neutralization a reduction in harmful effect can be observed.

### 12.2. Persistence and degradability



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<b>Physico-chemical degradability</b>	100 %		Neutralization, pH-measurement	Alkaline properties can be eliminated up to 100% by neutralization.
<b>Biological degradability</b>	> 70 %	DOC decrease	calculated	Biodegradable

### 12.3. Bioaccumulative potential

sodium hydroxide: No bioaccumulation.

1-propanol: Accumulation in organisms is not expected (log Pow: 0.34).

disodium tetraborate: Accumulation in organisms is not expected (log Pow: -1.53).

### 12.4. Mobility in soil

sodium hydroxide: Mobile in an aqueous ambience.

1-propanol: Adsorption on soil is not expected.

disodium tetraborate: 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
<b>COD</b>	ca. 89 mgO <sub>2</sub> /g	calculated	
<b>AOX</b>	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.

The mixture is not classified as chronic hazardous to the aquatic environment.

Acute aquatic environmental hazards: Aquatic Acute 3 H402: Harmful to aquatic life. After neutralization: not classified as acute hazardous to the aquatic environment.

Do not allow uncontrolled leakage of product into the environment.

## SECTION 13: Disposal considerations

### 13.1. Waste treatment methods

#### Waste code No.

20 01 29\*

#### Name of waste

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.

Product is allowed to discharge into sewage treatment plants, but in accordance with 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

	<b>ADR/RID</b>	<b>IMDG</b>	<b>IATA-DGR</b>
<b>14.1. UN number</b>	UN 1824	UN 1824	UN 1824
<b>14.2. UN proper shipping name</b>	SODIUM HYDROXIDE SOLUTION	SODIUM HYDROXIDE SOLUTION	SODIUM HYDROXIDE SOLUTION
<b>14.3. Transport hazard class(es)</b>	8	8	8
<b>14.4. Packing group</b>	III	III	III
<b>14.5. Environmental hazards</b>	No	No	No
<b>14.6. Special precautions for user</b>	no		
<b>14.7. Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code</b>	not relevant		
<b>Land and inland navigation transport ADR/RID</b>			
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 + 40 - 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 <=3 %

### 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.

Indication of changes: "!" = Data changed compared with the previous version. Previous version: 3.3

### Sources of key data used

Own measurements.

European Chemicals Agency, <http://echa.europa.eu/>.

Informations from our suppliers.



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- 
- H225 Highly flammable liquid and vapour.  
H290 May be corrosive to metals.  
H314 Causes severe skin burns and eye damage.  
H318 Causes serious eye damage.  
H319 Causes serious eye irritation.  
H336 May cause drowsiness or dizziness.  
H360FD May damage fertility or the unborn child (state specific effect if known) (state route of exposure if it is conclusively proven that no other routes of exposure cause the hazard).