



Ultrasonics.Steam.Ultraclean.

Safety Data Sheet according to Regulation (EC)

No. 1907/2006 (REACH)

Printed 10.11.2016

revision 10.11.2016 (GB) Version 1.4

elma elektrolytsalz-lösung

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

1.1. Product identifier

Name of product elma elektrolytsalz-lösung

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

! Product categories [PC]

Electrolyte

PC0 - Other

! Process categories [PROC]

PROC8a - Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non-dedicated facilities

PROC9 - Transfer of substance or preparation into small containers (dedicated filling line, including weighing)

PROC15 - Use as laboratory reagent

! Environmental release categories [ERC]

ERC8a - Wide dispersive indoor use of processing aids in open systems

ERC8b - Wide dispersive indoor use of reactive substances in open systems

ERC6b - Industrial use of reactive processing aids

Uses advised against

! Process categories [PROC]

PROC7 - Industrial spraying

PROC11 - Non industrial spraying

! Remark

Do not use for injecting or spraying.

Recommended intended purpose(s)

Electrolytic solution for hydrogen soldering 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

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



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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

Met. Corr. 1	H290
Acute Tox. 4	H302
Skin Corr. 1A	H314

Hazard Statements

H290	May be corrosive to metals.
H302	Harmful if swallowed.
H314	Causes severe skin burns and eye damage.

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.
H302	Harmful if swallowed.
H314	Causes severe skin burns and eye damage.

Precautionary Statements

P234	Keep only in original container.
P260	Do not breathe mist/vapours/spray.
P280	Wear protective gloves/eye protection.
P301 + P310	IF SWALLOWED: Immediately call a POISON CENTER/doctor/... .
P301 + P330 + P331	IF SWALLOWED: rinse mouth. Do NOT induce vomiting.
P303 + P361 + P353	IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.
P305 + P351 + P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P310	Immediately call a doctor.
P332 + P313	If skin irritation occurs: Get medical advice/attention.
P405	Store locked up.

Hazardous ingredients for labeling

potassium-hydroxide

2.3. Other hazards

Aquatic Acute 3 H402: Harmful to aquatic life.



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Information pertaining to special dangers for human and environment

May cause respiratory irritation.

! 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

Potash lye.

! Hazardous ingredients

CAS No	EC No	Name	[% weight]	Classification according to Regulation (EC) No 1272/2008 [CLP/ GHS]
1310-58-3	215-181-3	potassium-hydroxide	30 - 40	Met. Corr. 1, H290 / Acute Tox. 3, H301 / Skin Corr. 1A, H314 / Eye Dam. 1, H318

REACH

CAS No	Name	REACH registration number
1310-58-3	potassium-hydroxide	01-2119487136-33

SECTION 4: First aid measures

4.1. Description of first aid measures

General information

Remove contaminated soaked clothing immediately and dispose it safely.

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.

Call for a doctor immediately.

Refer to 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 dangers

Risk of stomach perforation

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

water

Product does not burn, fire-extinguishing activities according to surrounding.

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:

Corrosive gases/vapours

5.3. Advice for firefighters

! Special protective equipment for fire-fighters

Do not inhale explosion and/or combustion gases.

! Additional information

Fire residues and contaminated firefighting water must be disposed of in accordance with the local regulations.

! SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

For non-emergency personnel

Use personal protection.

! For emergency responders

Use personal protective clothing.

Use personal protection.

Use breathing apparatus if exposed to vapours/dust/aerosol.

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. general-purpose binder).

Flush away residues with water.

Use chemical neutralizers.

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.

! SECTION 7: Handling and storage

7.1. Precautions for safe handling

Advice on safe handling

Use only alkali-resistant equipment.

Open and handle container with care!

! General protective measures

Do not inhale aerosols



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Hygiene measures

Provide washing facilities at place of work.
Remove soiled or soaked clothing immediately.
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 container tightly closed.
Keep locked up, out of reach of children
Protect from heat and direct solar radiation.
Do not keep at temperatures below 5 °C.

Information on storage stability

Storage time: 3 years.

7.3. Specific end use(s)

! Recommendation(s) for intended use

See section 1.2

! 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
1310-58-3	Potassium hydroxide	8 hours Short-term	2		R22, 35

DNEL-/PNEC-values

DNEL worker

CAS No	Substance name	Value	Code	Remark
1310-58-3	potassium-hydroxide	1 mg/m3	DNEL long-term inhalative (local)	

PNEC

CAS No	Substance name	Value	Code	Remark
1310-58-3	potassium-hydroxide			No data available

! Additional advice

8.2. Exposure controls

! Respiratory protection

Breathing apparatus in the event of aerosol or mist formation.
Short term: filter apparatus, Filter P2
Short term: filter apparatus, Filter P3



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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]: NR, 0,5mm, >=8h.

Glove material specification [make/type, thickness, permeation time/life]: PVC, 0,5mm, >=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, clear

Odour

almost odourless

Odour threshold

not determined

Important health, safety and environmental information

	Value	Temperature	at	Method	Remark
pH value	> 14				strong alkaline
boiling range	> 100 °C				
solidifying range	< 0 °C				
Flash point	no				
Flammable (solid)	not applicable				
Flammability (gas)	not applicable				
Ignition temperature	not relevant				
Self ignition temperature					not spontaneously flammable
Lower explosion limit	not relevant				
Upper explosion limit	not relevant				
Vapour pressure	<= 23 hPa	20 °C			
Relative density	1,352 g/cm ³	20 °C			
Vapour density	not relevant				
Solubility in water					miscible
Solubility/other	not determined				



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	Value	Temperature	at	Method	Remark
Partition coefficient n-octanol/water (log P O/W)					No informations available.
Decomposition temperature	> 100	°C			
Viscosity	not determined				
Solvent content	0 %				
! Vapourisation rate Water: 0.36 (ASTM D3539).					
Oxidising properties no					
Explosive properties no					
9.2. Other information No further relevant informations available. Product effects hygroscopic.					

! 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

Strong exothermic reaction with acids.
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 strong acids.
Corrodes aluminium.

10.6. Hazardous decomposition products

No decomposition if used as directed.



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! SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity/Irritation/Sensitization

	Value/Validation	Species	Method	Remark
LD50 acute oral	500 - 1000 mg/kg		ATE (acute toxicity estimate)	
Skin irritation	strong corrosive			
Eye irritation	strong corrosive			
Skin sensitization	non-sensitizing			

! Specific target organ toxicity (single exposure)

The mixture is not classified as specific target organ toxicant (single exposure).
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.
In case of ingestion, severe burns of the mouth and throat and risk of perforation of esophagus and stomach.
Inhalation of spray may cause strong respiratory irritation and may cause damage to mucous membranes/lung.
potassium hydroxide : LD50(oral, rat): 273 mg/kg .

! Experiences made from practice

Causes strong corrosions.

! SECTION 12: Ecological information

12.1. Toxicity

Ecotoxicological effects

	Value	Species	Method	Validation
Fish	LC50 > 100 mg/l		calculated	
Daphnia	EC50 10 - 100 mg/l		calculated	After neutralization there is a reduction in the harmfulness: EC50(Daphnia, calculated, after neutralization): > 100mg/l.

12.2. Persistence and degradability

Physico-chemical degradability	100 %		Neutralization, pH-measurement	Alkaline properties can be eliminated up to 100% by neutralization.
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Biological degradability not applicable

12.3. Bioaccumulative potential

potassium hydroxide: Accumulation in organisms is not expected.



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12.4. Mobility in soil

potassium hydroxide: Dissolves in water. Highly mobile in soil.

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	0 mgO2/g		
AOX	The product does not contain any organically bound halogens according to the recipe.		

! General regulation

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.	Name of waste
20 01 15*	Alkalines

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.

Neutralize with acetic acid (60%, liquid) or citric acid (solid powder, crystallized).

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

	ADR/RID	IMDG	IATA-DGR
14.1. UN number	UN 1814	UN 1814	UN 1814
14.2. UN proper shipping name	POTASSIUM HYDROXIDE SOLUTION	POTASSIUM HYDROXIDE SOLUTION	POTASSIUM HYDROXIDE SOLUTION
14.3. Transport hazard class(es)	8	8	8
14.4. Packing group	II	II	II



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	ADR/RID	IMDG	IATA-DGR
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)

Directive 2012/18/EU, Annex I: not mentioned.

VOC standard

VOC content 0 %

15.2. Chemical Safety Assessment

potassium hydroxide: For this substance a chemical safety assessment has been 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: 1.3

! Sources of key data used

Own measurements.

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

Information from our suppliers.

H290 May be corrosive to metals.
H301 Toxic if swallowed.
H314 Causes severe skin burns and eye damage.
H318 Causes serious eye damage.
