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

1.1. Product identifier

Name of product elma lab clean A25 (ELC A25)

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 strongly alkaline foam-inhibited cleaning concentrate for hard surfaces in industry and laboratory.

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 67/548/EEC or 1999/45/EC

C; R35

R-phrases
35 Causes severe burns.

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

Hazard classes and Hazard categories	Hazard Statements	Classification procedure
Met. Corr. 1	**H290**	**Expert judgement and weight of evidence determination.**
Skin Corr. 1A	**H314**	**Calculation method.**
Eye Dam. 1	**H318**	**Calculation method.**

Hazard Statements
H290 May be corrosive to metals.

H314 Causes severe skin burns and eye damage.
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.
H314	Causes severe skin burns and eye damage.
H318	Causes serious eye damage.

Precautionary Statements

P102	Keep out of reach of children.
P234	Keep only in original container.
P260	Do not breathe mist/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.
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 POISON CENTER/doctor/... .
P332 + P313	If skin irritation occurs: Get medical advice/attention.
P405	Store locked up.

! **Hazardous ingredients for labeling**
C10- fatty alcohol, ethoxylated, isotridecanol, ethoxylated, isotridecanol, ethoxylated, potassium-hydroxide

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

Aquatic Acute 2 H401: Toxic to aquatic life.

! **Information pertaining to special dangers for human and environment**
Inhalation of spray may be harmful, may cause strong respiratory irritation and may cause damage to mucous membranes/lung.

! **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 strongly alkaline foam-inhibited mixture of potassium hydroxide, amphoteric and non-ionic surfactants, complexing agents and phosphates.

! Hazardous ingredients

CAS No	EC No	Name	[% weight]	Classification according to 67/548/EEC
69011-36-5	931-138-8	isotridecanol, ethoxylated	< 5	Xn R22; Xi R41
166736-08-9		C10- fatty alcohol, ethoxylated	< 5	Xn R22; Xi R41
69011-36-5	931-138-8	isotridecanol, ethoxylated	< 5	Xi R41
1310-58-3	215-181-3	potassium-hydroxide	5 - 15	Xn R22; C R35
7320-34-5	230-785-7	tetrapotassium pyrophosphate	< 5	Xi R36
27458-92-0	248-469-2	isotridecanol	< 0,2	Xi R38; N R50

CAS No	EC No	Name	[% weight]	Classification according to Regulation (EC) No 1272/2008 [CLP/ GHS]
69011-36-5	931-138-8	isotridecanol, ethoxylated	< 5	Acute Tox. 4, H302 / Eye Dam. 1, H318
166736-08-9		C10- fatty alcohol, ethoxylated	< 5	Acute Tox. 4, H302 / Eye Dam. 1, H318
69011-36-5	931-138-8	isotridecanol, ethoxylated	< 5	Eye Dam. 1, H318 / Aquatic Chronic 3, H412
1310-58-3	215-181-3	potassium-hydroxide	5 - 15	Met. Corr. 1, H290 / Acute Tox. 3, H301 / Skin Corr. 1A, H314 / Eye Dam. 1, H318
7320-34-5	230-785-7	tetrapotassium pyrophosphate	< 5	Eye Irrit. 2, H319
27458-92-0	248-469-2	isotridecanol	< 0,2	Skin Irrit. 2, H315 / Aquatic Acute 1, H400 / Aquatic Chronic 1, H410

REACH

CAS No	Name	REACH registration number
69011-36-5	isotridecanol, ethoxylated	Not relevant (polymer).
166736-08-9	C10- fatty alcohol, ethoxylated	Not relevant (polymer).
69011-36-5	isotridecanol, ethoxylated	Not relevant (polymer).
1310-58-3	potassium-hydroxide	01-2119487136-33
7320-34-5	tetrapotassium pyrophosphate	01-2119489369-18
27458-92-0	isotridecanol	Not relevant (impurity).

! 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 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.

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.

! SECTION 5: Firefighting measures

5.1. Extinguishing media
Suitable extinguishing media
water
Fire-extinguishing activities according to surrounding.
Foam
Dry powder
Carbon dioxide

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
Nitrogen oxides (NOx)
Carbon monoxide (CO)
Phosphorus oxides (e.g. phosphoruspentoxide)

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

! **For emergency responders**
Remove persons to safety.
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.
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.
When diluting, always stir product into water.
Open and handle container with care!

! **General protective measures**
Do not inhale aerosols

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 unopened 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.
Do not keep at temperatures above 30°C.

Information on storage stability
Storage time: 3 years.

7.3. Specific end use(s)
! **Recommendation(s) for intended use**
Do not use the product itself for injecting or spraying. Use only the diluted application solution for splash cleaning.

! 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			R22, 35
		Short-term	2		

! **Additional advice**

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

Eye protection
tightly fitting goggles

Other protection measures
Alkali-resistant 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**
Splash cleaning only in enclosed systems.

! SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Appearance	**Colour**	**Odour**
liquid	dark brown	mild

Odour threshold
not determined

Important health, safety and environmental information

	Value	Temperature	at	Method	Remark
pH value	ca. 12	20 °C	10 g/l		strong alkaline
boiling range	>= 100 °C				
solidifying range	not determined				
Flash point					No flash point below 100°C.
Flammable (solid)	not relevant				
Flammability (gas)	not relevant				
Ignition temperature	not determined				
Self ignition temperature					not spontaneously flammable
Lower explosion limit	not relevant				
Upper explosion limit	not relevant				
Vapour pressure	ca. 23 hPa	20 °C			

	Value	Temperature	at	Method	Remark
Relative density	ca. 1,15 g/cm3				
Vapour density	not available				
Solubility in water					miscible
Solubility/other	not determined				
Partition coefficient n-octanol/water (log P O/W)	ca. -2				Value of tetrapotassium pyrophosphate .
Decomposition temperature	>= 100 °C				
Viscosity	not determined				
Solvent concentration	0 %				

! **Vapourisation rate**
Water: 0.36 (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
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
! **Materials to avoid**
Reactions with strong acids.
Reactions with strong oxidising agents.
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/Irritability/Sensitization

	Value/Validation	Species	Method	Remark
LD50 acute oral	2203 mg/kg		ATE (acute toxicity estimate)	
LD50 acute dermal	> 5000 mg/kg		ATE (acute toxicity estimate)	
Irritability skin	strong corrosive			
Irritability eye	strong corrosive			
Skin sensitization	non-sensitizing			

! **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.
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.
Aerosols of product effect toxic in case of inhaling (Acute Tox. 4 H332: Harmful if inhaled.).
potassium hydroxide : LD50(oral, rat): 273 mg/kg .

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

! SECTION 12: Ecological information

12.1. Toxicity

Ecotoxicological effects

	Value	Species	Method	Validation
Fish	LC50 11,8 mg/l		calculated	
Daphnia	EC50 9,3 mg/l		calculated	
Algae	EC50 2,8 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	>= 65 %	DOC decrease	calculated	Moderately/partially biodegradable

12.3. Bioaccumulative potential
isotridecanol, ethoxylated: Bioaccumulation is improbable.
isotridecanol, ethoxylated: Bioaccumulation is improbable.
tetrapotassium pyrophosphate: Bioaccumulation is improbable.
potassium hydroxide: Accumulation in organisms is not expected.
C10- fatty alcohol, ethoxylated: Accumulation in organisms is not expected.
isotridecanol: Has the potential to bioaccumulate (log Pow: 5.57).

12.4. Mobility in soil
isotridecanol, ethoxylated: Koc: >5000, immobile, strong adsorption on soil.
isotridecanol, ethoxylated: Koc: >5000, strong adsorption on soil, immobile.
potassium hydroxide: Dissolves in water. Highly mobile in soil.
tetrapotassium pyrophosphate: not available.
C10- fatty alcohol, ethoxylated: Adsorption on soil is possible.
isotridecanol: 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	ca. 344 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. After neutralization: Aquatic Acute 3 H402: Harmful to aquatic life.
The mixture is not classified as chronic 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 29*	detergents containing dangerous 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 fot 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
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 0 %

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: 1.1

Sources of key data used
Own measurements.

Wording of the R/H-phrases specified in chapter 3 (not the classification of the mixture!)

R 22 Harmful if swallowed.
R 35 Causes severe burns.
R 36 Irritating to eyes.
R 38 Irritating to skin.
R 41 Risk of serious damage to eyes.
R 50 Very toxic to aquatic organisms.

H290 May be corrosive to metals.
H301 Toxic if swallowed.
H302 Harmful if swallowed.
H314 Causes severe skin burns and eye damage.
H315 Causes skin irritation.
H318 Causes serious eye damage.
H319 Causes serious eye irritation.
H400 Very toxic to aquatic life.
H410 Very toxic to aquatic life with long lasting effects.
H412 Harmful to aquatic life with long lasting effects.