



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

1.1. Product identifier

Name of product elma tec clean A2

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

! Recommended intended purpose(s)

Ammoniated cleaning concentrate for laboratory and workshop as well as cleaning of jewellery.

1.3. Details of the supplier of the safety data sheet

Manufacturer/distributor

ELMA Hans Schmidbauer GmbH & Co KG
Kolpingstr. 1-7, 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
Phone +49 7731 882-287
Fax +49 7731 882-266

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

Xi; R38

Xi; R41

R67

! R-phrases

38 Irritating to skin.
41 Risk of serious damage to eyes.
67 Vapours may cause drowsiness and dizziness.

2.2. Label elements

Labelling according to 1999/45/EC

Remarks for labelling

The product is classified and labelled in accordance with EC directives/German regulations on dangerous substances.

Xi Irritant



! R-phrases

38 Irritating to skin.
41 Risk of serious damage to eyes.
67 Vapours may cause drowsiness and dizziness.



Safety Data Sheet according to Regulation (EC)
No. 1907/2006 (REACH)

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revision 30.07.2013 (GB) Version 1.5

elma tec clean A2

! S-phrases

- 23 Do not breathe gas.
23 Do not breathe vapour.
23 Do not breathe spray.
26 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
28 After contact with skin, wash immediately with plenty of water.
39 Wear eye/face protection.
62 If swallowed, do not induce vomiting: seek medical advice immediately and show this container or label.
7 Keep container tightly closed.

2.3. Other hazards

! Information pertaining to special dangers for human and environment

May be harmful if swallowed.
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

Aqueous concentrate from anionic and nonionic surfactants, ammonia solution, solvent and complexing agent.

! Hazardous ingredients

CAS No	EC No	Name	[% weight]	Classification according to 67/548/EEC
68920-66-1		fatty alcohol-PEG-ether	5 - 15	Xn R22; Xi R36
67254-71-1	931-952-3	fatty alcohol C 10-12, ethoxylated	< 5	Xn R22; Xi R41
1336-21-6	215-647-6	ammonia%	< 5	C R34; N R50
67-63-0	200-661-7	propan-2-ol	< 5	F R11; Xi R36; R67
97489-15-1	307-055-2	Sulfonic acids, C14-17-sec-alkane, sodium salts	5 - 15	Xn R22; Xi R38-41
107-98-2	203-539-1	1-methoxy-2-propanol	< 20	R10; R67

CAS No	EC No	Name	[% weight]	Classification according to Regulation (EC) No 1272/2008 [CLP/ GHS]
68920-66-1		fatty alcohol-PEG-ether	5 - 15	Acute Tox. 4, H302 / Eye Irrit. 2, H319
67254-71-1	931-952-3	fatty alcohol C 10-12, ethoxylated	< 5	Acute Tox. 4, H302 / Eye Dam. 1, H318
1336-21-6	215-647-6	ammonia%	< 5	Met. Corr. 1, H290 / Acute Tox. 4, H302 / Acute Tox. 4, H332 / Skin Corr. 1B, H314 / Eye Dam. 1, H318 / STOT SE 3, H335 / Aquatic Acute 1, H400 / Aquatic Chronic 2, H411
67-63-0	200-661-7	propan-2-ol	< 5	Flam. Liq. 2, H225 / Eye Irrit. 2, H319 / STOT SE 3, H336
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
107-98-2	203-539-1	1-methoxy-2-propanol	< 20	Flam. Liq. 3, H226 / STOT SE 3, H336

REACH

CAS No	Name	REACH registration number
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REACH (continued)

CAS No	Name	REACH registration number
68920-66-1	fatty alcohol-PEG-ether	Not relevant (polymer).
67254-71-1	fatty alcohol C 10-12, ethoxylated	Not relevant (polymer).
1336-21-6	ammonia%	01-2119488876-14
67-63-0	propan-2-ol	Not yet available from supplier.
97489-15-1	Sulfonic acids, C14-17-sec-alkane, sodium salts	01-2119489924-20
107-98-2	1-methoxy-2-propanol	01-2119457435-35

! SECTION 4: First aid measures

4.1. Description of first aid measures

General information

Remove contaminated soaked clothing immediately.
Take affected person into fresh air.

In case of inhalation

Remove the casualty into fresh air and keep him immobile.
In the event of symptoms refer for medical treatment.

In case of skin contact

In case of contact with skin wash off with 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.
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.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media

Alcohol-resistant foam
Dry powder
Water spray jet

Unsuitable extinguishing media

no

5.2. Special hazards arising from the substance or mixture

In the event of fire the following can be released:

Nitrogen gases (NO_x)
Ammonia
Carbon monoxide (CO)
Sulphur dioxide (SO₂)



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

Ensure adequate ventilation.

Use personal protection.

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

6.2. Environmental precautions

Do not discharge into the drains/surface waters/groundwater.

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.

! SECTION 7: Handling and storage

7.1. Precautions for safe handling

! Advice on safe handling

Avoid formation of aerosols.

Care for thoroughly room ventilation, if necessary use in well ventilated area with local exhaust ventilation at workplace.

Use only in well-ventilated areas.

General protective measures

Avoid contact with eyes and skin

Do not inhale gases/vapours/aerosols.

Hygiene measures

Provide washing facilities at place of work.

Keep away from food and drink.

Advice on protection against fire and explosion

No special measures necessary.

7.2. Conditions for safe storage, including any incompatibilities

Requirements for storage rooms and vessels

Keep only in original container.

Advice on storage compatibility

Store cool and at distance to acids or alkalis.

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 35 °C.

Information on storage stability

Storage time: 5 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
107-98-2	1-methoxypropan-2-ol	TWA, 8 hours	375	100	Sk, R10
		Short-term	560	150	
7664-41-7	ammonia	8 hours	14	20	EU
		Short-term	36	50	
7664-41-7	Ammonia, anhydrous	WEL, 8 hours	18	25	R10-23-34-
		Short-term	25	35	50
67-63-0	propan-2-ol	WEL, 8 hours	999	400	R11, 36, 67
		Short-term	1250	500	

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
107-98-2	1-methoxy-2-propanol	8 hours	375	100	skin
		Short-term	568	150	

Additional advice

8.2. Exposure controls

! Respiratory protection

Breathing apparatus in the event of aerosol or mist formation.
Breathing apparatus in the event of high concentrations.

Hand protection

Gloves (alkali- and solvent-resistant)
Glove material specification [make/type, thickness, permeation time/life]: Butyl, 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.

Additional advice on system design

Technical exhaustion if there is a long-term exposition

! SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Form

liquid

Colour

light yellow

Odour

similar to ammonia

! Odour threshold

1-methoxy-2-propanol: 10 - 360 mg/m3.
ammonia: 5ppm (3.5mg/m3).
propan-2-ol: 2.5 - 490 mg/m3.



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elma tec clean A2**Important health, safety and environmental information**

	Value	Temperature	at	Method	Remark
pH value in delivery state	10,5 - 11	20 °C			
starts to boil	78 °C				
solidifying point	ca. 0 °C				
Flash point	36,5 °C			DIN EN ISO 13736	Does not maintain the combustion.
Flammable solid	not applicable				
Flammability (gas)	not applicable				
Ignition temperature	not determined				
Autoignition					no
Lower explosion limit	1,7 Vol-%				Value of 1-methoxy-2-propanol.
Upper explosion limit	11,5 - 13,7 Vol-%				Value of 1-methoxy-2-propanol.
Vapour pressure	ca. 85 hPa	20 °C			
Relative density	0,99 - 1 g/cm ³	20 °C			
Vapour density	3,11				Value of 1-methoxy-2-propanol.
Solubility in water					miscible
Partition coefficient (log p_{OW})	0,24				Value of Sulfonic acids, C14-17-sec-alkane, sodium salts.
Viscosity	not determined				
Solvent concentration	18 %				
! Vapourisation rate					
	1-methoxy-2-propanol: 0.75 (ASTM D3539).				
	propan-2-ol: 1.5 (ASTM D3539).				
	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

No decomposition if used as directed.

10.3. Possibility of hazardous reactions

Reactions with strong oxidising agents.
Reactions with strong acids and alkalies.
Evolution of ammonia under influence of alkalies.

10.4. Conditions to avoid

Heat and direct solar radiation.

10.5. Incompatible materials

! Materials to avoid

Reactions with strong acids.
Reactions with oxidising agents.
Reactions with alkalies.

10.6. Hazardous decomposition products

Ammonia

! SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity/Irritability/Sensitization

	Value/Validation	Species	Method	Remark
LD50 acute oral	3064 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
Irritability skin	irritant			
Irritability eye	irritant - risk of strong eye injuries			
Skin sensitization	non-sensitizing			

! Specific target organ toxicity (single exposure)

Narcotic effect: STOT SE 3 H336: May cause drowsiness or dizziness.
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.

Cleaning products may contribute to the aspiration hazard if they are swallowed and enter airways.

! Toxicity test (Additional information)

The mixture is not classified as mutagen / not classified as carcinogen / not classified as reproductive toxicant.

ammonia : LD50(oral, rat): 350 mg/kg, LC50(inhalation, rat, 1h): 11.59 mg/l .

Experiences made from practice

Has a degreasing effect on the skin.

! SECTION 12: Ecological information

12.1. Toxicity

Ecotoxicological effects

	Value	Species	Method	Validation
Fish	LC50 4 mg/l		calculated	
Daphnia	EC50 17 mg/l		calculated	
Algae	EC50 22,2 mg/l		calculated	

12.2. Persistence and degradability

Physico-chemical degradability	100 %		Neutralization, pH-measurement	
Biological degradability	>= 90 %	DOC decrease	calculated	readily degradable

12.3. Bioaccumulative potential

1-methoxy-2-propanol: Accumulation in organisms is not expected.

propan-2-ol: Accumulation in organisms is not expected (log Pow: 0.05).

ammonia: Accumulation in organisms is not expected.

Sulfonic acids, C14-17-sec-alkane, sodium salts: Accumulation in organisms is not expected (log Pow: 0.24).

fatty alcohol C 10-12, ethoxylated: Bioaccumulation is improbable.

12.4. Mobility in soil

propan-2-ol: Dissolves in water. Highly mobile in soil.

1-methoxy-2-propanol: Dissolves in water. Highly mobile in soil.

ammonia ...%: The ammonium ion is adsorbed by the soil; very soluble in water.

Sulfonic acids, C14-17-sec-alkane, sodium salts: Moderate adsorption on 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	ca. 1285 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.

Toxic to aquatic life.



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
20 01 29*	detergents containing dangerous substances

Wastes marked with an asterisk are considered to be hazardous waste pursuant to Directive 91/689/EEC 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

Land and inland navigation transport ADR/RID

No dangerous goods as defined by these transport regulations.

Marine transport IMDG

No hazardous material as defined by the prescriptions.

Air transport ICAO/IATA-DGR

No hazardous material as defined by the prescriptions.

Special precautions for user

no

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

not relevant

! SECTION 15: Regulatory information

15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

! VOC standard

VOC content 18 %

15.2. Chemical Safety Assessment

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

! SECTION 16: Other information

! 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.

Sources of key data used

Own measurements.



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

- R 10 Flammable.
- R 11 Highly flammable.
- R 22 Harmful if swallowed.
- R 34 Causes 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.
- R 67 Vapours may cause drowsiness and dizziness.

- H225 Highly flammable liquid and vapour.
- H226 Flammable liquid and vapour.
- H290 May be corrosive to metals.
- 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.
- H332 Harmful if inhaled.
- H335 May cause respiratory irritation.
- H336 May cause drowsiness or dizziness.
- H400 Very toxic to aquatic life.
- H411 Toxic to aquatic life with long lasting effects.
- H412 Harmful to aquatic life with long lasting effects.