



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

1.1. Product identifier

Name of product elma noble clean

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)

Aqueous jewellery cleaner.

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

Xi; R36

Carc. Cat. 3; R40

R43

R52/53

Repr. Cat. 3; R63

R-phrases

| | |
|-------|---|
| 63 | Possible risk of harm to the unborn child. |
| 36 | Irritating to eyes. |
| 40 | Limited evidence of a carcinogenic effect. |
| 43 | May cause sensitisation by skin contact. |
| 52/53 | Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment. |



! 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. |
| Eye Irrit. 2 | H319 | Calculation method. |
| Skin Sens. 1 | H317 | Calculation method. |
| Carc. 2 | H351 | Calculation method. |
| Repr. 2 | H361d | Calculation method. |
| Aquatic Chronic 3 | H412 | Calculation method. |

Hazard Statements

| | |
|-------|--|
| H290 | May be corrosive to metals. |
| H317 | May cause an allergic skin reaction. |
| H319 | Causes serious eye irritation. |
| H351 | Suspected of causing cancer. |
| H361d | Suspected of damaging the unborn child. |
| 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



GHS08

! Signal word

Warning

Hazard Statements

| | |
|-------|--|
| H290 | May be corrosive to metals. |
| H317 | May cause an allergic skin reaction. |
| H319 | Causes serious eye irritation. |
| H351 | Suspected of causing cancer. |
| H361d | Suspected of damaging the unborn child. |
| H412 | Harmful to aquatic life with long lasting effects. |

Precautionary Statements

| | |
|--------------------|--|
| P102 | Keep out of reach of children. |
| P201 | Obtain special instructions before use. |
| P234 | Keep only in original container. |
| P261 | Avoid breathing mist/vapours/spray. |
| P273 | Avoid release to the environment. |
| P280 | Wear protective gloves/protective clothing/eye protection/face protection. |
| P301 + P330 + P331 | IF SWALLOWED: rinse mouth. Do NOT induce vomiting. |
| P302 + P352 | IF ON SKIN: Wash with plenty of soap and 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. |
| P308 + P313 | IF exposed or concerned: Get medical advice/attention. |
| P405 | Store locked up. |



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

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elma noble clean

! Hazardous ingredients for labeling

thiourea

2.3. Other hazards

Skin Irrit. 3 H316: Causes mild skin irritation.

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 and acid mixture with nonionic tensides, complexing agent and co-solvent.

! Hazardous ingredients

| CAS No | EC No | Name | [% weight] | Classification according to 67/548/EEC |
|-----------|-----------|----------------------|------------|--|
| 7664-38-2 | 231-633-2 | phosphoric acid ...% | < 5 | C R34 |
| 67-63-0 | 200-661-7 | propan-2-ol | < 10 | F R11; Xi R36; R67 |
| 62-56-6 | 200-543-5 | thiourea | 5 - 10 | Carc.Cat.3 R40; Repr.Cat.3 R63; Xn R22; N R51/53 |

| CAS No | EC No | Name | [% weight] | Classification according to Regulation (EC) No 1272/2008 [CLP/ GHS] |
|-----------|-----------|----------------------|------------|--|
| 7664-38-2 | 231-633-2 | phosphoric acid ...% | < 5 | Met. Corr. 1, H290 / Acute Tox. 4, H302 / Skin Corr. 1B, H314 / Eye Dam. 1, H318 |
| 67-63-0 | 200-661-7 | propan-2-ol | < 10 | Flam. Liq. 2, H225 / Eye Irrit. 2, H319 / STOT SE 3, H336 |
| 62-56-6 | 200-543-5 | thiourea | 5 - 10 | Carc. 2, H351 / Repr. 2, H361d / Acute Tox. 4, H302 / Skin Sens. 1, H317 / Aquatic Chronic 2, H411 |

REACH

| CAS No | Name | REACH registration number |
|-----------|----------------------|----------------------------------|
| 7664-38-2 | phosphoric acid ...% | 01-2119485924-24 |
| 67-63-0 | propan-2-ol | 01-2119457558-25 |
| 62-56-6 | thiourea | Not yet available from supplier. |

! SECTION 4: First aid measures

4.1. Description of first aid measures

General information

Remove contaminated soaked clothing immediately.

In case of inhalation

In case of inhalation of mist seek medical advice.

In case of skin contact

In case of contact with skin wash off immediately with soap and 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.

Refer to 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 dangers

Risk of the aspiration of the lung.

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

Alcohol-resistant foam

Dry powder

Carbon dioxide

Water spray jet

Unsuitable extinguishing media

no

5.2. Special hazards arising from the substance or mixture

Risk of formation of toxic pyrolyse products.

In the event of fire the following can be released:

Nitrogen gases (NO_x)

Carbon monoxide (CO)

Phosphorus oxides (e.g. phosphoruspentoxide)

Sulfur oxide

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

Use personal protection.

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

! For emergency responders

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.

6.3. Methods and material for containment and cleaning up

Take up with absorbent material (e.g. sand, kieselguhr, acid binder, general-purpose binder, sawdust).

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

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.

Wash hands before breaks and after work.

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 acid-resistant floor.

Keep only in original container.

! Advice on storage compatibility

Do not store with alkalies.

Further information on storage conditions

Keep barrel tightly closed.

Keep locked up, out of reach of children

Protect from heat and direct solar radiation.

Keep under lock and key or accessible only to specialists or people authorized by them.

Do not keep at temperatures below 5°C.

Information on storage stability

Storage time: 5 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 |
|-----------|----------------------|----------------------------|-------------|------------|-------------|
| 67-63-0 | propan-2-ol | WEL, 8 hours Short-term | 999 1250 | 400 500 | R11, 36, 67 |
| 7664-38-2 | Orthophosphoric acid | WEL, 8 hours Short-term | 1 2 | | R34 |

Additional advice

8.2. Exposure controls

Hand protection

Gloves (acid-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

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.

! SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Appearance

liquid

Colour

transparent

Odour

of isopropanol

Odour threshold

propan-2-ol: 2.5 - 490 mg/m³ (1 - 196 ppm).

Important health, safety and environmental information

| | Value | Temperature | at | Method | Remark |
|---------------------------|----------------|-------------|----|-----------|-----------------------------------|
| pH value | 1,2 | 20 °C | | | |
| starts to boil | >= 78 °C | | | | |
| solidifying range | not determined | | | | |
| Flash point | ca. 40 °C | | | DIN 51755 | Does not maintain the combustion. |
| Flammable (solid) | not applicable | | | | |
| Flammability (gas) | not applicable | | | | |



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elma noble clean

| | Value | Temperature | at | Method | Remark |
|--|---|-------------|----|--------|-----------------------------|
| Ignition temperature | 425 °C | | | | Value of propan-2-ol. |
| Self ignition temperature | | | | | not spontaneously flammable |
| Lower explosion limit | 2 Vol-% | | | | Value of propan-2-ol. |
| Upper explosion limit | ca. 12 Vol-% | | | | Value of propan-2-ol. |
| Vapour pressure | ca. 31 hPa | 20 °C | | | |
| Relative density | 1,022 g/cm ³ | 20 °C | | | |
| Vapour density | 2,07 | | | | Value of propan-2-ol. |
| Solubility in water | | | | | miscible |
| Solubility/other | not determined | | | | |
| Partition coefficient n-octanol/water (log P O/W) | 0,05 | 20 °C | | | Value of propan-2-ol. |
| Decomposition temperature | > 78 °C | | | | |
| Viscosity | not determined | | | | |
| Solvent concentration | < 10 Gew-% | | | | |
| ! Vapourisation rate | 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

No hazardous reactions known if used as directed.

10.2. Chemical stability

Stable at ambient temperature.



10.3. Possibility of hazardous reactions

Reactions with oxidising agents.

Reactions with strong alkalis.

10.4. Conditions to avoid

Heat and direct solar radiation.

10.5. Incompatible materials

! Materials to avoid

Reactions with oxidising agents.

Corrodes aluminium.

Reactions with strong alkalis.

10.6. Hazardous decomposition products

Possible in traces: Hydrogen sulphide (H₂S).

! SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity/Irritability/Sensitization

| | Value/Validation | Species | Method | Remark |
|------------------------------|---------------------|---------|-------------------------------|---------|
| LD50 acute oral | > 5000 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 | low irritant effect | | | |
| Irritability eye | irritant | | | |
| Skin sensitization | 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.

The mixture is classified as carcinogen: Carc. 2 H351: Suspected of causing cancer.

The mixture is classified as reproductive toxicant: Repr. 2 H361d: Suspected of damaging the unborn child.

thiourea : LD50(oral, rat): 1750 mg/kg, LD50(dermal, rabbit): > 2800 mg/kg .

Experiences made from practice

Has a degreasing effect on the skin.

Frequent persistent contact with the skin may cause skin irritation.



! SECTION 12: Ecological information

12.1. Toxicity

Ecotoxicological effects

| | Value | Species | Method | Validation |
|-----------------|-----------------------|--------------------|------------|-------------------------|
| Fish | LC50 53 mg/l | | calculated | |
| Daphnia | EC50 46 mg/l | | calculated | |
| Algae | EC50 37 mg/l | | calculated | |
| Bacteria | EC10 1265 mg/l (18 h) | Pseudomonas putida | | Value of pure thiourea. |

12.2. Persistence and degradability

| | | | | |
|---------------------------------------|-------|--|--------------------------------|---|
| Physico-chemical degradability | 100 % | | Neutralization, pH-measurement | Acid properties can be eliminated up to 100% by neutralization. |
| Biological degradability | | | | Moderately/partially biodegradable |

The product is biodegradable after lengthy adaptation.

12.3. Bioaccumulative potential

propan-2-ol: Accumulation in organisms is not expected (log Pow: 0.05).
phosphoric acid: Accumulation in organisms is not expected.
thiourea: Accumulation in organisms is not expected (log Pow: -0.92).

12.4. Mobility in soil

propan-2-ol: Dissolves in water. Highly mobile in soil.
phosphoric acid: not available.
thiourea: 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. 205 mgO ₂ /g | calculated | |
| BOD 5 d | 13 mgO ₂ /g | | Value of pure thiourea. |
| 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 3 H402: Harmful 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.

20 01 29*

Name of waste

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.

Neutralize with alkalis or lime.

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 1805 | UN 1805 | UN 1805 |
| 14.2. UN proper shipping name | PHOSPHORIC ACID, SOLUTION | PHOSPHORIC ACID SOLUTION | PHOSPHORIC ACID, 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 + 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 5,3 %

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: 1.4

Sources of key data used

Own measurements.

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

- R 11 Highly flammable.
- R 22 Harmful if swallowed.
- R 34 Causes burns.
- R 36 Irritating to eyes.
- R 40 Limited evidence of a carcinogenic effect.
- R 51/53 Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
- R 63 Possible risk of harm to the unborn child.
- R 67 Vapours may cause drowsiness and dizziness.

- H225 Highly flammable liquid and vapour.
- H290 May be corrosive to metals.
- H302 Harmful if swallowed.
- H314 Causes severe skin burns and eye damage.
- H317 May cause an allergic skin reaction.
- H318 Causes serious eye damage.
- H319 Causes serious eye irritation.
- H336 May cause drowsiness or dizziness.
- H351 Suspected of causing cancer (state route of exposure if it is conclusively proven that no other routes of exposure cause the hazard).
- H361d Suspected of damaging 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).
- H411 Toxic to aquatic life with long lasting effects.