



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

1.1. Product identifier

Name of product elma wf pro

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

Uses advised against

Remark

Do not use for injecting or spraying.

Recommended intended purpose(s)

Ready for use water-free cleaning solution for disassembled and assembled clockwork and for metallic precision parts.

This data sheet holds beginning from lot-No. 04, week 34, 2013.

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

R10

N; R51/53

Xn; R65

R66

R67

R-phrases

10

Flammable.

51/53

Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

65

Harmful: may cause lung damage if swallowed.

66

Repeated exposure may cause skin dryness or cracking.

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.

Xn Harmful
N Dangerous for the environment



R-phrases

10 Flammable.
51/53 Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
65 Harmful: may cause lung damage if swallowed.
66 Repeated exposure may cause skin dryness or cracking.
67 Vapours may cause drowsiness and dizziness.

S-phrases

16 Keep away from sources of ignition - No smoking.
23 Do not breathe vapour.
24/25 Avoid contact with skin and eyes.
61 Avoid release to the environment. Refer to special instructions/safety data sheets.
62 If swallowed, do not induce vomiting: seek medical advice immediately and show this container or label.

Hazardous ingredients for labeling

mixture of hydrocarbons

2.3. Other hazards

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

Mixture of aliphatic, isoaliphatic and aromatic hydrocarbons (C9-C12) with additives of soap, ammonia and alkoxy.

Hazardous ingredients

CAS No	EC No	Name	[% weight]	Classification according to 67/548/EEC
64742-82-1	919-446-0	Mixture of hydrocarbons [Hydrocarbons, C9-C12, n-alkanes, isoalkanes, cyclics, aromatics (2-25%)]	90 - 100	R10; Xn R65; R66; R67; N R51/53
71-36-3	200-751-6	n-butanol	< 5	R10; Xn R22; Xi R37/38-41; R67
556-82-1	209-141-4	3-Methylbut-2-en-1-ol	< 5	R10; Xn R22; C R34
1336-21-6	215-647-6	ammonia%	< 1	C R34; N R50



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Hazardous ingredients (continued)

CAS No	EC No	Name	[% weight]	Classification according to Regulation (EC) No 1272/2008 [CLP/GHS]
64742-82-1	919-446-0	Mixture of hydrocarbons [Hydrocarbons, C9-C12, n-alkanes, isoalkanes, cyclics, aromatics (2-25%)]	90 - 100	Flam. Liq. 3, H226 / Asp. Tox. 1, H304 / STOT SE 3, H336 / , EUH066 / Aquatic Chronic 2, H411
71-36-3	200-751-6	n-butanol	< 5	Flam. Liq. 3, H226 / Acute Tox. 4, H302 / Skin Irrit. 2, H315 / Eye Dam. 1, H318 / STOT SE 3, H335 / STOT SE 3, H336
556-82-1	209-141-4	3-Methylbut-2-en-1-ol	< 5	Flam. Liq. 3, H226 / Acute Tox. 4, H302 / Skin Corr. 1C, H314 / Eye Dam. 1, H318
1336-21-6	215-647-6	ammonia%	< 1	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

REACH

CAS No	Name	REACH registration number
64742-82-1	Mixture of hydrocarbons [Hydrocarbons, C9-C12, n-alkanes, isoalkanes, cyclics, aromatics (2-25%)]	01-2119458049-33
71-36-3	n-butanol	Not yet available from supplier.
556-82-1	3-Methylbut-2-en-1-ol	01-2119438442-43
1336-21-6	ammonia%	Not yet available from supplier.

SECTION 4: First aid measures

4.1. Description of first aid measures

General information

Remove contaminated soaked clothing immediately and dispose it safely.
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 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.
Call for a doctor immediately.
If swallowed seek medical advice immediately and show the doctor packing or label.

4.2. Most important symptoms and effects, both acute and delayed

Physician's information / possible symptoms

Dizziness

Physician's information / possible dangers

Risk of the aspiration of the lung.
In case of ingestion risk of pulmonary oedema and pneumonia.



4.3. Indication of any immediate medical attention and special treatment needed

Treatment (Advice to doctor)

Continue to monitor for pneumonia and pulmonary oedema.
If swallowed, flush stomach adding activated charcoal.
If swallowed or in the event of vomiting, risk of entering the lungs.
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
Carbon dioxide
Water spray jet

Unsuitable extinguishing media

Full water jet

5.2. Special hazards arising from the substance or mixture

In the event of fire the following can be released:
Carbon monoxide (CO)
Flammable vapor-air-mixture are more heavy than air. Inflammation over far distance is possible.

5.3. Advice for firefighters

Special protective equipment for fire-fighters

Do not inhale explosion and/or combustion gases.

Additional information

Cool endangered containers with water spray jet.
Collect contaminated firefighting water separately, must not be discharged into the drains.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Ensure adequate ventilation.
Use personal protection.
Keep away sources of ignition.

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

Send in suitable containers for recovery or disposal.
Take up with absorbent material (e.g. kieselguhr).

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

Avoid formation of aerosols.
Open and handle container with care!
Keep container tightly closed.
Provide good room ventilation even at ground level (vapours are heavier than air).
Use only in well-ventilated areas.
Use solvent-resistant equipment.
Keep limited supplies at workplace.

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

Keep away from sources of ignition
Vapours can form an explosive mixture with air.
Ignitable mixtures can be formed in the empty container.
Take precautionary measures against static discharges.

7.2. Conditions for safe storage, including any incompatibilities

Requirements for storage rooms and vessels

Ventilate store-rooms thoroughly.
Keep only in unopened original container.

Advice on storage compatibility

Do not store together with oxidizing agents.

Further information on storage conditions

Keep locked up, out of reach of children
Protect from heat and direct solar radiation.
Keep container dry, tightly closed and store at cool and aired place.
Do not store at temperature above 25°C (=77°F).
Keep under lock and key or accessible only to specialists or people authorized by them.

Information on storage stability

Storage time: 24 months.

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
71-36-3	butan-1-ol	WEL, 8 hours Short-term	154	50	Sk, R10-22- 37/38-41-67

Additional advice

Occupational exposure limits for mixtures of hydrocarbons.



8.2. Exposure controls

Respiratory protection

In case of insufficient ventilation or long-term effect use breathing apparatus.

Hand protection

Gloves (solvent-resistant)

Glove material specification [make/type, thickness]: FKM, 0,4mm.

Glove material specification [make/type, thickness]: NBR, 0,35mm.

Eye protection

safety goggles

Limitation and surveillance of the environment

Avoid penetration into the subsoil/soil.

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

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 beige up to light brown

Odour

of ammonia and solvent-like

Odour threshold

n-butanol: 0.012 - 150 mg/m³.

3-methylbut-2-en-1-ol: < 100 ppm (< 358 mg/m³).

ammonia: 5ppm (3.5mg/m³).

Important health, safety and environmental information

	Value	Temperature	at	Method	Remark
pH value in delivery state	not applicable				
boiling range	116 - 200 °C				
solidifying range	< -15 °C				
Flash point	30 - 34 °C				
Flammable solid	not applicable				
Flammability (gas)	not applicable				
Ignition temperature	> 200 °C				
Autoignition					no
Lower explosion limit	0,6 Vol-%				
Upper explosion limit	ca. 7,0 Vol-%				
Vapour pressure	<= 7 hPa	20 °C			
Relative density	0,78 - 0,8 g/ cm ³	20 °C			
Vapour density	> 1				



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	Value	Temperature	at	Method	Remark
Solubility in water					~6% are water-soluble.
Partition coefficient (log p_{OW})	ca. 3,2 - 7				Value of hydrocarbon components.
Viscosity	ca. 1,2 mm ² /s	20 °C			
Solvent concentration	96,1 %				
Vapourisation rate	Mixture of hydrocarbons: 0.16 (ASTM D3539). n-butanol: 0.44 (ASTM D3539).				

Oxidising properties

no

Explosive properties

Not classified as explosive. Vapours can form an explosive mixture with air.

9.2. Other information

Vapours are heavier than air.

SECTION 10: Stability and reactivity

10.1. Reactivity

No further hazardous reactions known if used as directed.

Vapours can form an explosive mixture with air.

10.2. Chemical stability

Stable at ambient temperature.

10.3. Possibility of hazardous reactions

Reactions with oxidising agents.

10.4. Conditions to avoid

Heat and direct solar radiation.

Evolution of flammable mixtures possible in air when heated above flash point and/or during spraying or misting.

10.5. Incompatible materials

Materials to avoid

Reactions with oxidising agents.

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	> 5000 mg/kg		ATE (acute toxicity estimate)	



	Value/Validation	Species	Method	Remark
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 - not necessary to label			The product was classified on the basis of the calculation procedure of the preparation directive (1999/45/EC).
Irritability eye	low irritant - no labeling duty			The product was classified on the basis of the calculation procedure of the preparation directive (1999/45/EC).
Skin sensitization	non-sensitizing			

Specific target organ toxicity (single exposure)

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

Specific target organ toxicity (repeated exposure)

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

Aspiration hazard

Aspiration hazard: Asp. Tox. 1 H304: May be fatal if swallowed and enters airways.

Toxicity test (Additional information)

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

Hydrocarbons, C9-C12, n-alkanes, isoalkanes, cyclics, aromatics (2-25%) : Causes damage to the Central nervous system (CNS) through prolonged or repeated exposure via inhalation.

benzene: < 10 ppm.

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 10,1 mg/l		calculated	NOELR: 0,1 - 0,2 mg/l.
Daphnia	EC50 10,8 mg/l		calculated	NOELR: ~0,3 mg/l.
Algae	EC50 4,5 mg/l		calculated	

12.2. Persistence and degradability**Physico-chemical degradability**

90 %

Activated charcoal adsorption

Biological degradability

readily degradable

**12.3. Bioaccumulative potential**

Hydrocarbons, C9-C12, n-alkanes, isoalkanes, cyclics, aromatics (2-25%): Has the potential to bioaccumulate.

n-butanol: Significant accumulation in organisms is not expected (log Pow: 0.88).

3-methylbut-2-en-1-ol: Significant accumulation in organisms is not expected (log Pow: 0.91).

ammonia: Accumulation in organisms is not expected.

12.4. Mobility in soil

Hydrocarbons, C9-C12, n-alkanes, isoalkanes, cyclics, aromatics (2-25%): Floats on water surface. Is adsorbed by soil and is of low mobility.

3-methylbut-2-en-1-ol: From the water surface the substance is gradually evaporated in the atmosphere.

Adsorption on soil is not expected.

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

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
AOX	The product does not contain any organically bound halogens according to the recipe.		

General regulation

Do not allow uncontrolled leakage of product into the environment.

Product is not allowed to be discharged into the ground water or aquatic environment.

SECTION 13: Disposal considerations**13.1. Waste treatment methods****Waste code No.**

14 06 03*

Name of waste

other solvents and solvent mixtures

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

Recommendations for the product

For recycling consult manufacturer.

Do not dispose with household waste. Do not discharge into the drains.

Material recycling possible.

Incinerate in suitable incineration plant, but care for official regulations.

Recommendations for packaging

Uncontaminated packaging may be taken for recycling.

Contaminated packaging should be emptied as far as possible and after appropriate cleansing may be taken for reuse.

SECTION 14: Transport information**Land and inland navigation transport ADR/RID**

UN 3295 HYDROCARBONS, LIQUID, N.O.S., 3, III, (D/E), ENVIRONMENTALLY HAZARDOUS

Marine transport IMDG

UN 3295 HYDROCARBONS, LIQUID, N.O.S., 3, III

MARINE POLLUTANT: Yes

Air transport ICAO/IATA-DGR

UN 3295 HYDROCARBONS, LIQUID, N.O.S., 3, III

ENVIRONMENTALLY HAZARDOUS: Yes



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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 96,1 %

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 22 Harmful if swallowed.

R 34 Causes burns.

R 37/38 Irritating to respiratory system and skin.

R 41 Risk of serious damage to eyes.

R 50 Very toxic to aquatic organisms.

R 51/53 Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

R 65 Harmful: may cause lung damage if swallowed.

R 66 Repeated exposure may cause skin dryness or cracking.

R 67 Vapours may cause drowsiness and dizziness.

EUH066 Repeated exposure may cause skin dryness or cracking.

H226 Flammable liquid and vapour.

H290 May be corrosive to metals.

H302 Harmful if swallowed.

H304 May be fatal if swallowed and enters airways.

H314 Causes severe skin burns and eye damage.

H315 Causes skin irritation.

H318 Causes serious eye damage.

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.