



elma tec clean A1

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Version 1.8 (en)
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SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1 Product identifier

Trade name/designation elma tec clean A1
Unique Formula Identifier UFI: CN40-H01H-H004-J3NC
Product category PC-CLN-OTH Other cleaning, care and maintenance products (excludes biocidal products)

Hazard components

n-propanol, Sulfonic acids, C14-17-sec-alkane, sodium salts, isotridecanol, ethoxylated

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

Sector of uses [SU]

SU22 Professional uses: Public domain (administration, education, entertainment, services, craftsmen)
SU3 Industrial uses

Process categories [PROC]

PROC8a Transfer of substance or mixture (charging and discharging) at non- dedicated facilities
PROC9 Transfer of substance or mixture into small containers (dedicated filling line, including weighing)
PROC13 Treatment of articles by dipping and pouring

Environmental release categories [ERC]

ERC8a Widespread use of non-reactive processing aid (no inclusion into or onto article, indoor)

Product Categories [PC]

PC35 Washing and cleaning products

Use of the substance/mixture

Mildly alkaline emulgating cleaning concentrate for glas and printed circuit boards (PCB's).

1.3 Details of the supplier of the safety data sheet

Supplier

Elma Schmidbauer GmbH
Gottlieb-Daimler-Str. 17
D-78224 Singen (Htwl.)
Telephone +49 7731 882-0
Telefax +49 7731 882-266
E-mail info@elma-ultrasonic.com
Website www.elma-ultrasonic.com

Department responsible for information:
Chemie/Labor: Email: chemlab@elma-ultrasonic.com

1.4 Emergency telephone number

Vergiftungs-Informations-Zentrale Freiburg (Sprache/Language: DE, +49 761 19240 EN)

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

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

Eye Dam. 1, H318 Calculation method.

Hazard statements for health hazards

H318 Causes serious eye damage.

2.2 Label elements

Labelling according to Regulation (EC) No. 1272/2008 [CLP]

Hazard components

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Hazard pictograms



GHS05

Signal word
Danger

Hazard statements
H318 Causes serious eye damage.

Precautionary statements
P280 Wear eye protection/face protection.
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.
P301 + P310 IF SWALLOWED: Immediately call a POISON CENTER/doctor.
P331 Do NOT induce vomiting.
P332 + P313 If skin irritation occurs: Get medical advice/attention.

Other labelling
Labelling for contents according to regulation (EC) No. 648/2004:
5 - 15% anionic surfactants
< 5% non-ionic surfactants

2.3 Other hazards

Adverse human health effects and symptoms
Skin Irrit. 3 H316: Causes mild skin irritation.
This product does not contain a substance that has endocrine disrupting properties with respect to humans as no components meets the criteria.

Adverse environmental effects
Aquatic Acute 3 H402: Harmful to aquatic life.
This product does not contain a substance that has endocrine disrupting properties with respect to non-target organisms as no components meets the criteria.

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**

Hazardous ingredients

CAS No.	EC No.	Substance name	Concentration	Classification according to Regulation (EC) No 1272/2008 [CLP]	SCL/ M/ ATE
71-23-8	200-746-9	n-propanol	< 15 weight-%	Flam. Liq. 2; H225 Eye Dam. 1; H318 STOT SE 3; H336	
97489-15-1	307-055-2	Sulfonic acids, C14-17-sec-alkane, sodium salts	5 < 10 weight-%	Acute Tox. 4; H302 Skin Irrit. 2; H315 Eye Dam. 1; H318 Aquatic Chronic 3; H412	Skin Irrit. 2; H315: C>10% Eye Dam. 1; H318: C>15% Eye Irrit. 2; H319: 10%<C=<15%



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

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CAS No.	EC No.	Substance name	Concentration	Classification according to Regulation (EC) No 1272/2008 [CLP]	SCL/ M/ ATE
69011-36-5	931-138-8	isotridecanol, ethoxylated	< 5 weight-%	Acute Tox. 4; H302 Eye Dam. 1; H318	Eye Dam. 1; H318: C>10% Eye Irrit. 2; H319: 1%<C<=10% ATE(oral): 500 mg/kg

REACH No.	Substance name
01-2119486761-29	n-propanol
01-2119489924-20	Sulfonic acids, C14-17-sec-alkane, sodium salts
Not relevant (polymer).	isotridecanol, ethoxylated

Additional information

Aqueous, mildly alkaline mixture with anionic and nonionic surfactants, complexing agent and added solvent.

SECTION 4: First aid measures

4.1 Description of first aid measures

General information

Remove contaminated, saturated clothing immediately.

Following skin contact

In case of contact with skin wash off with warm water.

In case of skin irritation, consult a physician.

After eye contact

After contact with the eyes, rinse with water with the eyelids open for a sufficient length of time, then consult an ophthalmologist immediately.

Following ingestion

Do NOT induce vomiting.

If swallowed seek medical advice immediately and show the doctor packing or label.

Rinse mouth immediately and drink plenty of water.

Medical treatment necessary.

4.2 Most important symptoms and effects, both acute and delayed

Symptoms

No further informations available.

4.3 Indication of any immediate medical attention and special treatment needed

Notes for the doctor

No further informations available.

SECTION 5: Firefighting measures

5.1 Extinguishing media

Suitable extinguishing media

Water

alcohol resistant foam

Extinguishing powder

Carbon dioxide (CO₂)

Water spray jet



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5.2 Special hazards arising from the substance or mixture

Hazardous combustion products

In case of fire formation of dangerous gases possible.
In the event of fire the following can be released:
Nitrogen oxides (NOx)
Carbon monoxide
Sulphur dioxide (SO₂)

5.3 Advice for firefighters

Special protective equipment for firefighters

Do not inhale explosion and combustion gases.

Additional information

Co-ordinate fire-fighting measures to the fire surroundings.
The product itself does not burn.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

For non-emergency personnel

Use personal protection equipment.
Special danger of slipping by leaking/spilling product.

For emergency responders

Ensure adequate ventilation.
Personal protection equipment
Use personal protection.
Special danger of slipping by leaking/spilling product.

6.2 Environmental precautions

Do not allow to enter into surface water or drains.

6.3 Methods and material for containment and cleaning up

For containment

Suitable material for taking up:
Sand
Sawdust
Universal binder
Kieselguhr
Flush away residues with water.
After taking up the material dispose according to regulation.

6.4 Reference to other sections

Safe handling: see section 7
Personal protection equipment: see section 8

SECTION 7: Handling and storage

7.1 Precautions for safe handling

Protective measures

Handle and open container with care.
Take the usual precautions when handling with chemicals.
Avoid contact with eyes and skin.
No special fire protection measures are necessary.

Advices on general occupational hygiene

Make available sufficient washing facilities
Keep away from food and drink.



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7.2 Conditions for safe storage, including any incompatibilities

Requirements for storage rooms and vessels

Keep/Store only in original container.
Keep container tightly closed.

Storage class

12 non-combustible liquids that cannot be assigned to any of the above storage classes

Further information on storage conditions

Keep locked up and 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.
Storage time: 5 years.

7.3 Specific end use(s)

Recommendation
no further

*** SECTION 8: Exposure controls/personal protection**

*** 8.1 Control parameters**

*** Occupational exposure limit values**

CAS No.	EC No.	Substance name	occupational exposure limit value
71-23-8	200-746-9	Propan-1-ol	10 [ml/m ³ (ppm)] (IE)
71-23-8	200-746-9	Propan-1-ol	200 [ml/m ³ (ppm)] 500 [mg/m ³] Short-term(ml/m ³) 250 Short-term(mg/m ³) 625 (UK)

*** DNEL worker**

CAS No.	Substance name	DNEL value	DNEL type	Remark
97489-15-1	Sulfonic acids, C14-17-sec-alkane, sodium salts	5 mg/kg bw/day	long-term dermal (systemic)	Assessment factor 40
71-23-8	n-propanol	136 mg/kg bw/day	long-term dermal (systemic)	
71-23-8	n-propanol	268 mg/m ³	long-term inhalative (systemic)	Assessment factor 7.5
97489-15-1	Sulfonic acids, C14-17-sec-alkane, sodium salts	35 mg/m ³	long-term inhalative (systemic)	Assessment factor 10

*** PNEC**

CAS No.	Substance name	PNEC Value	PNEC type	Remark
97489-15-1	Sulfonic acids, C14-17-sec-alkane, sodium salts	0.06 mg/L	aquatic, freshwater	Assessment factor 10
97489-15-1	Sulfonic acids, C14-17-sec-alkane, sodium salts	600 mg/L	sewage treatment plant (STP)	Assessment factor 1
71-23-8	n-propanol	6.83 mg/L	aquatic, freshwater	Assessment factor 10
71-23-8	n-propanol	96 mg/L	sewage treatment plant (STP)	Assessment factor 100

*** 8.2 Exposure controls**

*** Appropriate engineering controls**

*** Technical measures to prevent exposure**

Technical exhaustion for long-term expositions or higher bath temperatures.



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Personal protection equipment

Eye/face protection
tightly fitting goggles

Environmental exposure controls

Technical measures to prevent exposure

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 information

Occupational exposure limits of n-propanol.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Physical state
liquid

Colour
yellowish

Odour
like:
Alcohol

Safety relevant basis data

	Value	Method	Source, Remark
Odour threshold:			1-propanol: 0.075 - 150 mg/m ³ (0.03 - 60 ppm).
Melting point/freezing point	solidifying range < 0 °C		
Boiling point or initial boiling point and boiling range	≥ 88 °C		Azeotropic
flammability	solid		not applicable
flammability	gaseous		not applicable
Lower and upper explosion limit	Upper explosion limit 13.5 Vol-%		Value of 1-propanol.
Lower and upper explosion limit	Lower explosion limit 2.1 Vol-%		Value of 1-propanol.
Flash point	37.5 °C	DIN EN ISO 13736	Does not maintain the combustion.
Auto-ignition temperature	360 °C		Value of 1-propanol.
Decomposition temperature	≥ 88 °C		
pH	in delivery state approx. 10.6 (20°C)		
Viscosity	dynamic 4.9 mPa*s (20°C)		
Solubility(ies)	Water solubility		miscible
Partition coefficient n-octanol/water (log value)	0.34		Value of 1-propanol.
Vapour pressure	23- 43 hPa (20°C)		
Density and/or relative density	1.018 g/cm ³ (20°C)		
Relative vapour density	2.07		Value of 1-propanol.



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	Value	Method	Source, Remark
particle characteristics			not applicable (liquid).

9.2 Other information

Information with regard to physical hazard classes

Explosives

Assessment/classification

The mixture does not contain any explosive substances (CLP I 2.1.4.3 a).
CLP I 2.1.4.3 a: The classification procedure needs not to be applied because there are no chemical groups present in the molecule which are associated with explosive properties.

flammable gases

Assessment/classification

not applicable (liquid).

Aerosols

Assessment/classification

not relevant - no aerosol.
The classification criteria for this hazard class are not met by definition.

Oxidising gas

Assessment/classification

not applicable (liquid).

Gases under pressure

Assessment/classification

not applicable (liquid - no dissolved gas).

flammable liquids

Assessment/classification

Flash point > 35 °C, does not maintain the combustion.
The mixture is not classified as flammable liquids.

flammable solids

Assessment/classification

not applicable (liquid).

Self-reactive substances and mixtures

Assessment/classification

The mixture does not contain any self-reactive substances (CLP I 2.8.4.2 a).
CLP I 2.8.4.2 a: There are no chemical groups present in the molecule associated with explosive or self reactive properties.

Pyrophoric liquids

Assessment/classification

The mixture does not contain any pyrophoric substances - not spontaneously flammable (CLP I 2.9.4.1).
CLP I 2.9.4.1: The classification procedure for pyrophoric liquids need not be applied when experience in manufacture or handling shows that the substance or mixture does not ignite spontaneously on coming into contact with air at normal temperatures (i.e. the substance is known to be stable at room temperature for prolonged periods of time (days)).

Pyrophoric solids

Assessment/classification

not applicable (liquid).

self-heating substances and mixtures

Assessment/classification

The mixture does not contain any self-heating substances.



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Substances or mixtures which, in contact with water, emit flammable gases

Assessment/classification

not relevant - in contact with water releases no flammable gases (CLP I 2.12.4.1).
CLP I 2.12.4.1: The classification procedure for this class need not be applied if: (a) the chemical structure of the substance or mixture does not contain metals or metalloids; or (b) experience in production or handling shows that the substance or mixture does not react with water, e.g. the substance is manufactured with water or washed with water; or (c) the substance or mixture is known to be soluble in water to form a stable mixture.

Oxidising liquids

Assessment/classification

The mixture does not contain any oxidising substances.

Oxidising solids

Assessment/classification

not applicable (liquid).

Organic peroxides

Assessment/classification

The mixture does not contain any organic peroxides.

Corrosive to metals

Safety characteristics

	Value	Method, Result	Source, Remark
Corrosion rate (mm aluminium/year)	< 6.25 mm/a	Expert judgement and weight of evidence determination.	
Corrosion rate (mm steel/year)	< 6.25 mm/a	Expert judgement and weight of evidence determination.	

Assessment/classification

Based on available data, the classification criteria are not met.

Desensitised explosives

Assessment/classification

The mixture does not contain any desensitised explosive substances.

Other safety characteristics

	Value	Method	Source, Remark
Evaporation rate			Water: 0.36 (ASTM D3539).
Evaporation rate			1-propanol: 0.89 (ASTM D3539) / 16 (DIN 53170) .
Solvent content	< 15 %		
Explosive properties			none
Oxidising properties			none

Other information

No further relevant informations available.

SECTION 10: Stability and reactivity

10.1 Reactivity

Exothermic reaction with:

Acid

No further hazardous reactions known if used as directed.



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10.2 Chemical stability

Stable at ambient temperature.

10.3 Possibility of hazardous reactions

Reactions with strong oxidising agents.
Reactions with strong acids.

10.4 Conditions to avoid

Heat and direct solar radiation.

10.5 Incompatible materials

Reactions with strong acids.
Oxidising agent, strong

10.6 Hazardous decomposition products

No decomposition if used as directed.

SECTION 11: Toxicological information

11.1 Information on hazard classes as defined in Regulation (EC) No 1272/2008

Acute toxicity

Animal data

	Effective dose	Method, Evaluation	Source, Remark
Acute oral toxicity	5011 mg/kg	ATE: Acute Toxicity Estimate	
	CAS No.69011-36-5 isotridecanol, ethoxylated 500 mg/kg	ATE: Acute Toxicity Estimate	
	CAS No.97489-15-1 Sulfonic acids, C14-17-sec-alkane, sodium salts LD50: approx. 1250 mg/kg Species Rat		
Acute dermal toxicity	> 5000 mg/kg	ATE: Acute Toxicity Estimate	
Acute inhalation toxicity	Acute inhalation toxicity (vapour) > 50 mg/L	ATE: Acute Toxicity Estimate	
	CAS No.71-23-8 n-propanol Acute inhalation toxicity (vapour) LC50: > 33.8 mg/L Species Rat Exposure time 4 h		

Assessment/classification

Based on available data, the classification criteria are not met.

Skin corrosion/irritation

Animal data

Result / Evaluation	Method	Source, Remark
slightly irritant	Calculation method.	

Serious eye damage/irritation



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Animal data

Result / Evaluation	Method	Source, Remark
Causes serious eye damage.	Calculation method.	

Sensitisation to the respiratory tract

Assessment/classification

Based on available data, the classification criteria are not met.

Skin sensitisation

Animal data

Result / Evaluation	Dose / Concentration	Method	Source, Remark
not sensitising.		Calculation method.	

Germ cell mutagenicity

Assessment/classification

Based on available data, the classification criteria are not met.

Carcinogenicity

Assessment/classification

Based on available data, the classification criteria are not met.

Reproductive toxicity

Assessment/classification

Based on available data, the classification criteria are not met.

Overall Assessment on CMR properties

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

STOT-single exposure

STOT SE 1 and 2

Assessment/classification

The mixture is not classified as specific target organ toxicant (single exposure).
Based on available data, the classification criteria are not met.

STOT SE 3

Irritation to respiratory tract

Assessment/classification

Based on available data, the classification criteria are not met.

Narcotic effects

Assessment/classification

Based on available data, the classification criteria are not met.

STOT-repeated exposure

Assessment/classification

The mixture is not classified as specific target organ toxicant (repeated exposure).
Based on available data, the classification criteria are not met.

Aspiration hazard

Assessment/classification

The mixture is not classified as aspiration hazardous.
Based on available data, the classification criteria are not met.

Remark

1-propanol: Asp. Tox. 2 H305: May be harmful if swallowed and enters airways.



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11.2 Information on other hazards

Symptoms related to the physical, chemical and toxicological characteristics

	Effective dose	Method,Evaluation	Source, Remark
Endocrine disrupting properties			This product does not contain a substance that has endocrine disrupting properties with respect to humans as no components meets the criteria.

Other information

Has degreasing effect on the skin.

SECTION 12: Ecological information

12.1 Toxicity

Aquatic toxicity

	Effective dose	Method,Evaluation	Source, Remark
Acute (short-term) fish toxicity	LC50: 14.8 mg/L	calculated.	
	CAS No.97489-15-1 Sulfonic acids, C14-17-sec-alkane, sodium salts LC50: 2.8 mg/L		
Chronic (long-term) fish toxicity	CAS No.97489-15-1 Sulfonic acids, C14-17-sec-alkane, sodium salts NOEC 0.85 mg/L Species Oncorhynchus mykiss (Rainbow trout) Test duration 28 d	OECD 204	
Acute (short-term) toxicity to crustacea	EC50 19 mg/L	calculated.	
	CAS No.97489-15-1 Sulfonic acids, C14-17-sec-alkane, sodium salts EC50 9.2 mg/L Species Daphnia magna (Big water flea) Test duration 48 h	OECD 202	
Chronic (long-term) toxicity to aquatic invertebrate	CAS No.97489-15-1 Sulfonic acids, C14-17-sec-alkane, sodium salts NOEC 0.36 mg/L Species Daphnia magna (Big water flea) Test duration 22 d		
Acute (short-term) toxicity to algae and cyanobacteria	EC50 21 mg/L	calculated.	
	CAS No.97489-15-1 Sulfonic acids, C14-17-sec-alkane, sodium salts EC50 62.1 mg/L Species Scenedesmus subspicatus Test duration 72 h		
Chronic (long-term) toxicity to aquatic algae and cyanobacteria	not determined		
Toxicity to other aquatic plants/organisms	not determined		
Toxicity to microorganisms	not determined		



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Assessment/classification

Harmful to aquatic life.

12.2 Persistence and degradability

	Value	Method	Source, Remark
Biodegradation	Degradation rate > 90 %	calculated.	DOC reduction Readily biodegradable (according to OECD criteria).
Biodegradation	Degradation rate 100 %	Neutralization, pH- measurement	
Biodegradation	Degradation rate 83- 92 % Test duration 28 d	OECD 301F/ ISO 9408/ EEC 92/69/V, C.4-D	CAS No.71-23-8 n- propanol
Biodegradation	Degradation rate > 60 % Test duration 28 d	OECD 301B/ ISO 9439/ EEC 92/69/V, C.4-C	CAS No.69011-36-5 isotridecanol, ethoxylated
Biodegradation	Degradation rate 89 % Test duration 28 d	OECD 301E/ EEC 92/69/V, C.4-B	CAS No.97489-15-1 Sulfonic acids, C14-17-sec- alkane, sodium salts
Biodegradation	Degradation rate 78 % Test duration 28 d	OECD 301B/ ISO 9439/ EEC 92/69/V, C.4-C	CAS No.97489-15-1 Sulfonic acids, C14-17-sec- alkane, sodium salts

12.3 Bioaccumulative potential

Assessment/classification

isotridecanol, ethoxylated: Bioaccumulation is improbable.

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

1-propanol: Accumulation in organisms is not expected (log Pow: 0.34).

12.4 Mobility in soil

Assessment/classification

isotridecanol, ethoxylated: Koc: >5000, immobile, strong adsorption on soil.

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

1-propanol: Adsorption on soil is not expected.

12.5 Results of PBT and vPvB assessment

The product does not contain any PBT-/vPvB-substances according to the recipe.

12.6 Endocrine disrupting properties

	Effective dose	Method,Evaluation	Source, Remark
Endocrine disrupting properties			This product does not contain a substance that has endocrine disrupting properties with respect to non-target organisms as no components meets the criteria.

12.7 Other adverse effects

	Value	Method	Source, Remark
Ozone depletion potential (ODP):			Based on available data, the classification criteria are not met.

Additional ecotoxicological information

	Value	Method	Source, Remark
Chemical oxygen demand (COD)	578 mgO2/g	calculated.	



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	Value	Method	Source, Remark
AOX			The product does not contain any organically bound halogens according to the recipe.

Additional information

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.

The mixture is not classified as chronic hazardous to the aquatic environment.

Do not allow uncontrolled discharge of product into the environment.

No further relevant informations available.

SECTION 13: Disposal considerations

13.1 Waste treatment methods

Waste codes/waste designations according to EWC/AVV

Waste code product	Waste name
200129 *	detergents containing hazardous substances

Appropriate disposal / 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.

Appropriate disposal / Package

Non-contaminated packages may be recycled.

SECTION 14: Transport information

	Land transport (ADR/RID)	Sea transport (IMDG)	Air transport (ICAO-TI / IATA-DGR)
14.1 UN number or ID number	-	-	-
14.2 UN proper shipping name	-	-	-
14.3 Transport hazard class(es)	-	-	-
14.4 Packing group	-	-	-
14.5 Environmental hazards	-	-	-

14.6 Special precautions for user

none

14.7 Maritime transport in bulk according to IMO instruments

not relevant

Land transport (ADR/RID)

Remark

Not classified for this transport carrier.

Sea transport (IMDG)

Remark

No hazardous material as defined by the prescriptions.



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Air transport (ICAO-TI / IATA-DGR)

Remark

No hazardous material as defined by the prescriptions.

*** SECTION 15: Regulatory information**

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

*** EU legislation**

Authorisations

not relevant

*** Restrictions on use**

Regulation (EC) No 1907/2006 (REACH), Annex XVII No 3 + 40 - not relevant if used as directed.

Regulation (EC) No 1907/2006 (REACH), Annex XVII No 75 - not relevant if used as directed.

Restrictions of occupation

Observe restrictions to employment for juvenils according to the 'juvenile work protection guideline' (94/33/EC).

Other regulations (EU)

To follow:

Regulation (EC) No. 648/2004 (Detergents regulation)

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

Directive 2010/75/EU on industrial emissions [Industrial Emissions Directive] VOC

VOC content, delivery state < 15 %

15.2 Chemical Safety Assessment

National regulations

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

SECTION 16: Other information

Abbreviations and acronyms

For abbreviations and acronyms, see: ECHA Guidance on information requirements and chemical safety assessment, chapter R.20 (Table of terms and abbreviations).

ADR: European Agreement concerning the International Carriage of Dangerous Goods by Road

ASTM: American Society for Testing and Materials

ATE: Acute Toxicity Estimate

AVV: Waste Shipment Ordinance (DE)

DGR: Dangerous Goods Regulations (IATA)

DIN: German Institute for Standardization / German Industrial Standard

DNEL: derived no-effect level

DOC: Dissolved Organic Carbon

EN: European Standard

IATA: International Air Transport Association

ICAO: International Civil Aviation Organization

IMDG: International Maritime Dangerous Goods

IMO: International Maritime Organization

ISO: International Organization for Standardization

JArbSchG: Youth Labor Protection Act (DE)

OECD: Organisation for Economic Cooperation and Development

PBT: persistent and bioaccumulative and toxic

PNEC: Predicted No Effect Concentration

RID: Dangerous goods regulations for transport by rail

SCL: Specific concentration limit

TI: Technical Instruction

TRGS: Technical Rules for Hazardous Substances

VOC: Volatile organic compounds

vPvB: very persistent, very bioaccumulative



elma tec clean A1

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Key literature references and sources for data

Own measurements.
European Chemicals Agency, <http://echa.europa.eu/>.
Informations from our suppliers.

Additional information

National and local regulations concerning chemicals shall be observed.
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.

Relevant H- and EUH-phrases (Number and full text)

H225 Highly flammable liquid and vapour.
H302 Harmful if swallowed.
H315 Causes skin irritation.
H318 Causes serious eye damage.
H336 May cause drowsiness or dizziness.
H412 Harmful to aquatic life with long lasting effects.

Indication of changes

* Data changed compared with the previous version