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

1.1 Product identifier

Trade name/designation elma clean 310 (EC 310)

Unique Formula Identifier UFI: HU20-V0J6-200Q-NXE0

Product category PC-CLN-OTH Other cleaning, care and maintenance products (excludes biocidal products)

* 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
Weakly alkaline cleaning agent.

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, EN) +49 761 19240

* SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Remark
The product is not classified as dangerous according to Regulation (EC) 1272/2008 [GHS].
The product does not require a hazard warning label according to Regulation (EC) No 1272/2008 [GHS].

* 2.2 Label elements

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

* 2.3 Other hazards

* **Adverse human health effects and symptoms**
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.
The product does not contain any PMT-/vPvM-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	Index No	Substance name	Concentration	Classification according to Regulation (EC) No 1272/2008 [CLP]	SCL/ M/ ATE
102-71-6	203-049-8		triethanolamine [2,2',2''-nitrilotriethanol]	15 - 30 weight-%		

REACH No.	Substance name
01-2119486482-31	triethanolamine [2,2',2''-nitrilotriethanol]

Additional information
Aqueous, weakly alkaline mixture of wetting agents, emulsifiers and complexing agents.

SECTION 4: First aid measures

4.1 Description of first aid measures

Following skin contact
In case of contact with skin wash off immediately with plenty of water.

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.

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

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
Phosphorus oxides

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
Personal protection equipment
Use personal protection.
Forms slippery surfaces with water.
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.

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
Avoid:
generation/formation of aerosols
Do not inhale aerosols
Care for thoroughly room ventilation.
Handle and open container with care.
Avoid contact with eyes and skin.
Take the usual precautions when handling with chemicals.
Keep the packing dry and well sealed to prevent contamination and absorbtion of humidity.
The product is not combustible.

Advices on general occupational hygiene
Make available sufficient washing facilities
Keep away from food and drink.

*** 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.

Materials to avoid
Do not store together with:
Acid

Further information on storage conditions
Keep locked up and out of reach of children.
Protect from heat and direct solar radiation.
Do not store at temperature above 25°C (=77°F).
Do not keep at temperatures below 5°C.
Storage time: 3 years.

7.3 Specific end use(s)

Recommendation
Care for thoroughly room ventilation for higher bath temperatures.

* SECTION 8: Exposure controls/personal protection

*** 8.1 Control parameters**

*** Occupational exposure limit values**

CAS No	EC No	Substance name	occupational exposure limit value
102-71-6	203-049-8	Triethanolamine	5 [mg/m³] (IE)

*** DNEL worker**

CAS No	Substance name	DNEL value	DNEL type	Remark
102-71-6	triethanolamine [2,2',2''-nitrilotriethanol]	7.5 mg/kg bw/day	long-term dermal (systemic)	Assessment factor 50
102-71-6	triethanolamine [2,2',2''-nitrilotriethanol]	1 mg/m³	long-term inhalative (local)	

*** PNEC**

CAS No	Substance name	PNEC Value	PNEC type	Remark
102-71-6	triethanolamine [2,2',2''-nitrilotriethanol]	0.32 mg/L	aquatic, freshwater	Assessment factor 50
102-71-6	triethanolamine [2,2',2''-nitrilotriethanol]	10 mg/L	sewage treatment plant (STP)	Assessment factor 100

8.2 Exposure controls

Personal protection equipment

Eye/face protection
safety goggles

Environmental exposure controls

Technical measures to prevent exposure
Avoid penetration into the subsoil/soil.
Do not discharge into surface waters.

Additional information
Occupational exposure limits for triethanolamine.

* SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Physical state
liquid

Colour
light yellow up to yellowy-brown

Odour
mild

Safety relevant basis data

	Value	Method	Source, Remark
Odour threshold:			not determined
Melting point/freezing point	solidifying range approx. 0 °C		
Boiling point or initial boiling point and boiling range	approx. 100 °C		
flammability	solid		not applicable
flammability	gaseous		not applicable
Lower and upper explosion limit	Upper explosion limit		not relevant
Lower and upper explosion limit	Lower explosion limit		not relevant
Flash point			No flash point up to 100 °C.
Auto-ignition temperature	324 °C		Value of triethanolamine.
Decomposition temperature	> 100 °C		
pH	in delivery state 7.8 (20°C) Concentration 10 g/L		
Viscosity	dynamic 2.9 mPa*s (20°C)		
Viscosity	kinematic 1.9 mm²/s (20°C)	calculated.	
Solubility(ies)	Water solubility		miscible
Partition coefficient n-octanol/water (log value)			No informations available.
Vapour pressure	approx. 23 hPa (20°C)		
Density and/or relative density	1.07 g/cm³ (20°C)		
Relative vapour density	5.13		Value of triethanolamine.
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
not flammable, not combustible (No flash point below 100°C).

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.

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**

* **Assessment/classification**
The mixture does not contain any substances corrosive to metals.
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).
Solvent content	0 %		
Explosive properties			none
Oxidising properties			none

* **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

Exothermic reaction with strong acids.
Violent reactions with strong oxidising agents.

10.4 Conditions to avoid

Heat and direct solar radiation.

10.5 Incompatible materials

Reactions with strong acids.
Oxidising agent, strong
Nitric acid

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	> 5000 mg/kg	ATE: Acute Toxicity Estimate	
Acute dermal toxicity	> 5000 mg/kg	ATE: Acute Toxicity Estimate	
Acute inhalation toxicity	Acute inhalation toxicity (vapour)		not relevant

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

Animal data

Result / Evaluation	Method	Source, Remark
slightly irritant	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
The mixture is not classified as skin sensitiser.		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.

11.2 Information on other hazards

Information on other hazards

	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: >10- 100 mg/L	calculated.	
Chronic (long-term) fish toxicity	not determined		
Acute (short-term) toxicity to crustacea	EC50 >10- 100 mg/L	calculated.	
Chronic (long-term) toxicity to aquatic invertebrate	not determined		
Acute (short-term) toxicity to algae and cyanobacteria	EC50 >10- 100 mg/L	calculated.	
Chronic (long-term) toxicity to aquatic algae and cyanobacteria	not determined		
Toxicity to other aquatic plants/organisms	not determined		
Toxicity to microorganisms	not determined		

Assessment/classification
Harmful to aquatic life.

12.2 Persistence and degradability

	Value	Method	Source, Remark
Biodegradation	Degradation rate > 80 %	OECD 302B/ ISO 9888/ EEC 92/69/V, C.9	Biodegradable.
Biodegradation	Degradation rate 100 %	Neutralization, pH-measurement	Alkaline properties can be eliminated up to 100% by neutralization.
Biodegradation	Degradation rate 96 % Test duration 19 d	OECD 301E/ EEC 92/69/V, C.4-B	CAS No102-71-6 triethanolamine [2,2',2''-nitrilotriethanol]

12.3 Bioaccumulative potential

Assessment/classification
triethanolamine: Accumulation in organisms is not expected (BCF: <0,4).

12.4 Mobility in soil

Assessment/classification
triethanolamine: Adsorption on soil is not expected (Koc: 10).

* 12.5 Results of PBT and vPvB assessment

The product does not contain any PBT-/vPvB-substances according to the recipe.
The product does not contain any PMT-/vPvM-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 oyxgen demand (COD)	321 mgO2/g		
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
200130	detergents other than those mentioned in 20 01 29

Appropriate disposal / Product
Do not dispose with household waste.
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.

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
not relevant

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 0 %

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)
DNEL: derived no-effect level
IATA: International Air Transport Association
ICAO: International Civil Aviation Organization
IMDG: International Maritime Dangerous Goods
IMO: International Maritime Organization
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
TI: Technical Instruction
VOC: Volatile organic compounds
vPvB: very persistent, very bioaccumulative

Key literature references and sources for data
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.

Indication of changes
* Data changed compared with the previous version