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

1.1 Product identifier

Trade name/designation elma clean 205 (EC 205)

Unique Formula Identifier UFI: GW70-R08M-400X-P2ST

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

*

Product Categories [PC]
PC35 Washing and cleaning products
PC14 Metal surface treatment products

Use of the substance/mixture
Aqueous neutral concentrate for ultrasonically supported removal of oxide layers (rust and scalings) from iron and steel surfaces.

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].

2.2 Label elements

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

Special rules for supplemental label elements for certain mixtures
EUH210 Safety data sheet available on request.

Other labelling
Labelling for contents according to regulation (EC) No. 648/2004:
< 5% anionic surfactants
< 5% non-ionic surfactants
15 - 30% phosphonates

* 2.3 Other hazards

*

Adverse human health effects and symptoms
Acute Tox. 5 (oral + inhalation) H303 + H333: May be harmful if swallowed or if inhaled.
Inhalation of spray may be harmful.
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**
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
67953-76-8	267-956-0		(1-hydroxyethylidene)bisphosphonic acid, potassium salt	10 - 20 weight-%	Acute Tox. 4; H302	
15763-76-5	239-854-6		sodium cumenesulphonate	< 5 weight-%	Eye Irrit. 2; H319	
164524-02-1	629-764-9		potassium cumenesulphonate	< 5 weight-%	Eye Irrit. 2; H319	

REACH No.	Substance name
01-2119510384-48	(1-hydroxyethylidene)bisphosphonic acid, potassium salt
01-2119489411-37	sodium cumenesulphonate
01-2119489427-24	potassium cumenesulphonate

* **Additional information**
Aqueous neutral mixture of of anionic and nonionic surfactants and salts of organic acids.

SECTION 4: First aid measures

4.1 Description of first aid measures

Following inhalation
In case of inhaling spray mist, consult a physician.

Following skin contact
In case of contact with skin wash off with 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.
Seek medical advice immediately.
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
Foam
Extinguishing powder
Carbon dioxide (CO2)
Water spray jet

5.2 Special hazards arising from the substance or mixture

Hazardous combustion products
Pyrolysis products, toxic
In the event of fire the following can be released:
Carbon monoxide
Phosphorus oxides
Sulphur oxides

5.3 Advice for firefighters

Special protective equipment for firefighters
Do not inhale explosion and combustion gases.
In case of fire: Wear self-contained breathing apparatus.

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.
Use breathing apparatus if exposed to vapours/dust/aerosol.
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.
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
Disposal: see section 13

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.
Do not inhale aerosols
Avoid contact with eyes and skin.
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.

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: 3 years.

7.3 Specific end use(s)

Recommendation
no further

* SECTION 8: Exposure controls/personal protection

* 8.1 Control parameters

*** DNEL worker**

CAS No	Substance name	DNEL value	DNEL type	Remark
15763-76-5	sodium cumenesulphonate	191 mg/kg bw/day	long-term dermal (systemic)	Assessment factor 100
15763-76-5	sodium cumenesulphonate	37.4 mg/m³	long-term inhalative (systemic)	Assessment factor 25
164524-02-1	potassium cumenesulphonate	191 mg/kg bw/day	long-term dermal (systemic)	Assessment factor 100
164524-02-1	potassium cumenesulphonate	37.4 mg/m³	long-term inhalative (systemic)	Assessment factor 25
67953-76-8	(1-hydroxyethylidene)bisphosphonic acid, potassium salt	34 mg/kg bw/day	long-term dermal (systemic)	Assessment factor 10
67953-76-8	(1-hydroxyethylidene)bisphosphonic acid, potassium salt	12 mg/m³	long-term inhalative (systemic)	Assessment factor 5

*** PNEC**

CAS No	Substance name	PNEC Value	PNEC type	Remark
15763-76-5	sodium cumenesulphonate	0.1 mg/L	aquatic, freshwater	Assessment factor 1000
15763-76-5	sodium cumenesulphonate	100 mg/L	sewage treatment plant (STP)	Assessment factor 10

CAS No	Substance name	PNEC Value	PNEC type	Remark
164524-02-1	potassium cumenesulphonate	0.1 mg/L	sediment, freshwater	Assessment factor 1000
164524-02-1	potassium cumenesulphonate	100 mg/L	sewage treatment plant (STP)	Assessment factor 10
67953-76-8	(1-hydroxyethylidene)bisphosphonic acid, potassium salt	0.068 mg/L	aquatic, freshwater	Assessment factor 100
67953-76-8	(1-hydroxyethylidene)bisphosphonic acid, potassium salt	40 mg/L	sewage treatment plant (STP)	Assessment factor 5

*** 8.2 Exposure controls**

*** Personal protection equipment**

Eye/face protection
safety goggles

*** Hand protection**
Hand protection by long-term hand contact.
Glove material specification [make/type, thickness]: NBR, 0.35mm.
Glove material specification [make/type, thickness]: NR, 0.5mm.

Respiratory protection
Respiratory protection necessary at:
aerosol or mist formation
Suitable respiratory protection apparatus:
Short term: filter apparatus, Filter P2

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: No relevant informations available.

* SECTION 9: Physical and chemical properties

*** 9.1 Information on basic physical and chemical properties**

Physical state
liquid

*** Colour**
yellowish up to brownish

*** Odour**
characteristic

Safety relevant basis data

	Value	Method	Source, Remark
Odour threshold:			not determined
Melting point/freezing point	solidifying range		not determined
Boiling point or initial boiling point and boiling range	≥ 100 °C		
flammability	solid		not applicable
flammability	gaseous		not applicable

	Value	Method	Source, Remark
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	> 400 °C		CAS No15763-76-5 sodium cumenesulphonate
Decomposition temperature	≥ 100 °C		
pH	in delivery state approx. 6 (20°C)		
Viscosity			not determined
Solubility(ies)	Water solubility		miscible
Partition coefficient n-octanol/water (log value)	-1.1		Value of sodium cumenesulphonate.
Vapour pressure	23 mbar (20°C)		
Density and/or relative density	1.19 g/cm³ (20°C)		
Relative vapour density	0.62		Value of Water.
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

No hazardous reactions known.

10.4 Conditions to avoid

Heat and direct solar radiation.

10.5 Incompatible materials

No hazardous reactions known.

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	4291 mg/kg	ATE: Acute Toxicity Estimate	The acute oral toxicity is corresponding to GHS-category 5.
	CAS No67953-76-8 (1-hydroxyethylidene)bisphosphonic acid, potassium salt LD50: 883.5 mg/kg Species Rat		
Acute dermal toxicity	> 5000 mg/kg	ATE: Acute Toxicity Estimate	
Acute inhalation toxicity	Acute inhalation toxicity (dust/mist) 5.9 mg/L	ATE: Acute Toxicity Estimate	
	Acute inhalation toxicity (vapour)		not relevant

Assessment/classification
May be harmful if swallowed or if inhaled.

Skin corrosion/irritation

Animal data

Result / Evaluation	Method	Source, Remark
non-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
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.

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.

* SECTION 12: Ecological information

12.1 Toxicity

Aquatic toxicity

	Effective dose	Method,Evaluation	Source, Remark
Acute (short-term) fish toxicity	LC50: 156 mg/L	calculated.	
Chronic (long-term) fish toxicity	not determined		
Acute (short-term) toxicity to crustacea	EC50 204 mg/L	calculated.	
Chronic (long-term) toxicity to aquatic invertebrate	not determined		
Acute (short-term) toxicity to algae and cyanobacteria	EC50 109 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		

* 12.2 Persistence and degradability

	Value	Method	Source, Remark
Biodegradation			Moderately/partially biodegradable.
Biodegradation	Degradation rate 99 % Test duration 28 d	OECD 301B/ ISO 9439/ EEC 92/69/V, C.4-C	CAS No15763-76-5 sodium cumenesulphonate
Biodegradation	Degradation rate > 60 % Test duration 28 d	OECD 301B/ ISO 9439/ EEC 92/69/V, C.4-C	CAS No164524-02-1 potassium cumenesulphonate
Biodegradation	Degradation rate 14 % Test duration 5 d	OECD 301D/ EEC 92/69/V, C.4-E	CAS No67953-76-8 (1-hydroxyethylidene)bisphosphonic acid, potassium salt

* 12.3 Bioaccumulative potential

* **Assessment/classification**
(1-hydroxyethylidene)bisphosphonic acid, potassium salt: Accumulation in organisms is not expected.
sodium cumenesulphonate: Bioaccumulation is improbable.
potassium cumenesulphonate: Bioaccumulation is improbable.

* 12.4 Mobility in soil

* **Assessment/classification**
(1-hydroxyethylidene)bisphosphonic acid, potassium salt: strong adsorption on soil, immobile (log Koc: 4.2).
sodium cumenesulphonate: Adsorption on soil is not expected.
potassium cumenesulphonate: 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.
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)	approx. 0.2 gO2/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.
The mixture is not classified as acute/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
110199	wastes not otherwise specified
160306	organic wastes other than those mentioned in 16 03 05

Appropriate disposal / Product
Do not dispose with household waste.
Dispose of waste according to applicable legislation.
Undiluted product rests: take to local special waste collecting point.

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)	-	-	-

	Land transport (ADR/RID)	Sea transport (IMDG)	Air transport (ICAO-TI / IATA-DGR)
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
DOC: Dissolved Organic Carbon
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
TRGS: Technical Rules for Hazardous Substances
VOC: Volatile organic compounds
vPvB: very persistent, very bioaccumulative
Acute Tox. 4, H302: Acute Toxicity (oral), Category 4
Eye Irrit. 2: Eye irritation, Category 2

* **Key literature references and sources for data**
European Chemicals Agency, http://echa.europa.eu/.
Informations from our suppliers.
Own measurements.

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)

H302	Harmful if swallowed.
H319	Causes serious eye irritation.

Indication of changes
* Data changed compared with the previous version