

SAFETY DATA SHEET

according to Regulation No. 1907/2006 of the European Parliament and of the Council, as subsequently amended

CLEAMEN 310 highly acidic WC cleaner for ceramic

Date of issue: 14. 08. 2014

Version: 4.0

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

1.1 Product identifier

Product Name

CLEAMEN 310 highly acidic WC cleaner for ceramic

Product code

VC310XXXX96-CLP

Mixture description

An aqueous solution.

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

Identified uses

Cleaning product.

Only for professional users.

Uses advised against

Do not use to stainless, iron, chrome or other nonresistant surfaces to acids.

It is recommended to use it only for the intended use. Other uses may expose users to unpredictable risks.

1.3 Details of the supplier of the safety data sheet

CORMEN s.r.o.

Průmyslová 1420

593 01 Bystřice nad Pernštejnem

Czech Republic

Tel.: +420 566 550 961

Fax: +420 566 551 822

e-mail address for a competent person responsible for the SDS: info@cormen.cz

1.4 Emergency telephone number

112 (General emergency phone), 998 (fire brigade), 999 (ambulance service).

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

The mixture is classified as dangerous according to regulation 1272/2008/EC.

Classification according to 1272/2008/EC

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Met. Corr. 1; H290

Skin Corr. 1; H314

Eye Dam. 1; H318

Full text of classifications and H-phrases: see section 16.

The most important adverse physicochemical, human health and environmental effects

May be corrosive to metals. Causes severe skin burns and eye damage.

2.2 Label elements

Hazard pictograms



Signal word

Danger

Components of the mixture to be placed on the label

Contain Etidronic acid, Alcohols, C12-14, ethoxylated, Hydrochloric acid, Acetic acid

Hazard statements

H290 - May be corrosive to metals.

H314 - Causes severe skin burns and eye damage.

Precautionary statements

P234 - Keep only in original packaging.

P280 - Wear protective gloves/protective clothing/eye protection/face protection.

P301+P330+P331 - IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.

P303+P361+P353 - IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water or shower.

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 POISON CENTER/doctor.

P501 - Dispose of contents/container to hazardous or special waste collection point, in accordance with local, regional, national and/or international regulation.

Supplemental hazard information

Mandatory additional information is not required according to CLP regulation.

Composition: ≥ 30 % water, < 5 % non-ionic surfactants, hydrochloric acid, carboxylates, phosphonates, acrylates, xanthan gum, parfum, hexyl cinnamal, coloring agent.

2.3 Other hazards

Mixture or its components are not classified as PBT or vPvB, not the date of issue of the safety data sheet kept on the candidate list for Annex XIV of the REACH Regulation.

SECTION 3: Composition/information on ingredients

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3.2 Mixtures

An aqueous solution.

3.2.1 Components of a mixture classified as hazardous

Identification of substance		Content wt. %	Classification according to 1272/2008/EC
Etidronic acid			
CAS Number	2809-21-4	< 3.5	Met. Corr. 1; H290 Acute Tox. 4; H302 Eye Dam. 1; H318
EC Number	220-552-8		
Index Number	not given		
Registration Number	01-2119510391-53-XXXX		
Alcohols, C12-14, ethoxylated			
CAS Number	68439-50-9	< 3.0	Acute Tox. 4; H302 Eye Dam. 1; H318 Aquatic Chronic 3; H412
EC Number	500-213-3		
Index Number	not given		
Registration Number	not yet available		
Hydrochloric acid			
CAS Number	7647-01-0	< 2.0	Met. Corr. 1; H290 Skin Corr. 1B; H314 STOT SE 3; H335
EC Number	231-595-7		
Index Number	017-002-01-X		
Registration Number	01-2119475328-30-XXXX		
The substance has specific concentration limits: C ≥ 25 %: Skin Corr. 1B; H314, 10 % ≤ C < 25 %: Skin Irrit. 2; H315, 10 % ≤ C < 25 %: Eye Irrit. 2; H319, C ≥ 10 %: STOT SE 3; H335, C ≥ 0.1 %: Met. Corr. 1; H290			
Acetic acid			
CAS Number	64-19-7	< 0.1	Flam. Liq. 3; H226 Skin Corr. 1A; H314
EC Number	200-580-7		
Index Number	607-002-00-6		
Registration Number	01-2119475328-30-XXXX		
The substance has specific concentration limits: C ≥ 90 %: Skin Corr. 1A; H314, 25 % ≤ C < 90 %: Skin Corr. 1B; H314, 10 % ≤ C < 25 %: Skin Irrit. 2; H315, 10 % ≤ C < 25 %: Eye Irrit. 2; H319			
Full text of classifications and H-phrases: see section 16.			

SECTION 4: First aid measures

In all cases keep the victim at physical and mental rest and warm. In case of doubt or if symptoms persist, seek medical attention. An unconscious person never give anything. Protect yourself during rescue work.

4.1 Description of first aid measures

Inhalation

Interrupt the exposure, transfer the person to the fresh air. In case of persistent nausea, seek medical advice.

Skin contact

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Remove contaminated clothing, shoes, and wash thoroughly with water (preferably lukewarm) and soap. Do not use solvents or thinners. Seek medical advice.

Eye contact

Rinse with a gentle stream of water for at least 15 minutes. Keep your eyelids wide open with your thumb and forefinger. If the affected person is wearing contact lenses, remove them before rinsing eyes if it is easy. Seek medical advice.

Ingestion

Rinse your mouth and then drink plenty of water. Do not induce vomiting. Do not give milk or alcoholic beverages. Never give anything by mouth to an unconscious person. Seek medical advice.

4.2 Most important symptoms and effects, both acute and delayed

Are not known.

4.3 Indication of any immediate medical attention and special treatment needed

Treat symptomatically.

SECTION 5: Firefighting measures

5.1 Extinguishing media

Suitable extinguishing media

Small fire:

Carbon dioxide CO₂, dry extinguishing agent, sand or earth, alcohol resistant foam.

Extensive fire:

Fragmented water streams (water mist), alcohol resistant foam.

Unsuitable extinguishing media

Solid streams of water may be ineffective.

5.2 Special hazards arising from the substance or mixture

In case of fire extinguishing prevent leakage of water and rest of product into drains. Collect them separately and dispose of safely in accordance with current legislation and applicable local regulations.

In case of fires, hazardous combustion gases are formed: carbon oxides, chlorine oxides, chlorine, hydrogen chloride, phosphorus oxides, phosphine and products of incomplete combustion.

5.3 Advice for firefighters

Stop further leakage of product if possible. Spilled product, which does not burn, cover with sand or foam. Move containers and barrels away from the fire to a safe place, if possible. Cool all affected containers down with flooding quantities of water. If the fire can't be extinguished - evacuate the premises.

In case of fire, wear suitable respiratory protective equipment and fire-fighting suit.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Avoid contact with skin and eyes, use suitable protective equipment and clothing, see Section 8. Ensure adequate ventilation. Avoid formation of mist and vapour. At the point of leakage, prevent the movement of unauthorized persons.

6.2 Environmental precautions

Prevent further leakage or spillage if safe to do so. If this cannot be avoided, inform the competent authorities (police and firefighters) immediately.

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6.3 Methods and material for containment and cleaning up

According to the amount of spilled liquid, drain away the substance (large spillage) or in case of small spillage, absorb it with suitable absorbent (vermiculite, dry sand), put into labelled closed containers and dispose of them accordingly to Section 13. Flush residues with water and collect it for waste disposal. Do not use solvents or dispersants unless instructed by an expert or government authority.

If container is damaged, remove the content to the new undamaged container and label it properly again.

6.4 Reference to other sections

Refer also to the provisions of sections 7, 8 and 13 of this safety data sheet.

SECTION 7: Handling and storage

7.1 Precautions for safe handling

Avoid contact with skin and eyes. Personal protection see Section 8. Ensure good ventilation to prevent formation of mist and vapour.

Smoking, eating and drinking should be prohibited at the place of use. In place of use should be forbidden to smoke, eat or drink. Do not use dirty clothing. After work wash yourself carefully with warm water and soap, take a shower. Use protective cream.

7.2 Conditions for safe storage, including any incompatibilities

Store in original, tightly closed containers, in a dry, cool and well-ventilated place at room temperature. Protect from frost.

7.3 Specific end use(s)

Liquid extra strong cleaner for removing of water and urinary stone and for after building cleaning. It is designed for direct use or diluted for ceramic surfaces. Do not use to stainless, iron, chrome or other nonresistant surfaces to acids.

Sector of Use: Ceramic sanitary surfaces and facilities, WC.

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

8.1.1 Exposure limit value

Hydrochloric acid - hydrogen chlorine CAS: 7647-01-0

Limit values - Eight hours		Limit values - Short-term		Note
8 mg/m ³	5 ppm	15 mg/m ³	10 ppm	-

Acetic acid CAS: 64-19-7

Limit values - Eight hours		Limit values - Short-term		Note
25 mg/m ³	10 ppm	- mg/m ³	- ppm	none

8.1.2 Biological limit values

Not are determined in EU

8.1.3 DNEL and PNEC values

Etidronic acid CAS: 2809-21-4

DNEL

Area of use	Route of exposure	Effect	Exposure time	Value
Workers	Inhalation	Systemic effect	Long term	12 mg/m ³

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Workers	Dermal	Systemic effect	Long term	34 mg/kg/den
General population	Inhalation	Systemic effect	Long term	2.95 mg/m ³
General population	Dermal	Systemic effect	Long term	17 mg/kg/den
General population	Oral	Systemic effect	Long term	1.7 mg/kg/den
PNEC				
Fresh water	Marine water	Intermittent releases		Sewage Treatment Plant (STP)
		Fresh water	Marine water	
0.068 mg/l	0.007 mg/l	not given	not given	40 mg/l
PNEC				
Sediment (freshwater)	Sediment (marine water)	Air	Soil	Hazard for predators
136 mg/kg	13.6 mg/kg	no effect	10 mg/kg	3.7 mg/kg food
Hydrochloric acid				CAS: 7647-01-0
DNEL				
Area of use	Route of exposure	Effect	Exposure time	Value
Workers	Inhalation	Local effect	Long term	8 mg/m ³
Workers	Inhalation	Local effect	Acute/short term	15 mg/m ³
General population	Inhalation	Local effect	Long term	8 mg/m ³
General population	Inhalation	Local effect	Acute/short term	15 mg/m ³
PNEC - not yet available				
Acetic acid				CAS: 64-19-7
DNEL				
Area of use	Route of exposure	Effect	Exposure time	Value
Workers	Inhalation	Local effect	Long term	25 mg/m ³
Workers	Inhalation	Local effect	Acute/short term	25 mg/m ³
General population	Inhalation	Local effect	Long term	25 mg/m ³
General population	Inhalation	Local effect	Acute/short term	25 mg/m ³
PNEC				
Fresh water	Marine water	Intermittent releases		Sewage Treatment Plant (STP)
		Fresh water	Marine water	
3.058 mg/l	0.306 mg/l	30.58 mg/l	not given	85 mg/l
PNEC				
Sediment (freshwater)	Sediment (marine water)	Air	Soil	Hazard for predators
11.36 mg/kg	1.136 mg/kg	not given	0.47 mg/kg	not given
8.2 Exposure controls				
8.2.1 Workers exposure controls				

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Use only in well-ventilated areas.

Observe usual safety precautions for working with chemicals. The degree of effectiveness of personal protective equipment depends on temperature and ventilation levels.

8.2.2 Individual protection measures, such as personal protective equipment

Do not eat, drink or smoke. After work, wash thoroughly with warm water and soap and take a shower. Use protective cream. Do not soiled protective equipment to wash, do not use solvents.

Respiratory protection

Not necessary in case of compliance concentration limits (if they were exceeded, use a respirator against organic vapour). In the event of an accident or a fire use self-contained breathing apparatus.

Hand protection

Chemically resistant protective gloves. As there are no tests, it is not possible to recommend the glove material for this mixture. The selection of the glove material on consideration of the breakthrough time, permeability and degradation.

Eye/face protection

Wear safety goggles or face shield.

Skin protection

Suitable protective working clothing and footwear.

8.2.3 Environmental exposure controls

Uncontrolled release of the mixture into environment is to be avoided. Observe the emission limits.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Physical state	liquid
Colour	pink
Odour	characteristic
Odour threshold	not determined
pH	1
Melting point/freezing point	not determined
Initial boiling point and boiling range	100 C
Flash point	not determined
Evaporation rate	not determined
Flammability (solid, gas)	not determined
Lower flammability or explosive limits	not determined
	not determined
Upper flammability or explosive limits	not determined
Vapour pressure	23 hPa
Vapour density	not determined
Relative density	1.066 (water = 1)
Solubility in water	not determined

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Solubility in organic solvents	not determined
Partition coefficient: n-octanol/water	not determined
Auto-ignition temperature	not determined
Decomposition temperature	not determined
Viscosity	dynamic - 800 mPa.S (at 20 °C)
Explosive properties	is not classified as explosive
Oxidising properties	is not classified as an oxidant

9.2 Other information

Organic solvents	0.0 %
Water	87.9 %
VOC	0.0 %
Solids content	1.2 %

SECTION 10: Stability and reactivity

10.1 Reactivity

The mixture is stable under normal conditions of use. Dangerous reactions do not occur.

10.2 Chemical stability

Stable under recommended storage conditions.

10.3 Possibility of hazardous reactions

Not known.

10.4 Conditions to avoid

Protect from frost.

10.5 Incompatible materials

Strong base.

10.6 Hazardous decomposition products

Burning releases carbon oxides, chlorine oxides, chlorine, hydrogen chloride, phosphorus oxides, phosphine and products of incomplete combustion.

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Mixture

Acute toxicity

Oral data for the mixture are not available
the mixture is not classified by the additive formula
 $ATE_{\text{mixture}} > 8\,429 \text{ mg/kg}$

Dermal data for the mixture are not available
the mixture does not contain substances classified as an acute toxicity by dermal route of exposure or the concentration of substance(s) is lower than the limit for inclusion in Section 3

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Inhalation data for the mixture are not available
the mixture does not contain substances classified as an acute toxicity by inhalation route of exposure or the concentration of substance(s) is lower than the limit for inclusion in Section 3

Skin corrosion/irritation

data for the mixture are not available
the mixture is classified as corrosive for skin in category 1 based on pH and content of surfactant

Serious eye damage/irritation

data for the mixture are not available
the mixture is classified as causes serious eye damage based on the general/specific concentration limits of substance(s)

Respiratory or skin sensitisation

data for the mixture are not available
the mixture does not contain substances classified as sensitizing or the concentration of substance(s) is lower than the limit for inclusion in Section 3

Germ cell mutagenicity

data for the mixture are not available
the mixture does not contain substances classified as mutagenicity or the concentration of substance(s) is lower than the limit for inclusion in Section 3

Carcinogenicity

data for the mixture are not available
the mixture does not contain substances classified as carcinogenicity or the concentration of substance(s) is lower than the limit for inclusion in Section 3

Reproductive toxicity

data for the mixture are not available
the mixture does not contain substances classified as toxic for reproduction or the concentration of substance(s) is lower than the limit for inclusion in Section 3

Specific target organ toxicity – single exposure

data for the mixture are not available
the mixture is not classified as toxic for specific target organs in a single exposure in category 3 according to the recommended concentration limits of substance(s)

Specific target organ toxicity – repeated exposure

data for the mixture are not available
the mixture does not contain substances classified as toxic for specific target organs in a repeated exposure or the concentration of substance(s) is lower than the limit for inclusion in Section 3

Aspiration hazard

data for the mixture are not available
the mixture does not contain substances classified as aspiration hazard or the concentration of substance(s) is lower than the limit for inclusion in Section 3

Other information

See section 2 and 4.

Etidronic acid

CAS: 2809-21-4

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Acute toxicity	
Oral	the substance is classified in category 4 LD ₅₀ = 1 878 mg/kg (rat)
Dermal	based on available data, the classification criteria are not met LD ₅₀ > 10 000 mg/kg (rabbit)
Inhalation	data for the substance are not available
Skin corrosion/irritation	
based on available data, the classification criteria are not met mean erythema score = 0 and oedema = 0 (rabbit, 72 hrs., OECD 404)	
Serious eye damage/irritation	
based on available data, the classification criteria are not met the substance classified as seriously damaging to the eyes maximum irritation score = ca. 90 of 110 (irreversible, rabbit, 72 hours, OECD 405)	
Respiratory or skin sensitisation	
based on available data, the classification criteria are not met not skin sensitising (guinea pig, maximization test)	
Germ cell mutagenicity	
based on available data, the classification criteria are not met negative (OECD 471, OECD 476, OECD 487)	
Carcinogenicity	
based on available data, the classification criteria are not met NOAEL ≥ 493 mg/kg/day (rat, female, oral, OECD 453) NOAEL ≥ 384 mg/kg/day (rat, female, oral, OECD 453)	
Reproductive toxicity	
based on available data, the classification criteria are not met NOAEL = 92 mg/kg/day (rat, female, oral, generation P0, OECD 416) NOAEL = 92 mg/kg/day (rat, female, oral, generation F1, OECD 416)	
Specific target organ toxicity – single exposure	
data for the substance are not available	
Specific target organ toxicity – repeated exposure	
based on available data, the classification criteria are not met NOAEL = 34 mg/kg/day (juvenile rats, rat, male, oral, 90 d., OECD 408) LOAEL = 139 mg/kg/day (anemia, rat, male, oral, 90 d., OECD 408)	
Aspiration hazard	
the substance is not a hydrocarbon or a chlorinated hydrocarbon with a kinematic viscosity of 20.5 mm ² /s or less at 40 °C	
Hydrochloric acid	CAS: 7647-01-0
Acute toxicity	
Oral	data for the substance are not available

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Dermal data for the substance are not available

Inhalation based on available data, the classification criteria are not met

LC₅₀ = 40 989 ppm (HCl gas, male, 5 min.)

LC₅₀ = 4 701 ppm (HCl gas, male, 30 min.)

LC₅₀ = 45.6 ppm (aerosol, male, 5 min.)

LC₅₀ = 8.3 ppm (aerosol, male, 30 min.)

Skin corrosion/irritation

classified as skin corrosive category 1B

not skin corrosive - tissue viability = 93.3% (10% solution, exposure: 3 minutes, human skin model, OECD 431)

skin corrosive - tissue viability = 27.6%, 5.4% (10% solution, exposure: 60, 240 minutes, human skin model, OECD 431)

skin corrosive - tissue viability = 30.4%, 6.5%, 6% (25% solution, exposure: 3, 60, 240 minutes, human skin model, OECD 431)

skin corrosive - tissue viability = 9.5%, 4.1%, 6.6% (30% solution, exposure: 3, 60, 240 minutes, human skin model, OECD 431)

not skin irritant - tissue viability = 106.8%, 99.7%, 82%, 101% (1, 3, 10, 15% solution, human skin model, OECD 439)

positive result - tissue viability = 41.1%, 32.2%, 82%, 101% (17.5, 25% solution, human skin model, OECD 439)

Serious eye damage/irritation

classified as serious eye damage

Respiratory or skin sensitisation

based on available data, the classification criteria are not met

not skin sensitising (guinea pig, OECD 406)

Germ cell mutagenicity

based on available data, the classification criteria are not met

negative (mitotic recombination assay with *Saccharomyces cerevisiae*, mammalian chromosome aberration test)

positive (mammalian cell gene mutation assay)

Carcinogenicity

based on available data, the classification criteria are not met

NOAEL < 10 ppm (HCl gas, rat, male)

Reproductive toxicity

based on available data, the classification criteria are not met

NOAEL = 853 mg/kg/day (rat, oral, generation P0, OECD 415)

Specific target organ toxicity – single exposure

the substance may cause respiratory irritation

Specific target organ toxicity – repeated exposure

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based on available data, the classification criteria are not met

NOAEL = 20 ppm (mortality, clinical signs, food consumption, body weight and organ weight, rat, inhalation, HCl gas, OECD 413)

LOAEL = 50 ppm (mortality, clinical signs, food consumption, body weight and organ weight, rat, inhalation, HCl gas, OECD 413)

Aspiration hazard

the substance is not a hydrocarbon or a chlorinated hydrocarbon with a kinematic viscosity of 20.5 mm²/s or less at 40 °C

Alcohols, C12-14, ethoxylated

CAS: 68439-50-9

Acute toxicity

Oral the substance is classified in category 4
LD₅₀ > 300 mg/kg (rat)

Dermal based on available data, the classification criteria are not met
LD₅₀ > 2 000 mg/kg (rabbit)

Inhalation data for the substance are not available

Skin corrosion/irritation

data for the substance are not available

Serious eye damage/irritation

the substance classified as seriously damaging to the eyes

Respiratory or skin sensitisation

data for the substance are not available

Germ cell mutagenicity

data for the substance are not available

Carcinogenicity

data for the substance are not available

Reproductive toxicity

data for the substance are not available

Specific target organ toxicity – single exposure

data for the substance are not available

Specific target organ toxicity – repeated exposure

data for the substance are not available

Aspiration hazard

the substance is not a hydrocarbon or a chlorinated hydrocarbon with a kinematic viscosity of 20.5 mm²/s or less at 40 °C

Acetic acid

CAS: 64-19-7

Acute toxicity

Oral based on available data, the classification criteria are not met
LD₅₀ = 3 530 mg/kg (rat)

Dermal data for the substance are not available

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Inhalation based on available data, the classification criteria are not met
LC₅₀ = 40 mg/l (vapour, rat, 4 hrs)

Skin corrosion/irritation

the substance classified as skin corrosion in category 1A
not classified as skin irritant - primary dermal irritation index PDII = 0.5 (3.3% solution, 72 hours, rabbit, OECD 404)
classified as skin irritant - primary dermal irritation index PDII = 1.1 (10% solution, 72 hours, rabbit, OECD 404)
not classified as skin irritant - mean erythema score = 0.42 and edema = 0.17 (2.5% solution, rabbit, 72 hours, OECD 404)
classified as skin irritant - mean erythema score = 1.5-3.92 and edema = 0.42-2.83 (10-25% solution, rabbit, 72h, OECD 404)

Serious eye damage/irritation

the substance classified as seriously damaging to the eyes
mean corneal opacity = 1.72, conjunctival oedema = 1.67, erythema = 2.67 (10% solution, rabbit, 72 h, OECD 405)

Respiratory or skin sensitisation

data for the substance are not available

Germ cell mutagenicity

based on available data, the classification criteria are not met
negative (OECD 471, OECD 473)

Carcinogenicity

data for the substance are not available

Reproductive toxicity

data for the substance are not available

Specific target organ toxicity – single exposure

data for the substance are not available

Specific target organ toxicity – repeated exposure

based on available data, the classification criteria are not met
NOAEL = 290 mg/kg/day (body weight, clinical sign, rat, oral)

Aspiration hazard

the substance is not a hydrocarbon or a chlorinated hydrocarbon with a kinematic viscosity of 20.5 mm²/s or less at 40 °C

SECTION 12: Ecological information

12.1 Toxicity

Mixture

Fish

data for the mixture are not available

Crustaceans

data for the mixture are not available

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Algae	
data for the mixture are not available	
Etidronic acid	CAS: 2809-21-4
the substance is not classified as dangerous for the aquatic environment	
Fish	
LC ₅₀ , 96 hrs., Oncorhynchus mykiss: 195 mg/l (mobility) NOEC, 14 d., Oncorhynchus mykiss: 60 mg/l (behaviour, loss of equilibrium)	
Crustaceans	
EC ₅₀ , 48 hrs., Daphnia Magna: 527 mg/l (mobility) NOEC, 28 d., Daphnia Magna: 60 mg/l (adult survival and number of pups)	
Algae	
data for the substance are not available	
Alcohols, C12-14, ethoxylated	CAS: 68439-50-9
the substance is classified as Aquatic Chronic 3; H412	
Fish	
data for the substance are not available	
Crustaceans	
EC ₅₀ , 48 hrs., Daphnia Magna: 1 - 10 mg/l	
Algae	
EC ₅₀ , 72 hrs., Desmodesmus subspicatus: 1 - 10 mg/l	
Hydrochloric acid	CAS: 7647-01-0
the substance is not classified as dangerous for the aquatic environment	
Fish	
LC ₀ , 96 hrs., Lepomis macrochirus: pH = 3.5 (mortality) LC ₅₀ , 96 hrs., Lepomis macrochirus: pH = 3.25 - 3.5 (mortality) LC ₁₀₀ , 96 hrs., Lepomis macrochirus: pH = 3 (mortality)	
Crustaceans	
EC ₅₀ , 48 hrs., Daphnia Magna: pH = 4.92 (mobility) NOEC, 48 hrs., Daphnia Magna: pH = 5.5 (mobility) LOEC, 48 hrs., Daphnia Magna: pH = 5 (mobility)	
Algae	
EC ₅₀ , 72 hrs., Chlorella vulgaris: pH = 4.7 (growth rate) EC ₅₀ , 72 hrs., Chlorella vulgaris: pH = 4.82 (biomass) NOEC, 72 hrs., Chlorella vulgaris: pH = 5 (growth rate)	
Acetic acid	CAS: 64-19-7
the substance is not classified as dangerous for the aquatic environment	
Fish	

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LC₅₀, 96 hrs., Oncorhynchus mykiss: > 1 000 mg/l (50% potassium acetate solution, mortality)

LC₅₀, 96 hrs., Oncorhynchus mykiss: > 300.82 mg/l (acetate anion, mortality)

NOEC, 96 hrs., Oncorhynchus mykiss: 1 000 mg/l (50% potassium acetate solution, mortality)

NOEC, 96 hrs., Oncorhynchus mykiss: 300.82 mg/l (acetate anion, mortality)

Crustaceans

EC₅₀, 48 hrs., Daphnia Magna: > 1 000 mg/l (50% potassium acetate solution, mobility)

EC₅₀, 48 hrs., Daphnia Magna: > 300.82 mg/l (acetate anion, mobility)

NOEC, 21 d., Daphnia Magna: 80 mg/l (60% solution, reproduction)

NOEC, 21 d., Daphnia Magna: 31.4 mg/l (100% solution, reproduction)

Algae

EC₅₀, 72 hrs., Skeletonema costatum: > 1 000 mg/l (50% potassium acetate solution, growth rate)

EC₅₀, 72 hrs., Skeletonema costatum: > 300.82 mg/l (acetate anion, growth rate)

NOEC, 72 hrs., Skeletonema costatum: 1 000 mg/l (50% potassium acetate solution, growth rate)

NOEC, 72 hrs., Skeletonema costatum: 300.82 mg/l (acetate anion, growth rate)

12.2 Persistence and degradability

Mixture

data for the mixture are not available

The surfactants contained in this preparation in accordance with the biodegradability criteria according to Regulation (EC) No. 648/2004 on detergents.

Etidronic acid

CAS: 2809-21-4

not readily biodegradable: BOD₅/COD = 23 % (OECD 301 D)

BOD - Biological Oxygen Demand

COD - Chemical Oxygen Demand

Alcohols, C12-14, ethoxylated

CAS: 68439-50-9

readily biodegradable: > 60 %

Hydrochloric acid

CAS: 7647-01-0

not determined, it is an inorganic substance

Acetic acid

CAS: 64-19-7

readily biodegradable: 96 % after 20 days (biooxidation)

12.3 Bioaccumulative potential

Mixture

data for the mixture are not available

Etidronic acid

CAS: 2809-21-4

BCF < 7 (Cyprinus carpio, dose 0.06 mg/l)

BCF < 2 (Cyprinus carpio, dose 0.6 mg/l)

log Pow = -3.5 (OECD 117)

Hydrochloric acid

CAS: 7647-01-0

not determined, it is an inorganic substance

Acetic acid

CAS: 64-19-7

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BCF = 3.16 (Q)SAR method
log Pow = -0.17 (25 °C, pH = 7, OECD 117)

12.4 Mobility in soil

Mixture

data for the mixture are not available

Etidronic acid

CAS: 2809-21-4

log Koc = 4.22

Hydrochloric acid

CAS: 7647-01-0

not determined, it is an inorganic substance

Acetic acid

CAS: 64-19-7

Koc = 1.153 (Q)SAR method

12.5 Results of PBT and vPvB assessment

Mixture or its components are not classified as PBT or vPvB, not the date of issue of the safety data sheet kept on the candidate list for Annex XIV of the REACH Regulation.

12.6 Other adverse effects

data are not available

SECTION 13: Disposal considerations

13.1 Waste treatment methods

Disposal methods of the substance or mixture and the contaminated packaging

Delete according to the applicable European and local regulations (eg. in a hazardous waste incinerator). **Never remove flushing into sewer!** Do not contaminate ponds or ditches with chemical or used container. Residual amounts and solutions to a licensed disposal company.

For classifying the waste and the removal of waste producer responsibility.

Possible waste code

07 06 01* - aqueous washing liquids and mother liquors (mixture), 15 01 10* - packaging containing residues of or contaminated by dangerous substances (contaminated packaging), 15 01 02 - plastic packaging (clear packaging)

Physical/chemical properties that may affect waste treatment options

Metal corrosion.

Special precautions recommended for waste management

None known.

Waste legislation

Directive 2008/98/EC

SECTION 14: Transport information

14.1 UN number

3265

14.2 UN proper shipping name

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ADR/RID/IMDG/IATA

CORROSIVE LIQUID, ACIDIC, ORGANIC, N.O.S. (Etidronic acid, Hydrochloric acid)

14.3 Transport hazard class(es)

8

14.4 Packing group

III

14.5 Environmental hazards

it is not dangerous for the environment during transport

14.6 Special precautions for user

not given

14.7 Transport in bulk according to Annex II of Marpol and the IBC Code

not available

14.8 Other information

Labeling according to ADR



Additional data for ADR/RID

classification code	C3
labels	8
hazard identification code	80
tunnel restriction code	E (ADR), - (RID)
limited quantities	5 l
excepted quantities	Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 1 000 ml
transport category	3

Additional data for IMDG

Emergency Schedules (EmS) F-A/S-B

SECTION 15: Regulatory information

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

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Regulation No. 1907/2006/ES, concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals, as subsequently amended (REACH)

Regulation No. 1272/2008/ES, on Classification, Labelling and Packaging of substances and mixtures, as subsequently amended (CLP)

Regulation No. 648/2004/ES, on detergents

15.2 Chemical safety assessment

No data available

SECTION 16: Other information

Reason for the revision of the safety data sheet

Change in the classification and labeling of the mixture in section 2, change of composition in section 3 and related changes in the other sections of the safety data sheet.

Key or legend to abbreviations and acronyms

Acute Tox. 4	Acute toxicity, cat. 4
Aquatic Chronic 3	Chronic aquatic hazard, cat. 3
Eye Dam. 1	Serious eye damage, cat. 1
Eye Irrit. 2	Eye irritation, cat. 2
Flam. Liq. 3	Flammable liquid, cat. 3
Met. Corr. 1	Substance or mixture corrosive to metals, cat. 1
Skin Corr. 1A	Skin corrosion, cat. 1A
Skin Corr. 1B	Skin corrosion, cat. 1B
Skin Corr. 1	Skin corrosion, cat. 1
Skin Irrit. 2	Skin irritation, cat. 2
STOT SE 3	Specific target organ toxicity - single exposure, cat. 3
ADR	Accord Dangereuses Route
CLP	Regulation No. 1272/2008/EC
DNEL	Derived No Effect Level
ICAO/IATA	International Air Transport Association
IMDG	International Maritime Dangerous Goods
PBT	Persistent, bioaccumulative, toxic substance
PNEC	Predicted No Effect Concentration
REACH	Regulation No. 1907/2006/EC
RID	Regulation concerning the International Carriage of Dangerous Goods by Rail
VOC	Volatile organic compound
vPvB	Very persistent and very bioaccumulative substance

Sources of key data used to compile the Safety Data Sheet

European legislation, manufacturer's safety data sheet, registration dossier of substances.

List of H- and P- phrases

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H226	Flammable liquid and vapour.
H290	May be corrosive to metals.
H302	Harmful if swallowed.
H314	Causes severe skin burns and eye damage.
H315	Causes skin irritation.
H318	Causes serious eye damage.
H319	Causes serious eye irritation.
H335	May cause respiratory irritation.
H412	Harmful to aquatic life with long lasting effects.
P234	Keep only in original packaging.
P280	Wear protective gloves/protective clothing/eye protection/face protection.
P301+P330+P331	IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.
P303+P361+P353	IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water or shower.
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 POISON CENTER/doctor.
P501	Dispose of contents/container to hazardous or special waste collection point, in accordance with local, regional, national and/or international regulation.

Training advice

According to MSDS.

Other information

The mixture is classified using calculation methods according to Regulation CLP and tests. Use only for the purposes designated by the manufacturer, will prevent health and environmental risks.

The information in this MSDS was obtained from sources, which we believe are reliable. However, the information is provided without any warranty, express or implied, regarding its correctness. This MSDS was prepared and is to be used only for this product. If the product is used as a component in another product, this MSDS information may not be applicable.

The safety data sheet was created by company LACHEPRA s.r.o.