



exeol clean 4E

Multi-enzymatic detergent

► Concentrated enzymatic solution to be diluted:

- for cleaning by immersion of invasive and non-invasive reusable medical devices before sterilisation or final disinfection.
- for cleaning of surgical instruments and accessories in an IWD or tunnel washer before sterilisation.

Complex of 4 enzymes: Protease, Lipase, Amylase, Mannanase.

▪ **Synergistic formulation of 4 enzymes essential for detergency coupled with surfactants and an easily biodegradable sequestering agent.**

▪ **For use in manual soaking, ultrasonic tanks and instruments washer-disinfector.**

▪ **Validated detergency performance on the main cleaning indicators of the market (e.g.: TOSI®, Browne®).**

▪ **EDTA-free, NTA-free, phosphate-free.**

▪ **Compatible with most materials including stainless steels, in compliance with standard NF S94-402-1 (May 2004).**



**INSTRUMENTS
ENDOSCOPY**

+

PRODUCT

DUAL
USE

4
ENZYMES

CONCENTRATED
FORMULA

GOOD PRACTICES



Commercial presentations

For use by immersion:

- Box 6 x 1L dosing bottles: EXS0060
- Box 4 x 5L + 1 pump 20mL: EXS0091

Use in IWD/tunnels:

- Box 2 x 5L IWD: EXS0075



Product file available on
www.exeol.fr/en

CE marking in 2023

MD class I



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Instructions for use

For use by immersion:

• 1L dosing bottle:

Remove the cap and press the sides of the bottle to obtain the desired dose. Dilute the dose obtained with water at room temperature: from 0.2% (2mL/L) to 0.5% (5mL/L). Close the bottle after use.

• 5L container:

When using for the first time, before unscrewing the cap, remove the tamper-proof ring. Attach the 20mL pump to the container and prime it. Do not use the dose obtained before the pump is fully primed. Using the dosing pump, dilute the concentrate with water at room temperature: from 0.2% (2mL/L) to 0.5% (5mL/L).

Use:

The diluted and unused solution can be stored in a covered soaking tank for 72h.

1. Open and disassemble the medical devices and place them in the solution, ensuring that they are completely immersed.
2. Clean, brush, swab and irrigate the channels. Contact time: from 5 min.
3. Remove the medical devices, rinse thoroughly with water.

Used solution must be changed after each use.

exeol clean 4E can be used in ultrasonic soaking tank.

Use in IWD/tunnels:

When using for the first time, before unscrewing the cap, remove the tamper-proof ring. Place the container in or near the washer-disinfector and insert the sampling tube into the container for the washing phase. If changing the product in the washer-disinfector, first drain and rinse the hoses and dosing system using clean water. Do not recycle the washing solution.

exeol clean 4E should be injected during the washing phase.

Dilution between 0.2% (2mL/L) and 0.5% (5mL/L) at a temperature of 55°C from 2 minutes. The optimal dose is dependent on-site specificities (water quality, type of washer-disinfector and equipment to be treated, level of soiling).

Then use **exeol rinse matic** for thermal disinfection phase (final rinsing).

Follow the instructions given by the manufacturers of the medical devices to be treated and the washer-disinfector.

Composition	Characteristics	Cautionary notes
Non-ionic surfactants, enzymes (protease, lipase, amylase, mannanase), easily biodegradable sequestering agent (GLDA), preservatives (PHENOXYETHANOL and BENZISOTHIAZOLINONE), excipients.	<ul style="list-style-type: none">• pure pH: 8.0 - 9.0• pH at 0.2% - 0.5%: 7.0 - 8.0• Fragrance: Unscented• Colour: Fluo yellow	Always read the label and product information before use. UFI: CM89-S0WE-S003-4MGK



DANGER

PROFESSIONAL USE ONLY

MADE IN FRANCE

 Sodel
190 rue René Barthélemy
14100 Lisieux, France.
TEL: +33 (0)2 31 31 10 50
www.exeol.fr


A SODEL DIVISION

exeol clean 4E

Multi-enzymatic detergent

► Concentrated enzymatic solution to be diluted:

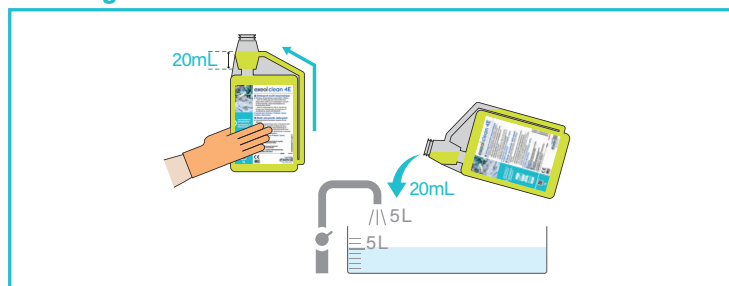
- for cleaning by immersion of invasive and non-invasive reusable medical devices before sterilisation or final disinfection.
- for cleaning of surgical instruments and accessories in an IWD or tunnel washer before sterilisation.



INSTRUMENTS
ENDOSCOPY

Before use, check the expiry date on the label.

1L dosing bottle



- 1 Remove the cap and press the sides of the bottle to obtain the desired dose. Dilute the dose obtained with water at room temperature: from 0.2% (2mL/L) to 0.5% (5mL/L). Close the bottle after use.

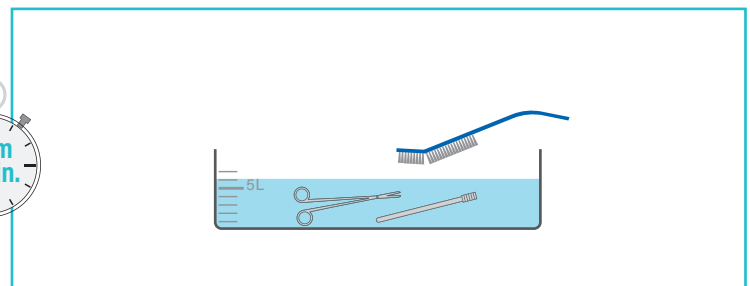
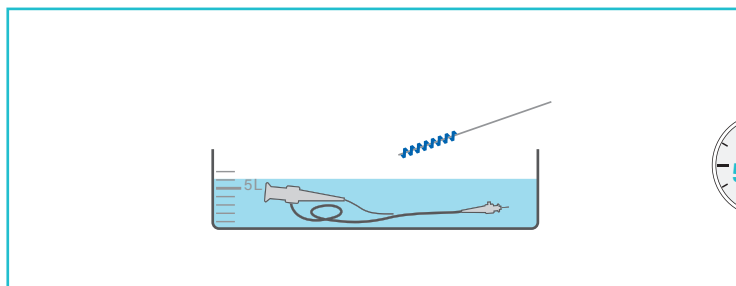
5L container



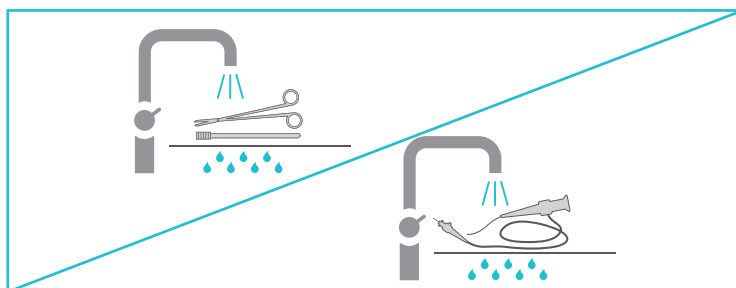
- 1 When using for the first time, before unscrewing the cap, remove the tamper-proof ring. Attach the 20mL pump to the container and prime it. Do not use the dose obtained before the pump is fully primed. Using the dosing pump, dilute the concentrate with water at room temperature: from 0.2% (2mL/L) to 0.5% (5mL/L).



The diluted and unused solution can be stored in a covered soaking tank for 72h.



- 2 Open and disassemble the medical devices and place them in the solution, ensuring that they are completely immersed. Clean, brush, swab and irrigate the channels. Contact time: from 5 min.



- 3 Remove the medical devices, rinse thoroughly with water.



Always read the label and product information before use. PPE:

Used solution must be changed after each use.
exeol clean 4E can be used in ultrasonic soaking tank.

PROFESSIONAL USE ONLY

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www.exeol.fr/en

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CE marking in 2023
MD class I



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

1.1. Product identifier

Product form	: Mixture
Trade name	: exeol clean 4E
UFI	: CM89-S0WE-S003-4MGK
Product code	: 3350-112-1
Type of product	: Detergent, Medical devices intended for cleaning
Product group	: Trade product

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

Relevant identified uses

Main use category	: Professional use
Use of the substance/mixture	: Multi-enzymatic detergent Concentrated enzymatic solution to be diluted: - for cleaning by immersion of invasive and non-invasive reusable medical devices before sterilisation or final disinfection - for cleaning of surgical instruments and accessories in an IWD or tunnel washer before sterilisation

1.3. Details of the supplier of the safety data sheet

Manufacturer

SODEL
190 rue René Barthélemy
FR 14100 LISIEUX
FRANCE
T +33(0)2 31 31 10 50, F +33(0)2 31 31 80 60
info@sodel-sa.eu, www.sodel-sa.eu

1.4. Emergency telephone number

Country/Area	Organisation/Company	Address	Emergency number	Comment
Ireland	National Poisons Information Centre Beaumont Hospital	PO Box 1297 Beaumont Road 9 Dublin	+353 1 809 2566 (Healthcare professionals- 24/7) +353 1 809 2166 (public, 8am - 10pm, 7/7)	
United Kingdom	Guy's & St Thomas' Poisons Unit Medical Toxicology Unit, Guy's & St Thomas' Hospital Trust	Avonley Road SE14 5ER	+44 20 7188 7188	
United Kingdom	National Poisons Information Service (Newcastle Centre) Regional Drugs and Therapeutics Centre	16/17 Framlington Place Newcastle-upon-Tyne NE2 4AB Newcastle	0344 892 0111	Only for healthcare professionals

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

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

Corrosive to metals Not classified
Serious eye damage/eye irritation, Category 2 H319
Full text of H- and EUH-statements: see section 16

Adverse physicochemical, human health and environmental effects

Causes serious eye irritation.

exeol clean 4E

Safety Data Sheet

according to the REACH Regulation (EC) 1907/2006 amended by Regulation (EU) 2020/878

2.2. Label elements

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

Hazard pictograms (CLP)



GHS07

Signal word (CLP)

: Warning

Hazard statements (CLP)

: H319 - Causes serious eye irritation.

Precautionary statements (CLP)

: P280 - Wear eye 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.

P337+P313 - If eye irritation persists: Get medical advice/attention.

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

EUH-statements

: EUH208 - Contains subtilisin(9014-01-1). May produce an allergic reaction.

2.3. Other hazards

Contains no PBT and/or vPvB substances $\geq 0.1\%$ assessed in accordance with REACH Annex XIII

The mixture does not contain substance(s) included in the list established in accordance with Article 59(1) of REACH for having endocrine disrupting properties, or substance(s) are not identified as having endocrine disrupting properties in accordance with the criteria set out in Commission Delegated Regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at a concentration equal to or greater than 0,1 %

SECTION 3: Composition/information on ingredients

3.2. Mixtures

Name	Product identifier	%	Classification according to Regulation (EC) No. 1272/2008 [CLP]
Hexyl D-glucoside	CAS-No.: 54549-24-5 EC-No.: 259-217-6 REACH-no: 01-2119492545-29	$\geq 1 - < 5$	Eye Dam. 1, H318
Dimethyldioctylammonium chloride	CAS-No.: 5538-94-3 EC-No.: 226-901-0 REACH-no: 01-2120767055-53	$\geq 0.1 - < 1$	Acute Tox. 3 (Oral), H301 (ATE=238 mg/kg bodyweight) Acute Tox. 2 (Dermal), H310 (ATE=191 mg/kg bodyweight) Skin Corr. 1B, H314 Eye Dam. 1, H318 Aquatic Acute 1, H400 (M=10) Aquatic Chronic 1, H410 (M=1)
subtilisin	CAS-No.: 9014-01-1 EC-No.: 232-752-2 EC Index-No.: 647-012-00-8 REACH-no: 01-2119480434-38	$\geq 0.1 - < 1$	Acute Tox. 4 (Oral), H302 Skin Irrit. 2, H315 Eye Dam. 1, H318 Resp. Sens. 1, H334 STOT SE 3, H335 Aquatic Acute 1, H400 Aquatic Chronic 2, H411

Full text of H- and EUH-statements: see section 16

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SECTION 4: First aid measures

4.1. Description of first aid measures

First-aid measures general	: As a general rule, in case of doubt or if symptoms persist, always call a doctor. Never give anything by mouth to an unconscious person.
First-aid measures after inhalation	: Remove person to fresh air and keep comfortable for breathing.
First-aid measures after skin contact	: Wash skin with plenty of water.
First-aid measures after eye contact	: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention.
First-aid measures after ingestion	: Rinse mouth. Do not induce vomiting. Call a poison center or a doctor if you feel unwell.

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

Symptoms/effects after inhalation	: None under normal conditions.
Symptoms/effects after skin contact	: None under normal conditions.
Symptoms/effects after eye contact	: Eye irritation.
Symptoms/effects after ingestion	: None under normal conditions.

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	: Water spray. Dry powder. Foam. Carbon dioxide.
Unsuitable extinguishing media	: Do not use a heavy water stream.

5.2. Special hazards arising from the substance or mixture

Fire hazard	: Not flammable.
Explosion hazard	: No direct explosion hazard.
Hazardous decomposition products in case of fire	: Toxic fumes may be released. Do not breathe in smoke.

5.3. Advice for firefighters

Firefighting instructions	: Fight fire from safe distance and protected location. Do not enter fire area without proper protective equipment, including respiratory protection.
Protection during firefighting	: Do not attempt to take action without suitable protective equipment. Self-contained breathing apparatus. Complete protective clothing.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

General measures	: Stop leak if safe to do so. Notify authorities if product enters sewers or public waters. Absorb spillage to prevent material damage.
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For non-emergency personnel

Protective equipment	: Wear recommended personal protective equipment.
Emergency procedures	: Ventilate spillage area. Avoid contact with skin and eyes.

For emergency responders

Protective equipment	: Do not attempt to take action without suitable protective equipment. For further information refer to section 8: "Exposure controls/personal protection".
Emergency procedures	: Evacuate unnecessary personnel. Stop leak if safe to do so.

6.2. Environmental precautions

Avoid release to the environment. Prevent entry into storm water systems or watercourses.

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according to the REACH Regulation (EC) 1907/2006 amended by Regulation (EU) 2020/878

6.3. Methods and material for containment and cleaning up

- For containment : Contain large spillage with sand or earth. Contain any spills with dikes or absorbents to prevent migration and entry into sewers or streams. Stop leak without risks if possible.
- Methods for cleaning up : Take up liquid spill into absorbent material.
- Other information : Dispose of materials or solid residues at an authorized site.

6.4. Reference to other sections

For further information refer to section 13.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

- Additional hazards when processed : Not expected to present a significant hazard under anticipated conditions of normal use.
- Precautions for safe handling : Ensure good ventilation of the work station. Avoid contact with skin and eyes. Wear personal protective equipment.
- Hygiene measures : Do not eat, drink or smoke when using this product. Always wash hands after handling the product.

7.2. Conditions for safe storage, including any incompatibilities

- Technical measures : Keep in a cool, well-ventilated place away from heat.
- Storage conditions : Keep only in original container. Store in a closed container.
- Storage temperature : 5 – 25 °C
- Storage area : Store away from heat.
- Special rules on packaging : Keep only in original container. Store in a closed container.

7.3. Specific end use(s)

No additional information available

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

National occupational exposure and biological limit values

sodium hydroxide (1310-73-2)	
Ireland - Occupational Exposure Limits	
Local name	Sodium hydroxide
OEL STEL	2 mg/m ³
Remark	Advisory OELV (Advisory Occupational Exposure Limit Values)
Regulatory reference	Chemical Agents Code of Practice 2024
United Kingdom - Occupational Exposure Limits	
Local name	Sodium hydroxide
WEL STEL (OEL STEL)	2 mg/m ³
Regulatory reference	EH40/2005 (Fourth edition, 2020). HSE
Ethanol (64-17-5)	
Ireland - Occupational Exposure Limits	
Local name	Ethanol [Ethyl alcohol]
OEL STEL	1000 ppm
Remark	Advisory OELV (Advisory Occupational Exposure Limit Values)

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Ethanol (64-17-5)	
Regulatory reference	Chemical Agents Code of Practice 2024
United Kingdom - Occupational Exposure Limits	
Local name	Ethanol
WEL TWA (OEL TWA)	1920 mg/m ³ 1000 ppm
Regulatory reference	EH40/2005 (Fourth edition, 2020). HSE
GLYCERIN (56-81-5)	
United Kingdom - Occupational Exposure Limits	
Local name	Glycerol
WEL TWA (OEL TWA)	10 mg/m ³ mist
Regulatory reference	EH40/2005 (Fourth edition, 2020). HSE
subtilisin (9014-01-1)	
Ireland - Occupational Exposure Limits	
Local name	Subtilisins (proteolytic enzymes as 100% pure crystalline enzyme)
OEL TWA	0.00006 mg/m ³
OEL STEL	0.00006 mg/m ³
Remark	Advisory OELV (Advisory Occupational Exposure Limit Values), Sens (In the workplace, respiratory or dermal exposures to sensitising agents may occur. Sensitisers may evoke respiratory or dermal reactions, e.g. asthma, rhinitis and allergic contact dermatitis. The "sens" notation alone does not distinguish between respiratory or dermal sensitisation. Chemical agents that are sensitisers present special problems in the workplace. Should an employee become sensitised, subsequent exposure may cause intense responses, even at low exposure concentrations well below the OELV. Exposure should be eliminated or significantly reduced through control measures such as engineering and process controls and use of personal protective equipment (PPE))
Regulatory reference	Chemical Agents Code of Practice 2024
United Kingdom - Occupational Exposure Limits	
Local name	Subtilisins (Bacillus subtilis Carlsberg)
WEL TWA (OEL TWA)	0.00004 mg/m ³
Remark	Sen (Capable of causing occupational asthma)
Regulatory reference	EH40/2005 (Fourth edition, 2020). HSE
PROPYLENE GLYCOL (57-55-6)	
Ireland - Occupational Exposure Limits	
Local name	Propane-1,2-diol [Propylene glycol]
OEL TWA	470 mg/m ³ total (vapour and particulates) 10 mg/m ³ particulates 150 ppm total (vapour and particulates)
Remark	Advisory OELV (Advisory Occupational Exposure Limit Values)
Regulatory reference	Chemical Agents Code of Practice 2024
United Kingdom - Occupational Exposure Limits	
Local name	Propane-1,2-diol

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PROPYLENE GLYCOL (57-55-6)	
WEL TWA (OEL TWA)	10 mg/m ³ particulates 474 mg/m ³ total vapour and particulates
	150 ppm total vapour and particulates
Regulatory reference	EH40/2005 (Fourth edition, 2020). HSE

8.2. Exposure controls

Appropriate engineering controls

Appropriate engineering controls:

Emergency eye wash fountains and safety showers should be available in the immediate vicinity of any potential exposure. Ensure good ventilation of the work station.

Personal protection equipment

Personal protective equipment:

Wear recommended personal protective equipment.

Personal protective equipment symbol(s):



Eye and face protection

Eye protection:

Use eye protection according to EN 166, designed to protect against liquid splashes. Avoid contact with eyes. In the event of high danger, protect the face with a face shield. Prescription glasses are not considered as protection. Emergency eye wash fountains should be available in the immediate vicinity of any potential exposure. Safety glasses

Eye protection			
Type	Field of application	Characteristics	Standard
Safety glasses			EN 166

Skin protection

Hand protection:

Gloves must be selected according to the application and duration of use at the workstation. Chemical resistant gloves (according to European standard ISO 374-1 or equivalent). The wearing of protective gloves is not compulsory. If your protocols recommend wearing them, use suitable protective gloves resistant to chemical agents in accordance with standard EN374

Other skin protection

Materials for protective clothing:

Avoid contact with skin. Grossly contaminated clothing should be removed and the skin washed with soap and water or a proprietary skin cleaner. Work clothing worn by personnel shall be laundered regularly. Protective clothing is not mandatory, but if your protocol requires it, use suitable chemical protective clothing

Respiratory protection

Respiratory protection:

In case of insufficient ventilation, wear suitable respiratory equipment

Environmental exposure controls

Environmental exposure controls:

Avoid release to the environment.

Other information:

Use personal protective equipment that is clean and has been properly maintained. You must check the condition of the protections before each use. Store personal protective equipment in a clean place, away from the work area. Used at the recommended dosage dose on the label, the product is not classified and does not require the use of PPE. The solution remains a chemical to be handled with care.

exeol clean 4E

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SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	: Liquid
Colour	: Yellow.
Appearance	: Clear.
Odour	: Fragrance-free.
Odour threshold	: Not available
Melting point	: Not applicable
Freezing point	: Not available
Boiling point	: Not available
Flammability	: Non flammable.
Lower explosion limit	: Not available
Upper explosion limit	: Not available
Flash point	: > 93 °C
Auto-ignition temperature	: Not available
Decomposition temperature	: Not available
pH	: 8 – 9.3
pH solution concentration	: 100 %
Viscosity, kinematic	: Not available
Solubility	: Not available
Partition coefficient n-octanol/water (Log Kow)	: Not available
Vapour pressure	: Not available
Vapour pressure at 50°C	: Not available
Density	: 1.134 – 1.144 g/ml
Relative density	: Not available
Relative vapour density at 20°C	: Not available
Particle characteristics	: Not applicable

9.2. Other information

Other safety characteristics

VOC content : 0.26 % (EU Directive 2010/75)

SECTION 10: Stability and reactivity

10.1. Reactivity

The product is non-reactive under normal conditions of use, storage and transport.

10.2. Chemical stability

Stable under normal conditions.

10.3. Possibility of hazardous reactions

No dangerous reactions known under normal conditions of use.

10.4. Conditions to avoid

None under recommended storage and handling conditions (see section 7).

10.5. Incompatible materials

No additional information available

10.6. Hazardous decomposition products

Under normal conditions of storage and use, hazardous decomposition products should not be produced.

exeol clean 4E

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SECTION 11: Toxicological information

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

Acute toxicity (oral) : Not classified (Based on available data, the classification criteria are not met)
Acute toxicity (dermal) : Not classified (Based on available data, the classification criteria are not met)
Acute toxicity (inhalation) : Not classified (Based on available data, the classification criteria are not met)

Dimethyldioctylammonium chloride (5538-94-3)	
LD50 oral rat	238 mg/kg bodyweight Animal: rat, Guideline: OECD Guideline 401 (Acute Oral Toxicity), 95% CL: 0,198 - 0,287
LD50 dermal rabbit	191 mg/kg (OECD Guideline 434)

Hexyl D-glucoside (54549-24-5)	
LD50 oral	> 2000 mg/kg bodyweight
LD50 dermal rabbit	> 2000 mg/kg bodyweight Animal: rabbit, Guideline: OECD Guideline 402 (Acute Dermal Toxicity)
LD50 dermal	> 2000 mg/kg bodyweight

subtilisin (9014-01-1)	
LD50 oral rat	1800 mg/kg bodyweight Animal: rat, Guideline: OECD Guideline 401 (Acute Oral Toxicity), 95% CL: 1200 - 2300
LD50 oral	1800 mg/kg bodyweight

Skin corrosion/irritation : Not classified (Based on available data, the classification criteria are not met)
pH: 8 – 9.3
Serious eye damage/irritation : Causes serious eye irritation.
pH: 8 – 9.3
Respiratory or skin sensitisation : Not classified (Based on available data, the classification criteria are not met)
Germ cell mutagenicity : Not classified (Based on available data, the classification criteria are not met)
Carcinogenicity : Not classified (Based on available data, the classification criteria are not met)
Reproductive toxicity : Not classified (Based on available data, the classification criteria are not met)
STOT-single exposure : Not classified (Based on available data, the classification criteria are not met)

subtilisin (9014-01-1)	
STOT-single exposure	May cause respiratory irritation.
STOT-repeated exposure	: Not classified (Based on available data, the classification criteria are not met)

Hexyl D-glucoside (54549-24-5)	
NOAEL (oral, rat, 90 days)	1000 mg/kg bodyweight Animal: rat, Guideline: EU Method B.26 (Sub-Chronic Oral Toxicity Test: Repeated Dose 90-Day Oral Toxicity Study in Rodents)

subtilisin (9014-01-1)	
NOAEL (oral, rat, 90 days)	360 – 891 mg/kg bodyweight Animal: rat, Guideline: OECD Guideline 408 (Repeated Dose 90-Day Oral Toxicity in Rodents)

Aspiration hazard : Not classified (Based on available data, the classification criteria are not met)

11.2. Information on other hazards

No additional information available

SECTION 12: Ecological information

12.1. Toxicity

Ecology - general : The product is not considered harmful to aquatic organisms nor to cause long-term adverse effects in the environment.

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Hazardous to the aquatic environment, short-term (acute) : Not classified (Based on available data, the classification criteria are not met)

Hazardous to the aquatic environment, long-term (chronic) : Not classified (Based on available data, the classification criteria are not met)

Dimethyldioctylammonium chloride (5538-94-3)	
LC50 - Fish [1]	0.28 mg/l Test organisms (species): <i>Lepomis macrochirus</i>
EC50 - Crustacea [1]	0.066 mg/l Test organisms (species): <i>Daphnia magna</i>
EC50 96h - Algae [1]	0.025 mg/l Test organisms (species): <i>Skeletonema costatum</i>
LOEC (chronic)	0.046 mg/l Test organisms (species): <i>Daphnia magna</i> Duration: '21 d'
NOEC (chronic)	0.027 mg/l Test organisms (species): <i>Daphnia magna</i> Duration: '21 d'

Hexyl D-glucoside (54549-24-5)	
LC50 - Fish [1]	420 mg/l Test organisms (species): <i>Oncorhynchus mykiss</i> (previous name: <i>Salmo gairdneri</i>)
EC50 - Crustacea [1]	490 mg/l Test organisms (species): <i>Daphnia magna</i>
EC50 - Other aquatic organisms [1]	490 mg/l waterflea
EC50 - Other aquatic organisms [2]	180 mg/l
EC50 96h - Algae [1]	1049.988 mg/l Source: <i>Episuite</i>

subtilisin (9014-01-1)	
LC50 - Fish [1]	8.2 mg/l
LC50 - Fish [2]	8.2 mg/l Test organisms (species): <i>Oncorhynchus mykiss</i> (previous name: <i>Salmo gairdneri</i>)
EC50 - Crustacea [1]	0.306 mg/l Test organisms (species): <i>Daphnia magna</i>
EC50 - Crustacea [2]	170 µg/l Test organisms (species): <i>Daphnia magna</i>
EC50 - Other aquatic organisms [1]	0.868 mg/l waterflea
EC50 72h - Algae [1]	0.513 mg/l Test organisms (species): <i>Pseudokirchneriella subcapitata</i> (previous names: <i>Raphidocelis subcapitata</i> , <i>Selenastrum capricornutum</i>)
EC50 72h - Algae [2]	1.48 mg/l Test organisms (species): <i>Pseudokirchneriella subcapitata</i> (previous names: <i>Raphidocelis subcapitata</i> , <i>Selenastrum capricornutum</i>)

12.2. Persistence and degradability

exeol clean 4E	
Persistence and degradability	The surfactant(s) contained in this preparation complies(comply) with the biodegradability criteria as laid down in Regulation (EC) No. 648/2004 on detergents. Data to support this assertion are held at the disposal of the competent authorities of the Member States and will be made available to them, at their direct request or at the request of a detergent manufacturer.
Dimethyldioctylammonium chloride (5538-94-3)	
Persistence and degradability	Readily biodegradable but failing the 10-day window.
Hexyl D-glucoside (54549-24-5)	
Persistence and degradability	Readily biodegradable (OECD).
subtilisin (9014-01-1)	
Persistence and degradability	Readily biodegradable (OECD).

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12.3. Bioaccumulative potential

Hexyl D-glucoside (54549-24-5)

Partition coefficient n-octanol/water (Log Pow)	1.7
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12.4. Mobility in soil

No additional information available

12.5. Results of PBT and vPvB assessment

No additional information available

12.6. Endocrine disrupting properties

No additional information available

12.7. Other adverse effects

No additional information available

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Regional waste regulation	: Disposal must be done according to official regulations.
Waste treatment methods	: Dispose of contents/container in accordance with licensed collector's sorting instructions.
Sewage disposal recommendations	: Disposal must be done according to official regulations.
Product/Packaging disposal recommendations	: Empty container completely. Keep label(s) on container. Avoid release to the environment. Prevent entry into storm water systems or watercourses. Disposal must be done according to official regulations. Waste management is carried out without endangering human health, without harming the environment and, in particular without risk to water, air, soil, plants or animals.
Additional information	: Do not re-use empty containers.

SECTION 14: Transport information

In accordance with ADR / IMDG / IATA / ADN / RID

ADR	IMDG	IATA	ADN	RID
14.1. UN number or ID number				
Not applicable	Not applicable	Not applicable	Not applicable	Not applicable
14.2. UN proper shipping name				
Not applicable	Not applicable	Not applicable	Not applicable	Not applicable
14.3. Transport hazard class(es)				
Not applicable	Not applicable	Not applicable	Not applicable	Not applicable
14.4. Packing group				
Not applicable	Not applicable	Not applicable	Not applicable	Not applicable
14.5. Environmental hazards				
Not applicable	Not applicable	Not applicable	Not applicable	Not applicable
No supplementary information available				

14.6. Special precautions for user

Overland transport

Not applicable

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Transport by sea

Not applicable

Air transport

Not applicable

Inland waterway transport

Not applicable

Rail transport

Not applicable

14.7. Maritime transport in bulk according to IMO instruments

Not applicable

SECTION 15: Regulatory information

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

EU-Regulations

REACH Annex XVII (Restriction List)

Contains no substance(s) listed on REACH Annex XVII (Restriction Conditions)

REACH Annex XIV (Authorisation List)

Contains no substance(s) listed on REACH Annex XIV (Authorisation List)

REACH Candidate List (SVHC)

Contains no substance(s) listed on the REACH Candidate List

PIC Regulation (Prior Informed Consent)

Contains no substance(s) listed on the PIC list (Regulation EU 649/2012 concerning the export and import of hazardous chemicals)

POP Regulation (Persistent Organic Pollutants)

Contains no substance(s) listed on the POP list (Regulation EU 2019/1021 on persistent organic pollutants)

Ozone Regulation (2024/590)

Contains no substance(s) listed on the Ozone Depletion list (Regulation EU 2024/590 on substances that deplete the ozone layer)

Council Regulation (EC) for the control of dual-use items

Contains no substance subject to the COUNCIL REGULATION (EC) for the control of dual-use items

VOC Directive

VOC content : 0.26 % (EU Directive 2010/75)

Detergent Regulation (EC 648/2004)

Labelling of contents	
Component	%
cationic surfactants, non-ionic surfactants	<5%
enzymes	
PHENOXYETHANOL	
BENZISOTHIAZOLINONE	

Explosives Precursors Regulation (EU 2019/1148)

Contains no substance(s) listed on the Explosives Precursors list (Regulation EU 2019/1148 on the marketing and use of explosives precursors)

Drug Precursors Regulation (EC 273/2004)

Contains no substance(s) listed on the Drug Precursors list (Regulation EC 273/2004 on the manufacture and the placing on market of certain substances used in the illicit manufacture of narcotic drugs and psychotropic substances)

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15.2. Chemical safety assessment

No chemical safety assessment has been carried out

SECTION 16: Other information

Indication of changes		
Section	Changed item	Comments
	Supersedes version of	Added
	Revision date	Added
2.1	Classification according to Regulation (EC) No. 1272/2008 [CLP]	Modified
2.2	Precautionary statements (CLP)	Modified
3	Composition/information on ingredients	Modified
4.1	First-aid measures for first aider	Added
4.1	First-aid measures after ingestion	Modified
4.2	Symptoms/effects after ingestion	Added
4.2	Symptoms/effects after inhalation	Added
4.2	Symptoms/effects after skin contact	Added
5.1	Unsuitable extinguishing media	Added
5.2	Explosion hazard	Added
5.3	Firefighting instructions	Added
6.1	Emergency procedures	Added
6.1	Protective equipment	Added
6.1	General measures	Added
6.3	For containment	Added
7.1	Additional hazards when processed	Added
7.2	Technical measures	Added
7.2	Storage conditions	Modified
8.2	Personal protective equipment	Added
8.2	Eye protection	Modified
8.2	Appropriate engineering controls	Modified
9	VOC content	Modified
9	pH	Modified
13.1	Additional information	Added
13.1	Regional waste regulation	Added
13.1	Product/Packaging disposal recommendations	Added
13.1	Sewage disposal recommendations	Added
16	Abbreviations and acronyms	Modified

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Abbreviations and acronyms:	
ACGIH	American Conference of Government Industrial Hygienists
ADN	European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways
ADR	European Agreement concerning the International Carriage of Dangerous Goods by Road
ATE	Acute Toxicity Estimate
BCF	Bioconcentration factor
BLV	Biological limit value
BOD	Biochemical oxygen demand (BOD)
CAS-No.	Chemical Abstract Service number
CLP	Classification Labelling Packaging Regulation; Regulation (EC) No 1272/2008
COD	Chemical oxygen demand (COD)
CSA	Chemical safety assessment
DMEL	Derived Minimal Effect level
DNEL	Derived-No Effect Level
EC-No.	European Community number
EC50	Median effective concentration
ED	Endocrine disruptor
EN	European Standard
EWC	European waste catalogue
IARC	International Agency for Research on Cancer
IATA	International Air Transport Association
IMDG	International Maritime Dangerous Goods
LC50	Median lethal concentration
LD50	Median lethal dose
LOAEL	Lowest Observed Adverse Effect Level
Log Kow	Partition coefficient n-octanol/water (Log Kow)
Log Pow	Partition coefficient n-octanol/water (Log Pow)
MAK	maximum workplace concentration
NOAEC	No-Observed Adverse Effect Concentration
NOAEL	No-Observed Adverse Effect Level
NOEC	No-Observed Effect Concentration
N.O.S.	Not Otherwise Specified
OECD	Organisation for Economic Co-operation and Development
OEL	Occupational Exposure Limit
OSHA	Occupational Safety Health Administration
PBT	Persistent Bioaccumulative Toxic
PNEC	Predicted No-Effect Concentration
PPE	Personal protection equipment
RID	Regulations concerning the International Carriage of Dangerous Goods by Rail
SDS	Safety Data Sheet

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Abbreviations and acronyms:

STP	Sewage treatment plant
TF	Technical function
ThOD	Theoretical oxygen demand (ThOD)
TLM	Median Tolerance Limit
TWA	Time Weighted Average
VOC	Volatile Organic Compounds
vPvB	Very Persistent and Very Bioaccumulative
UFI	Unique Formula Identifier

Other information

: Since the user's working conditions are not known by us, the information supplied on this safety data sheet is based on our current level of knowledge and on national and community regulations. The mixture must not be used for other uses than those specified in section 1 without having first obtained written handling instructions. It is at all times the responsibility of the user to take all necessary measures to comply with legal requirements and local regulations.

Full text of H- and EUH-statements:

Acute Tox. 2 (Dermal)	Acute toxicity (dermal), Category 2
Acute Tox. 3 (Oral)	Acute toxicity (oral), Category 3
Acute Tox. 4 (Oral)	Acute toxicity (oral), Category 4
Aquatic Acute 1	Hazardous to the aquatic environment – Acute Hazard, Category 1
Aquatic Chronic 1	Hazardous to the aquatic environment – Chronic Hazard, Category 1
Aquatic Chronic 2	Hazardous to the aquatic environment – Chronic Hazard, Category 2
Eye Dam. 1	Serious eye damage/eye irritation, Category 1
Resp. Sens. 1	Respiratory sensitisation, Category 1
Skin Corr. 1B	Skin corrosion/irritation, Category 1, Sub-Category 1B
Skin Irrit. 2	Skin corrosion/irritation, Category 2
STOT SE 3	Specific target organ toxicity – Single exposure, Category 3, Respiratory tract irritation
H301	Toxic if swallowed.
H302	Harmful if swallowed.
H310	Fatal in contact with skin.
H314	Causes severe skin burns and eye damage.
H315	Causes skin irritation.
H318	Causes serious eye damage.
H319	Causes serious eye irritation.
H334	May cause allergy or asthma symptoms or breathing difficulties if inhaled.
H335	May cause respiratory irritation.
H400	Very toxic to aquatic life.
H410	Very toxic to aquatic life with long lasting effects.
H411	Toxic to aquatic life with long lasting effects.
EUH208	Contains subtilisin(9014-01-1). May produce an allergic reaction.

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Classification and procedure used to derive the classification for mixtures according to Regulation (EC) 1272/2008 [CLP]:

Met. Corr. Not classified		Expert judgement
Eye Irrit. 2	H319	Calculation method

The classification complies with : ATP 12

Safety Data Sheet (SDS), EU

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.