Safety data sheet

RM Clean+ 12 kg

Revision: 2024-08-02 **Version:** 01.1

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

1.1 Product identifier Trade name: RM Clean+

UFI: HTWJ-E0T9-T00U-7D1P

1.2 . Relevant Intended Uses of the Substance or Mixture and Non-Recommended Uses of the Product: Dishwashing detergent. For professional use only. Other uses not listed.

Not recommended uses:

SWED - Sector-specific description of workers' exposure:
AISE_SWED_PW_8b_1
AISE_SWED_PW_1_1
AISE_SWED_PW_4_1

1.3 . Safety Data Sheet Supplier Details

Contact details
RM GASTRO s.r.o.
Náchodská 818/16 193 00 Prague 9 - Horní Počernice TEL: +420 281 926 604, email: info@rmgastro.cz

1.4 Emergency Phone Number
Consult a doctor (if possible present this label or safety data sheet) Poison Information Centre, TEL: 224919293, 224915402

SECTION 2: Hazard identification

2.1 . Classification of the substance or Mixtures

Corrosive to skin, Category 1A (H314) Serious eye damage, Category 1 (H318) Corrosive to metals, Category 1 (H290)

2.2 Elements of the designation

Signal word: Danger.

Contains Sodium Hydroxide

Standard hazard statements:
H290 - May be corrosive to metals.
H314 - Causes severe skin burns and eye damage.

Instructions for safe handling:
P280 - Wear protective gloves, protective clothing and goggles or a face shield.
P303 + P361 + P353 - IF IN CONTACT WITH SKIN (or hair): Remove all contaminated garments immediately. Rinse the skin with water or shower.
P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses if they are fitted and can be removed easily. Continue rinsing.
P310 - Call a POISON CONTROL CENTRE or a physician immediately.

2.3 Other hazards
No other known hazards are known.

SECTION 3: Composition/information on ingredients

3.2 Mixtures

Substance(s)	EC number	CAS Number	REACH number	Classification	Note.	Weight Percentage
Sodium hydroxide	215-185-5	1310-73-2	01-2119457892-27	Corrosive to skin, Category 1A (H314) Corrosive to metals, Category 1 (H290)		10-20
ionic mixture: tetrasodium -[(1-hydroxyethylidene)bisphos phonate]	223-267-7	3794-83-0	[1]	Acute toxicity - oral, Category 4 (H302) Eye irritation, Category 2 (H319)		1-3

Specific concentration limits
Sodium hydroxide:
- Serious eye damage, Category 1 (H318) >= 2% > Eye irritation, Category 2 (H319) >= 0.5%
- Skin corrosion, Category 1A (H314) >= 5% > Skin corrosion, Category 1B (H314) >= 2% > Skin irritation, Category 2 (H315) >= 0.5%

The exposure limit(s), if any, are set out in subsection 8.1.
ATEs, if any, are listed in Section 11.
[1] Excluded: ionic mixtures. See Regulation (EC) No 1907/2006, Annex V, para. 3 and 4. This salt is potentially present, based on the calculation, and is included for classification and labelling purposes only. Each starting component of this ionic mixture is registered.
For the texts of the H and EUH sentences in this section, see section 16.

SECTION 4: First Aid Instructions

4.1 First aid description

General information: If the victim is unconscious, place him in a safe position and provide medical assistance. Provide a supply of fresh air. In case of irregular breathing or its arrest, perform artificial respiration. Do not perform mouth-to-mouth or mouth-to-nose resuscitation. Use a resuscitator with an ambu bag or a ventilator.

Inhalation: Bring the person out into the fresh air and leave them in a position that facilitates breathing. If you feel unwell, seek medical help or treatment.

Skin contact: Rinse the skin with plenty of lukewarm water for at least 30 minutes. Rinse the skin with plenty of lukewarm water. Take off any contaminated parts of clothing immediately and wash before using them again. Call a POISON CONTROL CENTRE or a doctor immediately. For skin irritation: Seek medical attention or treatment.

Eye Exposure: Keep your eyelids open and rinse with plenty of lukewarm water for at least 15 minutes. Remove contact lenses if they are fitted and can be removed easily. Continue rinsing. Call a POISON CONTROL CENTRE or a doctor immediately. Rinse your mouth. Drink 1 glass of water immediately. Never give anything to an unconscious person through your mouth. DO NOT induce vomiting. Leave alone. Call a POISON CONTROL CENTRE or a doctor immediately.

Ingestion:

Protection of the first aid person: Wear the personal protective equipment specified in subsection 8.2.

4.2 Key acute and delayed symptoms and effects Inhalation: Skin contact: Eye contact: Ingestion:

With normal use, there are no known effects or symptoms. It causes severe burns.
Causes severe or permanent damage.
Ingestion can lead to severe burns to the oral cavity and larynx, and there is a risk of perforation of the esophagus and stomach.

4.3 Instruction concerning immediate medical assistance and special treatment
There is no information on clinical trials and medical follow-up. Where specific toxicological data on substances are available, they are presented in Section 11.

SECTION 5: Fire extinguishing measures

5.1 Hashiva
Carbon dioxide. Dry powder. Shower water jet. To extinguish larger fires, use a stream of water or alcohol-resistant foam.

5.2 . Special hazard arising from the substance or mixture
No particular hazard is known.

5.3 Firefighter Instructions
In the event of a fire, wear suitable breathing apparatus, suitable protective clothing including protective gloves and goggles/face shield.

SECTION 6: Measures in the event of accidental leakage

6.1 . Personal protection measures, protective equipment and emergency procedures

Wear suitable protective clothing. Wear eye/face protection. Wear appropriate protective gloves.

6.2 . Environmental protection measures
Dilute with plenty of water. Avoid entering sewers, surface water, or groundwater.

6.3 Methods and material for leakage containment and cleaning
Create a dam to catch large leaks. Use neutralizing agents. Sprinkle with inert material, e.g. sand, gravel, universal absorbent. Do not re-place the leaked material in the original container. Collect in sealed suitable containers and discard.

6.4 Reference to Other Sections
For information on personal protective equipment, see subsection 8.2. For information on deletion, see Section 13.

SECTION 7: Handling and storage

7.1 Safe Handling Precautions Fire and Explosion Prevention Precautions:
Special safety measures are not required.

Measures necessary to protect the environment:
For limitation of exposure to the environment, see subsection 8.2.

Guidelines for general occupational health protection:
Follow the safety regulations for handling chemicals. Do not leave food, drinks and game feed nearby. Do not mix with other products. After handling, wash your hands, face and exposed areas of skin thoroughly. Take off any contaminated parts of clothing immediately. Wash contaminated clothing before reuse. Avoid contact with skin and eyes. Use only with adequate ventilation. See section 8.2, Exposure control/personal protective equipment.

7.2 . Conditions for the safe storage of substances and mixtures, including incompatible substances and mixtures
Store in accordance with local codes and ordinances. Store in a sealed container. Store only in the original packaging. For conditions to be avoided, see subsection 10.4. For incompatible materials, see subsection 10.5.

7.3 Specific End-Uses/Specific End-uses
There is no specific end-use recommendation.

SECTION 8: Limitation of exposure / personal protective equipment

8.1 Control parameters Exposure limit values within the meaning of Government Regulation No. 361/2007 Coll., as amended

Permissible limits in air, if available:

Substance(s)	Permissible Exposure Limits (PELs)	Maximum permissible concentrations (NPK-P)
Sodium hydroxide	1 mg/m3	2 mg/m3

Biological agent, if available:

Recommended monitoring practices, if available:

Additional exposure limits under specific conditions of use, if available:

DNEL/DMEL and PNEC values
Human exposure
DNEL/DMEL oral exposure - consumer (mg/kg body weight)

Substance(s)	Short-term - local effects	Short-term - systemic effects	Long-term - local	Long-term - systemic effects
Sodium hydroxide	-	-	-	-
ionic mixture: tetrasodium [(1-hydroxyethylidene)bisphosphonate]	-	-	-	2.4

DNEL/DMEL Dermal Exposure - Worker

Substance(s)	Short-term - local effects	Short-term systemic effects (mg/kg body weight)	Long-term - local effects	Long-term - systemic effects (mg/kg body weight)
Sodium hydroxide	2 %	-	-	-
ionic mixture: tetrasodium [(1-hydroxyethylidene)bisphosphonate]	Data not available	-	Data not available	48

DNEL/DMEL Dermal Exposure - Consumer

Substance(s)	Short-term - local effects	Short-term - systemic effects	Long-term - local effects	Long-term - systemic effects

		(mg/kg body weight)		(mg/kg body weight)
Sodium hydroxide	2 % -		-	-
ionic mixture: tetrasodium [(1-hydroxyethylidene)bisphosphonate]	Data not available		Data not available 24	

DNEL/DMEL inhalation exposure - worker (mg/m3)

Substance(s)	Short-term - local effects	Short-term - systemic effects	Long-term - local Long-term - effects systemic effects	
Sodium hydroxide	-	-	1	-
ionic mixture: tetrasodium [(1-hydroxyethylidene)bisphosphonate]	-	-	-	16.9

DNEL/DMEL inhalation exposure - consumer (mg/m3)

Substance(s)	Short-term - local effects	Short-term - systemic effects	Long-term - local Long-term - effects systemic effects	
Sodium hydroxide	-	-	1	-
ionic mixture: tetrasodium [(1-hydroxyethylidene)bisphosphonate]	10	-	10	4.2

Environmental exposure:

Environmental Exposure - PNEC

Substance(s)	Surface water, freshwater (mg/l)	Surface water, seawater (mg/l)	Intermittent (mg/l) Wastewater treatment plants (mg/l)	
Sodium hydroxide	-	-	-	-
ionic mixture: tetrasodium [(1-hydroxyethylidene)bisphosphonate]	0.096	0.01	-	-

Environmental Exposure - PNEC, continued

Substance(s)	Sediment, freshwater (mg/kg)	Sediment, marine (mg/kg)	Soils (mg/kg) Air (mg/m3)	
Sodium hydroxide	-	-	-	-
ionic mixture: tetrasodium [(1-hydroxyethylidene)bisphosphonate]	193	19.3	14	-

8.2. Limitation of exposure

The following information relates to the uses listed in subsection 1.2 of the Safety Data Sheet.

Normal terms and conditions apply to this section.

Recommended precautions when handling undiluted product:

Suitable technical inspections: If the product is diluted in a specific dosing system where there is no risk of splashes or direct contact with the skin, the use of personal protective equipment listed in this section is not required. If possible, use an automatic/closed system and cover open containers. Transport by pipeline. Filling in an automatic system. Use tools to handle the product manually.

Appropriate organizational controls: If possible, avoid direct contact and/or splashing with the product. Employee training.

REACH application scenarios for an undiluted product:

	SWED - Sector-specific description of workers' exposure	LCS	WHY	Duration (min)	ERC
Automatic transfer and dilution	AISE_SWED_PW_8b_1	Eau	PROC 8b	60	ERC8b

Personal Protective Equipment Eye/Face Protection: Safety or safety glasses (EN 16321 / EN 166). The use of a protective face shield or a full-face mask is recommended.

Hand protection: Chemically resistant protective gloves (EN374). Verify the glove manufacturer's instructions for permeability and penetration. Assess specific conditions of use such as risk of splashes, cuts, contact time and temperature.
Gloves are recommended for long-term contact: Material: butyl rubber Penetration time: ≥ 480 min Material thickness: ≥ 0.7 mm Gloves are recommended for protection against splashes: Material: nitrile rubber Penetration time: ≥ 30 min Material thickness: ≥ 0.4 mm After consultation with the supplier of protective gloves, another type providing similar protection can be selected. Wear chemically resistant clothing and footwear if there may be direct skin contact and/or splashes (EN 14605).

Skin and body protection:

Respiratory protection: There are no special requirements for normal use.

Limiting environmental exposure: When discharging used aqueous solutions into the sewer, observe the applicable legal regulations. Do not discharge undiluted or neutralized.

Recommended precautions for handling diluted product:

Highest recommended concentration (% w/w): 0.2

Appropriate technical controls: Appropriate organizational controls: Not required for normal use. Not required for normal use.

REACH usage scenarios for a diluted product:

	SWED	LCS	WHY	Duration (min)	ERC
Automatic application in a specialized closed system	AISE_SWED_PW_1_1	Eau	PROC 1	480	ERC8a
Automatic application in a specialized system	AISE_SWED_PW_4_1	Eau	PROC 4	480	ERC8a

Personal Protective Equipment Eye / Face Protection: Hand Protection: Skin and Body Protection: Respiratory Protection: Not required for normal use. Not required for normal use. Not required for normal use. There are no special requirements for normal use.

Limiting environmental exposure: Not required for normal use.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties The information in this section applies to the product, unless it is explicitly stated that it relates to the substance

Method / Note

State: Liquid Color:
Clear, Yellow
Odour: product specific
Odor threshold: Not suitable here
Melting Point / Freezing Point (°C): Not specified
Initial boiling point and boiling point range (°C): not specified Not relevant for the classification of this product See. Substance Details

Substance data, boiling point

Substance(s)	Value (°C)	Method	Atmospheric pressure (hPa)
Sodium hydroxide	> 990	Method not specified	
ionic mixture: tetrasodium [(1-hydroxyethylidene)bisphosphonate]	Data not available		

Method / Note

Flammability (solids, gases): Not relevant for liquids
Flammability (liquid): Non-flammable.
Flash point (°C): Not suitable here.
Burn support: Not suitable here.
(UN Manual of Tests and Criteria, Section 32, L.2)
Lower and upper explosion limits/flammability limits (%): Not listed

Substance data, flammability or explosion limit values, if available:

Auto-ignition temperature: Not specified
Decomposition temperature: Not suitable here.

Method / Note
Not relevant for the classification of this product

pH: >= 11.5 (undiluted) diluted
pH:> 11 (0.2%)
Kinematic Viscosity: Undetermined
Solubility/miscibility in water: perfectly miscible

ISO 4316
ISO 4316

Particulars of the substance, water solubility

Substance(s)	Value (g/l)	Method	Temperature (°C)
Sodium hydroxide	1000	Method not specified	20
ionic mixture: tetrasodium [(1-hydroxyethylidene)bisphosphonate]	Data not available		

For data on the substance, partition coefficient : n-octanol/water (log Ko/w) see subsection 12.3

Method / Note

The same pair: Not specified
See. Substance Details

Substance data, vapour pressure

Substance(s) Value (Pa)		Method Temperature (°C)	
Sodium hydroxide < 1330		Method not specified 20	
ionic mixture: tetrasodium [(1-hydroxyethylidene)bisphosphonate] Data not available			

Relative Density: ≈ 1.26 (20°C) — **Method / Note** OECD 109 (EU A.3)
Relative vapor density: Data not available. — Not relevant for the classification of this product
Particle characteristics: Data not available. — Not relevant for liquids.

9.2 Additional Information
9.2.1. Information relating to physical hazard classes
Explosive properties: Explosion-proof — Not explosive based on the properties of the substance
Oxidizing properties: Not oxidizing. — Non-oxidizing based on the properties of the substance
Corrosive for metals: Corrosive

9.2.2. Other safety characteristics
No other relevant information is available.

SECTION 10: Persistence and Reactivity

10.1 Reactivity
No dangerous reactions occur during normal use and storage.

10.2 Chemical stability
Stable under normal conditions (temperature and pressure) during storage and use.

10.3 Possibility of dangerous reactions
Under normal storage and use conditions, there are no dangerous reactions.

10.4 Conditions to be avoided
It is stable under normal use and storage.

10.5 Incompatible Materials
May be corrosive to metals. It reacts with acids.

10.6 Hazardous Decomposition Products
It is stable under normal use and storage.

SECTION 11: Toxicological information

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

Compound data: .

Relevant calculated ATE(s):
ATE - Oral (mg/kg): >2000

Data on the substance, where relevant and available, are listed below:.

Acute toxicity
Acute oral toxicity

Substance(s)	Final state	Value (mg/kg)	Species	Method	Exposure time (h)	ATE Oral (mg/kg)
Sodium hydroxide		Data not available				Not specified
ionic mixture: tetrasodium [(1-hydroxyethylidene)bisphosphonate]	LD^{50}	2850	Rat	OECD 401 (EU B.1)		940

Acute dermal toxicity

Substance(s)	Final state	Value (mg/kg)	Species	Method	Exposure time (h)	ATE Dermal (mg/kg)
Sodium hydroxide	LD^{50}	1350	Rabbit	Method not specified		Not specified
ionic mixture: tetrasodium [(1-hydroxyethylidene)bisphosphonate]	LD^{50}	> 5000	Rabbit	OECD 402 (EU B.3)		Not

						Determined

Acute inhalation toxicity

Substance(s)	Final state	Value (mg/l)	Species	Method	Exposure time (h)
Sodium hydroxide		Data not available			
ionic mixture: tetrasodium [(1-hydroxyethylidene)bisphosphonate]		Data not available			

Acute inhalation toxicity, continued

Substance(s)	ATE - inhalation, dust (mg/l)	ATE - inhalation, mist (mg/l)	ATE - inhalation, vapors gas (mg/l) (mg/l)	ATE - inhalation,
Sodium hydroxide	Not specified	Not specified	Not specified	Not specified
ionic mixture: tetrasodium [(1-hydroxyethylidene)bisphosphonate]	Not specified	Not specified	Not specified	Not specified

Irritability and caustic

Skin irritation and causticness

Substance(s)	Result	Species	Method	Exposure time
Sodium hydroxide	Corrosive	Rabbit	Method not specified	
ionic mixture: tetrasodium [(1-hydroxyethylidene)bisphosphonate]	Slightly irritating	Rabbit	OECD 404 (EU B.4)	4 hour(s)

Corrosive/irritating to the skin

Substance(s)	Result	Species	Method	Exposure time
Sodium hydroxide	Corrosive	Rabbit	Method not specified	
ionic mixture: tetrasodium [(1-hydroxyethylidene)bisphosphonate]	Irritating	Rabbit	OECD 405 (EU B.5)	

Respiratory irritation and causticness

Substance(s)	Result	Species	Method	Exposure time
Sodium hydroxide	Data not available			
ionic mixture: tetrasodium [(1-hydroxyethylidene)bisphosphonate]	Data not available			

Sensitization

Sensitization in contact with the skin

Substance(s)	Result	Species	Method	Exposure time (h)
Sodium hydroxide	Not sensitizing		Repeated epicutaneous test on human subjects	
ionic mixture: tetrasodium [(1-hydroxyethylidene)bisphosphonate]	Data not available			

Sensitization by inhalation

Substance(s)	Result	Species	Method	Exposure time
Sodium hydroxide	Data not available			
ionic mixture: tetrasodium [(1-hydroxyethylidene)bisphosphonate]	Data not available			

Effects of CMR (carcinogenic, mutagenic or toxic to reproduction)

Mutagenicity

Substance(s)	Result (in vitro)	Method (in-vitro)	Result (in-vivo)	Method (in-vitro)
Sodium hydroxide	No evidence of mutagenicity, negative test results	OECD 473 Rat Hepatocyte DNA Repair Test	No evidence of mutagenicity, negative test results	OECD 474 (EU B.12) OECD 475 (EU B.11)
ionic mixture: tetrasodium [(1-hydroxyethylidene)bisphosphonate] test results	There is no evidence of mutagenicity, negative	OECD draft 487	No evidence of genotoxicity, negative test results	OECD 478

Carcinogenicity

Substance(s)	Influence
Sodium hydroxide	There is no evidence of carcinogenicity, weight of evidence
ionic mixture: tetrasodium [(1-hydroxyethylidene)bisphosphonate]	No evidence of carcinogenicity, negative test results

Reproductive toxicity

Substance(s)	Final state	Specific effects	Value (mg/kg body weight)	Species	Method	Exposure time	Notes and other effects observed

			w/day)				
Sodium hydroxide			Data not available				No evidence of developmental toxicity No evidence of reproductive toxicity
ionic mixture: tetrasodium -[(1-hydrox yethylidene)bisphosphonate]	NOAEL		112	Rat	OECD 416, (EU B.35), Oral		There is no evidence of reproductive toxicity

Repeated dose toxicity

Subacute or subchronic oral toxicity

Substance(s)	Final state	Value (mg/kg body weight/day)	Species	Method	Exposure time (days)	Specific effects on affected organs
Sodium hydroxide		Data not available				
ionic mixture: tetrasodium [(1-hydroxyethylidene)bisphosphonate]	NOAEL	41	Rat	OECD 408 (EU B.26)	90	Effects not observed

Subchronic dermal toxicity

Substance(s)	Final state	Value (mg/kg body weight/day)	Species	Method	Exposure time (days)	Specific effects on affected organs
Sodium hydroxide		Data not available				
ionic mixture: tetrasodium [(1-hydroxyethylidene)bisphosphonate]		Data not available				

Subchronic inhalation toxicity

Substance(s)	Final state	Value (mg/kg body weight/day)	Species	Method	Exposure time (days)	Specific effects on affected organs
Sodium hydroxide		Data not available				
ionic mixture: tetrasodium [(1-hydroxyethylidene)bisphosphonate]		Data not available				

Chronic toxicity

Substance(s)	Method of exposure	Final state	Value (mg/kg body weight/day)	Species	Method	Exposure time (days)	Specific effects on affected organs	Note
Sodium hydroxide			Data not available					
ionic mixture: tetrasodium -[(1-hydrox yethylidene)bisphosphonate]			Data not available					

STOT - Specific Target Organ Toxicity - Single Exposure

Substance(s)	Affected organ(s)
Sodium hydroxide	Data not available
ionic mixture: tetrasodium [(1-hydroxyethylidene)bisphosphonate]	Data not available

STOT - Specific Target Organ Toxicity - Repeated Exposure

Substance(s)	Affected organ(s)
Sodium hydroxide	Data not available
ionic mixture: tetrasodium [(1-hydroxyethylidene)bisphosphonate]	Data not available

Danger if inhaled

Substances with non-useless by inhalation (H304), if present, are listed in Section 3.

Potential adverse health effects and symptoms

Effects and symptoms related to the product, if listed in subsection 4.2.

11.2 Information on other hazards

11.2.1. Endocrine-disrupting properties

Endocrine-disrupting properties - Human data, if available:

11.2.2. Additional information

No other relevant information is available.

SECTION 12: Environmental information

12.1 Toxicity

Data is not available for mixtures .

Data on the substance, where relevant and available, are listed below:

Toxicity to aquatic organisms - short-term

Aquatic toxicity - short-term - fish

Substance(s)	Final state	Value (mg/l)	Species	Method	Exposure time (h)
Sodium hydroxide	LC^{50}	35	*Various organisms*	Method not specified	96
ionic mixture: tetrasodium [(1-hydroxyethylidene)bisphosphonate]	LC^{50}	195			

Aquatic toxicity - short-term - crustaceans

Substance(s)	Final state	Value (mg/l)	Species	Method	Exposure time (h)
Sodium hydroxide	EC^{50}	40.4	*Ceriodaphnia sp.*	Method not specified	48
ionic mixture: tetrasodium [(1-hydroxyethylidene)bisphosphonate]		Data not available			

Toxicity to aquatic organisms - short-term - algae

Substance(s)	Final state	Value (mg/l)	Species	Method	Exposure time (h)
Sodium hydroxide	EC^{50}	22	*Photobacteria M phosphoreum*	Method not specified	0.25
ionic mixture: tetrasodium [(1-hydroxyethylidene)bisphosphonate]		Data not available			

Aquatic Toxicity - Short-Term - Marine Organisms

Substance(s)	Final state	Value (mg/l)	Species	Method	Exposure time (days)
Sodium hydroxide		Data not available			
ionic mixture: tetrasodium [(1-hydroxyethylidene)bisphosphonate]		Data not available			

Impact on wastewater treatment plants - toxicity to bacteria

Substance(s)	Final state	Value (mg/l)	Inoculum	Method	Exposure time
Sodium hydroxide		Data not available			
ionic mixture: tetrasodium [(1-hydroxyethylidene)bisphosphonate]		Data not available			

Toxicity to aquatic organisms - long-term

Aquatic toxicity - fish

Substance(s)	Final state	Value (mg/l)	Species	Method	Exposure time	Observed effects
Sodium hydroxide		Data not available				
ionic mixture: tetrasodium [(1-hydroxyethylidene)bisphosphonate]		Data not available				

Toxicity to aquatic organisms - crustaceans

Substance(s)	Final state	Value (mg/l)	Species	Method	Exposure time	Observed effects
Sodium hydroxide		Data not available				
ionic mixture: tetrasodium [(1-hydroxyethylidene)bisphosphonate]	NOEC	6.75	*Daphnia magna*		28 day(s)	

Toxicity to other aquatic benthic organisms, including sediment-dwelling organisms, if available:

Substance(s)	Final state	Value (mg/kg dry matter of sediment)	Species	Method	Exposure time (days)	Observed effects

Sodium hydroxide		Data not available				
ionic mixture: tetrasodium [(1-hydroxyethylidene)bisphosphonate]		Data not available				

Terrestrial toxicity

Terrestrial toxicity - earthworms, if available:

Substance(s)	Final state	Value (mg/kg dry matter)	Species	Method	Exposure time (days)	Observed effects
Sodium hydroxide		Data not available				

Terrestrial toxicity - plants, if available:

Substance(s)	Final state	Value (mg/kg dry matter)	Species	Method	Exposure time (days)	Observed effects
Sodium hydroxide		Data not available				

Terrestrial toxicity - birds, if available:

Substance(s)	Final state	Value	Species	Method	Exposure time (days)	Observed effects
Sodium hydroxide		Data not available				

Terrestrial toxicity - beneficial insects, if available:

Substance(s)	Final state	Value (mg/kg dry matter)	Species	Method	Exposure time (days)	Observed effects
Sodium hydroxide		Data not available				

Terrestrial toxicity - soil bacteria, if available:

Substance(s)	Final state	Value (mg/kg dry matter)	Species	Method	Exposure time (days)	Observed effects
Sodium hydroxide		Data not available				

12.2 Persistence and degradability

Abiotic degradation

Abiotic decomposition - by photodegradation in air, if available:

Substance(s)	Half-life	Method	Reviews	Note
Sodium hydroxide	13 second(s)	Method not specified	Quickly photodegradable	

Abiotic decomposition - hydrolysis, if available:

Substance(s)	Half-life in fresh water	Method	Reviews	Note
Sodium hydroxide	Data not available			

Abiotic decomposition - other processes, if available:

Substance(s)	Type	Half-life	Method	Reviews	Note
Sodium hydroxide		Data not available			

Biological degradation

Easy biodegradability - aerobic conditions

Substance(s)	Inoculum	Analytical method	DT ^{50}	Method	Reviews
Sodium hydroxide					Not applicable (inorganic substances)
ionic mixture: tetrasodium [(1-hydroxyethylidene)bisphosphonate]	Activated sludge, aerobic			Read across	The substance is not easily biodegradable.

Easy biodegradability – anaerobic and marine conditions, if available:

Substance(s)	Medium and type	Analytical method	DT ^{50}	Method	Reviews
Sodium hydroxide					Data not available

Degradation in relevant environmental compartments, if available:

Substance(s)	Medium and type	Analytical method	DT 50	Method	Reviews
Sodium hydroxide					Data not available

12.3 Bioaccumulation potential
Partition coefficient n-octanol/water (log Ko/w)

Substance(s)	Value	Method	Reviews	Note
Sodium hydroxide	Data not available		Not relevant, no bioaccumulation	
ionic mixture: tetrasodium -[(1-hydroxyethylidene)bisphos phonate]	Data not available			

Bioconcentration factor (BCF)

Substance(s)	Value	Species	Method	Reviews	Note
Sodium hydroxide	Data not available				
ionic mixture: tetrasodium -[(1-hydrox yethylidene)bisphosphonate]	Data not available				

12.4 Mobility in the soil
Adsorption/Desorption to soil or sediment

Substance(s)	Adsorbent Coefficient Log Koc	Desorbion coefficient Log Koc(des)	Method	Soil/sediment type	Reviews
Sodium hydroxide	Data not available				Mobile in the soil
ionic mixture: tetrasodium [(1-hydroxyethylidene)bisphosphonate]	Data not available				

12.5. PBT and vPvB assessment results
Substances that meet the PBT/vPvB criteria are listed in Section 3, if any.

12.6 Endocrine-disrupting properties
Endocrine disrupting properties - Environmental effects, if available:

12.7 Other adverse effects
There are no other known side effects.

SECTION 13: Removal Instructions

13.1. Waste management methods

Product residues as waste/unused products: Comply with applicable legislation, laws, decrees and regulations on waste. Hand over it for professional disposal (e.g. incineration) to a company that deals with waste disposal, or arrange it according to your permit. Waste should not be disposed of by release into the sewer.

Waste catalogue: 20 01 15* Principles.

Empty packaging Recommendations: Comply with applicable legislation, laws, decrees and regulations on waste. The packaging material is suitable for energy recovery or recycling. Water,

Suitable cleaning agents: with detergent if necessary.

Act on Waste and on the Amendment of Certain Other Acts No. 541/2020 Coll., as amended, and related implementing regulations

SECTION 14: Shipping Information

Land Transport (ADR/RID), Maritime Transport (IMDG), Air Freight (ICAO-TI / IATA-DGR)
14.1 UN number or ID number: 1824
14.2 Official (UN) naming for transport:

Sodium hydroxide solution

14.3. Transport hazard class(s): Transport hazard class (and ancillary risks): 8
14.4. Packaging group: II
14.5 Environmental hazard: Endangers the environment: No
Marine pollutant: No
14.6 Special precautions for users: Not known.
14.7 Ocean bulk transport according to IMO instruments: The product is not transported in tanks on ships.

Other important information: ADR
Classification code: C5
Tunnel Restriction Code: (E)
Hazard identification number: 80
IMO/IMDG
EmS: F-A, S-B

The product is classified, labelled and packaged in accordance with the requirements of the ADR and the provisions of the IMDG Code An exception to the ADR applies to small volume packaging.

SECTION 15: Regulatory Information

15.1. Safety, health and environmental rules/specific legislation relating to the substance or mixture

EU Regulation:
- Regulation (EC) No 1907/2006 - REACH
- Regulation (EC) No 1272/2008 - CLP
- Regulation (EC) No 648/2004 - Detergents Regulation
- substances that have been identified as having endocrine-disrupting properties according to the criteria set out in Delegated Regulation (EU) 2017/2100 or Regulation (EU) 2018/605
- Agreement concerning the International Carriage of Dangerous Goods by Road (ADR)
- International Transport of Dangerous Goods by Sea (IMDG)

Authorisation or restriction (EC Regulation No. 1907/2006, Title VII and Title VIII, respectively) Not relevant here.

Ingredients according to Regulation 648/2004/EC on detergents:

polycarboxylates,	5 - 15 %
phosphonates	< 5 %

Seveso - Classification: Unclassified

15.2. Chemical Safety Assessment
No chemical safety assessment of the mixture has been performed.

SECTION 16: Additional Information

The data in the Safety Data Sheet is based on the current state of our knowledge and information available at the time the Safety Data Sheet is processed. However, this does not constitute a guarantee of product properties and does not provide for a legally binding contract.

Safety Data Sheet Code: MS1004307 **Version:** 01.1 **Revision: 2024-08-02**

Reason for revision:
This safety data sheet contains changes compared to the previous version in section(s):, 1, 4, 6, 9, 16, Complies with Appendix II of Regulation (EC) 1907/2006 as amended by Regulation (EC) 2020/878

Method of classification
The classification of the mixture shall be carried out on the basis of the calculation method using the substance data as specified in Regulation (EC) No 1272/2008. If data are available for the mixture, e.g. based on extrapolation principles or conclusive evidence for classification, this will be reported in the relevant parts of the safety data sheet, e.g. in Section 9 Physical and chemical properties, Section 11 Toxicological information or Section 12 Ecological information.

Abbreviations and acronyms:
- AISE - The international Association for Soaps, Detergents and Maintenance Products (international organization)
- ATE - Acute Toxicity Estimation
- DNEL - a derived level at which there are no adverse effects

- EC50 - effective concentration, 50%
- ERC - Environmental release category
- EUH - CLP additional hazard statements
- LC50 - lethal concentration, 50%
- LCS - Life Cycle Stage
- LD50 - lethal dose, 50%
- NOAEL - Dose value with no observed adverse effect
- NOEL - dose value with no observed effect
- OECD - Organisation for Economic Co-operation and Development
- PBT - persistent, bioaccumulative and toxic
- PNEC - estimate of the concentration at which no adverse effects occur
- PROC - Process Categories
- REACH number - REACH registration number without the part that specifies the supplier
- vPvB - lhighly persistent and highly bioaccumulative
- H290 - May be corrosive to metals.
- H302 - Harmful if swallowed.
- H314 - Causes severe skin burns and eye damage.
- H318 - Causes serious eye damage.
- H319 - Causes serious eye irritation.