SAFETY DATA SHEET

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

CLEAMEN 144

Date of revision:	**14. 04. 2026**	Version: **3.0**
Replaced version from:	**22. 03. 2022**	
Date of issue:	**17. 02. 2020**	

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

1.1. Product identifier

Product Name

CLEAMEN 144

UFI code

UFI: H561-G0JD-G00X-GG0W

Product code

TC144.R01a

Mixture description

Water solution.

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

Identified uses

Cleaning agent. Washing, chlorine, alkaline detergent for machine and hand washing of floors and surfaces. Consumer and professional use.

Uses advised against

Not known. 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

Registered office:
CORMEN s.r.o.
Věchnov 73
593 01
Czech Republic
Tel.: +420 566 550 961
Fax: +420 566 551 822

Trade establishment:
CORMEN s.r.o.
Průmyslová 1420
593 01 Bystřice nad Pernštejnem
Czech Republic
Tel.: +420 565 400 300

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

1.4. Emergency telephone number

112 (General emergency phone).

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

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

Classification according to 1272/2008/EC

Met. Corr. 1; H290
Skin Corr. 1A; H314
Eye Dam. 1; H318
Aquatic Chronic 3; H412

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

The most important adverse physical, human health and environmental effects

May be corrosive to metals. Causes severe skin burns and eye damage. Harmful to aquatic life with long lasting effects. Do not use together with other products. May release dangerous gases (chlorine).

2.2. Label elements

Hazard pictograms

Signal word

Danger

Substances of the mixture to be placed on the label

Contain Sodium hydroxide, Disodium metasilicate pentahydrate, Sodium hypochlorite.

Hazard statements

H290	May be corrosive to metals.
H314	Causes severe skin burns and eye damage.
H412	Harmful to aquatic life with long lasting effects.

Precautionary statements

P102	Keep out of reach of children.
P234	Keep only in original packaging.
P273	Avoid release to the environment.
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. **Dispose of the cleaned packaging without any residual product content in the sorted waste.**

Supplemental hazard information

EUH206 - Warning! Do not use together with other products. May release dangerous gases (chlorine).

Composition according to regulation 648/2004/EC on detergents: 5 - < 15% phosphonates, < 5% chlorine-based bleaching agents.

2.3. Other hazards

The mixture does not contain substance(s) meeting the criteria for persistent, bioaccumulative and toxic (PBT) or very persistent and very bioaccumulative (vPvB) in accordance with Annex XIII of REACH regulation. The mixture and its substances are not mentioned on the Candidate list for possible inclusion in Annex XIV of REACH at the date of the revision of the safety data sheet (established in accordance with Article 59(1) of REACH regulation. The mixture does not contain the substance(s) 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.

SECTION 3: Composition/information on ingredients

3.2. Mixtures

3.2.1. Substances of a mixture classified as hazardous

Identification of substance			Content wt. %	Classification according to 1272/2008/EC
Sodium hydroxide; Caustic soda				
CAS Number	1310-73-2		5 - < 15	Met. Corr. 1; H290 Skin Corr. 1A; H314 Eye Dam. 1; H318
EC Number	215-185-5			
Index Number	011-002-00-6			
Registration Number	01-2119457892-27-XXXX			
The substance has specific concentration limits:				
Skin Corr. 1A; H314		C ≥ 5 %		
Skin Corr. 1B; H314		2 % ≤ C < 5 %		
Skin Irrit. 2; H315		0.5 % ≤ C < 2 %		
Eye Irrit. 2; H319		0.5 % ≤ C < 2 %		
Disodium metasilicate pentahydrate				
CAS Number	10213-79-3		1 - < 10	Met. Corr. 1; H290 Skin Corr. 1B; H314 Eye Dam. 1; H318 STOT SE 3; H335
EC Number	229-912-9			
Index Number	014-010-00-8			
Registration Number	01-2119449811-37-XXXX			
The classification is for anhydride.				
Sodium hypochlorite				

CAS Number EC Number Index Number Registration Number	7681-52-9 231-668-3 017-011-00-1 01-2119488154-34-XXXX	1 - < 2.25	Met. Corr. 1; H290 Skin Corr. 1B; H314 Eye Dam. 1; H318 STOT SE 3; H335 Aquatic Acute 1; H400 Aquatic Chronic 1; H410 M=10 M(Chronic)=1 EUH031
The substance has specific concentration limits:			
EUH031	C ≥ 5 %		
Ammonia, solution			
CAS Number EC Number Index Number Registration Number	1336-21-6 215-647-6 007-001-01-2 not yet available	< 0.15	Skin Corr. 1B; H314 STOT SE 3; H335 Aquatic Acute 1; H400
The substance has specific concentration limits:			
STOT SE 3; H335	C ≥ 5 %		

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. Never give anything by mouth if victim is rapidly losing consciousness, unconscious or convulsing. Protect yourself during rescue work.

4.1. Description of first aid measures

Inhalation

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

Skin contact

Remove contaminated clothing, shoes, and wash affected skin 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 and supportively.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media

The product is non-flammable. Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

Unsuitable extinguishing media

Strong 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, nitrogen oxides, ammonia, chlorine oxides, chlorine, hydrogen chloride, silicon oxides 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 vapour and aerosol. 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.

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 vapour and aerosol.

Smoking, eating and drinking should be prohibited at the place of use. Keep safety regulations for handling chemicals. Take off contaminated clothing and protective equipment before entering the dining area. 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.
Do not store together with incompatible materials (see subsection 10.5), food, drink and feed.

7.3. Specific end use(s)

See subsection 1.2.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

8.1.1. Exposure limit value

Sodium hypochlorite - chlorine (CAS: 7782-50-5) CAS: 7681-52-9

Limit values - Eight hours		Limit values - Short-term		Note
not given	not given	1.5 mg/m^3	0.5 ppm	not given

Ammonia anhydrous CAS: 7664-41-7

Limit values - Eight hours		Limit values - Short-term		Note
14 mg/m^3	20 ppm	36 mg/m^3	50 ppm	none

8.1.2. Biological limit values

Not determined in EU.

8.1.3. DNEL and PNEC values

Sodium hydroxide CAS: 1310-73-2

DNEL

Area of use	Route of exposure	Effect	Exposure time	Value
Workers	Inhalation	Local effect	Long term	1 mg/m^3
General population	Inhalation	Local effect	Long term	1 mg/m^3

PNEC - not available

Disodium metasilicate ES: 229-912-9

DNEL

Area of use	Route of exposure	Effect	Exposure time	Value
Workers	Inhalation	Systemic effect	Long term	6.22 mg/m^3
Workers	Dermal	Systemic effect	Long term	1.49 mg/kg/day
General population	Inhalation	Systemic effect	Long term	1.55 mg/m^3
General population	Dermal	Systemic effect	Long term	0.74 mg/kg/day
General population	Oral	Systemic effect	Long term	0.74 mg/kg/day

PNEC - not available

Sodium hypochlorite CAS: 7681-52-9

DNEL

Area of use	Route of exposure	Effect	Exposure time	Value
Workers	Inhalation	Systemic effect	Long term	1.55 mg/m^3

Workers	Inhalation	Systemic effect	Acute/short term	3.1 mg/m^3
Workers	Inhalation	Local effect	Long term	1.55 mg/m^3
Workers	Inhalation	Local effect	Acute/short term	3.1 mg/m^3
Workers	Dermal	Local effect	Long term	0.007 mg/m^2
General population	Inhalation	Systemic effect	Long term	1.55 mg/m^3
General population	Inhalation	Systemic effect	Acute/short term	3.1 mg/m^3
General population	Inhalation	Local effect	Long term	1.55 mg/m^3
General population	Inhalation	Local effect	Acute/short term	3.1 mg/m^3
General population	Dermal	Local effect	Long term	0.007 mg/m^2
General population	Oral	Systemic effect	Long term	0.26 mg/kg/day

PNEC

Fresh water	Marine water	Intermittent releases		Sewage Treatment Plant (STP)
		Fresh water	Marine water	
0.21 µg/l	0.042 µg/l	0.26 µg/ l	not given	4.69 mg/l

PNEC

Sediment (freshwater)	Sediment (marine water)	Air	Soil	Hazard for predators
not given	not given	no effect	not given	11.1 mg/kg food

8.2. Exposure controls

8.2.1. Appropriate engineering controls

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.

Eye/face protection

Wear safety glasses or face shield (EN 166, EN 149+A1).

Skin protection - hand protection

Wear protective gloves (EN 374-1, EN 374-2).

Recommended gloves material:

nitrile rubber, breakthrough time: > 480 min., glove thickness: 0.4 mm

Viton, breakthrough time: > 480 min., glove thickness: 0.7 mm

Unsuitable glove material: Leather.

The selection of the glove material on consideration of the breakthrough time, permeability, degradation and next relevant factors; other chemicals that may come into contact, physical requirements (cut and puncture protection, dexterity, thermal protection), possible body reactions to the glove material and the glove supplier's instructions and specifications. In case of repeated use of gloves, clean and keep them in a well-ventilated place before taking off.

Skin protection - other

Suitable protective working clothing and protective footwear.

Respiratory protection

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

Thermal hazards

In normal use, it is not necessary to use protective equipment to be worn for materials that represent a thermal hazard.

8.2.3. Environmental exposure controls

Uncontrolled release of the mixture into environment is to be avoided. Keep the emission limits according to national legislation.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Mixture

Physical state	Liquid.
Colour	Colourless.
Odour	Characteristic.
Melting point/freezing point	Not determined.
Boiling point or initial boiling point and boiling range	100 °C (OECD 103).
Flammability	Not determined, it is an aqueous solution which does not contain any flammable substances or the concentration of flammable substance(s) is lower than the limit for inclusion in Section 3.
Lower explosion limit	Not determined, it is an aqueous solution which does not contain any flammable substances or the concentration of flammable substance(s) is lower than the limit for inclusion in Section 3.
Upper explosion limit	Not determined, it is an aqueous solution which does not contain any flammable substances or the concentration of flammable substance(s) is lower than the limit for inclusion in Section 3.
Flash point	Not determined.
Auto-ignition temperature	Not determined.
Decomposition temperature	Not determined, the mixture does not contain self-reactive substances or organic peroxides or other substances which may decompose.
pH	14.
Kinematic viscosity	Not determined, the mixture does not contain a substance classified as aspiration toxic, or the sum of the concentrations of substances classified as aspiration toxic is less than 10 wt. %.
Solubility	Miscible.
Partition coefficient n-octanol/water (log value)	Does not apply to mixture.
Vapour pressure	Not determined.

Density and/or relative density	D_4^{20} = 1.1.
Relative vapour density	Not determined.
Particle characteristics	Does not apply to liquid.
Sodium hydroxide	CAS: 1310-73-2
Physical state	Solid.
Colour	White.
Odour	Odourless.
Melting point/freezing point	323 °C (literature).
Boiling point or initial boiling point and boiling range	1 388 °C (literature).
Flammability	The substance is not classified as flammable, pyrophoric or emit flammable gases under standard conditions.
Lower explosion limit	Does not apply to solid.
Upper explosion limit	Does not apply to solid.
Flash point	Does not apply to solid.
Auto-ignition temperature	Does not apply to solid.
Decomposition temperature	Not determined, it is not a self-reactive substance or an organic peroxide or a substance that may decompose.
pH	Not determined, strong alkaline substance.
Kinematic viscosity	Does not apply to solid.
Solubility	100 g/100 g H2O (25 °C, literature).
Partition coefficient n-octanol/water (log value)	Not determined, it is an inorganic substance.
Vapour pressure	Not determined, the substance has melting point higher than 300 °C.
Density and/or relative density	2.13 g/cm^3 (20 °C, literature).
Relative vapour density	Does not apply to solid.
Particle characteristics	Not determined, solid NaOH is in the form of large particles (flakes).
Disodium metasilicate	ES: 229-912-9
Physical state	Solid.
Colour	Colourless to white.
Odour	Not determined.
Melting point/freezing point	1 089 °C (literature).
Boiling point or initial boiling point and boiling range	Not determined.
Flammability	The substance is not classified as flammable, pyrophoric or emit flammable gases under standard conditions.

Lower explosion limit	Does not apply to solid.
Upper explosion limit	Does not apply to solid.
Flash point	Does not apply to solid.
Auto-ignition temperature	Does not apply to solid.
Decomposition temperature	Not determined, it is not a self-reactive substance or an organic peroxide or a substance that may decompose.
pH	Not determined.
Kinematic viscosity	Does not apply to solid.
Solubility	210 g/l (20 °C, pH = 12.7).
Partition coefficient n-octanol/water (log value)	Not determined, it is an inorganic substance.
Vapour pressure	Not determined, the substance has melting point higher than 300 °C.
Density and/or relative density	2.61 g/cm^3 (literature).
Relative vapour density	Does not apply to solid.
Particle characteristics	D10 = 397 µm (ISO 13320-1). D50 = 695 µm (ISO 13320-1). D90 = 1 150 µm (ISO 13320-1).
Sodium hypochlorite	CAS: 7681-52-9
Physical state	Liquid (aqueous solution).
Colour	Yellowish.
Odour	Chlorine.
Melting point/freezing point	-28.9 °C (aqueous solution, active chlorine content 24.3%, OECD 102).
Boiling point or initial boiling point and boiling range	≥ 60.4 °C (aqueous solution, active chlorine content 24.3%, OECD 102).
Flammability	The substance is not classified as flammable, pyrophoric or emit flammable gases under standard conditions, it is an aqueous solution.
Lower explosion limit	Not determined, it is an aqueous solution of an inorganic substance.
Upper explosion limit	Not determined, it is an aqueous solution of an inorganic substance.
Flash point	Not determined, it is an aqueous solution of an inorganic substance.
Auto-ignition temperature	Not determined, it is an aqueous solution of an inorganic substance.
Decomposition temperature	Not determined, it is not a self-reactive substance or an organic peroxide.
pH	12.5 (19.1 °C, aqueous solution, active chlorine content 5.4 %, literature).

Kinematic viscosity	Not determined, it is not a hydrocarbon or a chlorinated hydrocarbon.
Solubility	Not determined, it is an aqueous solution of an inorganic substance.
Partition coefficient n-octanol/water (log value)	Not determined, it is an aqueous solution of an inorganic substance.
Vapour pressure	Not determined, it is an aqueous solution of an inorganic substance.
Density and/or relative density	$D_4^{21.2}$ = 1.3 (aqueous solution, active chlorine content 24.3 %, OECD 109).
Relative vapour density	Not determined.
Particle characteristics	Does not apply to liquid.

9.2. Other information

9.2.1. Information with regard to physical hazard classes

Mixture

Explosives

Data for the mixture are not available.

The mixture does not contain substances classified as explosives or oxidising, or the concentration of substance(s) is lower than the limit for inclusion in Section 3.

Flammable gases

It is not gas.

Aerosols

It is not aerosol.

Oxidising gases

It is not gas.

Gases under pressure

It is not gas.

Flammable liquids

Data for the mixture are not available.

The mixture does not contain substances classified as flammable liquids or the concentration of substance(s) is lower than the limit for inclusion in Section 3.

Flammable solids

It is not solid.

Self-reactive substances and mixtures

Data for the mixture are not available.

The mixture does not contain substances classified as self-reactive substances or explosives or organic peroxides or oxidising, or the concentration of substance(s) is lower than the limit for inclusion in Section 3.

Pyrophoric liquids

Data for the mixture are not available.

The mixture does not contain substances classified as pyrophoric liquids or the concentration of substance(s) is lower than the limit for inclusion in Section 3.

Pyrophoric solids

It is not solid.

Self-heating substances and mixtures

Data for the mixture are not available.

The mixture does not contain substances classified as self-heating or pyrophoric substances or the concentration of substance(s) is lower than the limit for inclusion in Section 3.

Substances and mixtures, which emit flammable gases in contact with water

Data for the mixture are not available.

The mixture does not contain substances classified as substances, which emit flammable gases in contact with water or the concentration of substance(s) is lower than the limit for inclusion in Section 3.

Oxidising liquids

Data for the mixture are not available.

The mixture does not contain substances classified as oxidising liquids or the concentration of substance(s) is lower than the limit for inclusion in Section 3.

Oxidising solids

It is not solid.

Organic peroxides

Data for the mixture are not available.

The mixture does not contain substances classified as organic peroxides or the concentration of substance(s) is lower than the limit for inclusion in Section 3.

Corrosive to metals

Data for the mixture are not available.

The mixture is classified as corrosive to category 1 metals, due to the high content of such classified components.

Desensitised explosives

Data for the mixture are not available.

The mixture does not contain substances classified as explosives or desensitised explosives, or the concentration of substance(s) is lower than the limit for inclusion in Section 3.

Sodium hydroxide CAS: 1310-73-2

Explosives

Data for the substance are not available.

The substance does not contain chemical groups associated with explosive properties.

Flammable gases

It is not gas.

Aerosols

It is not aerosol.

Oxidising gases

It is not gas.

Gases under pressure
It is not gas.
Flammable liquids
It is not liquid.
Flammable solids
Data for the substance are not available. The substance is not classified as flammable solid.
Self-reactive substances and mixtures
Data for the substance are not available. The substance does not contain chemical groups associated with explosive or self-reactive properties.
Pyrophoric liquids
It is not liquid.
Pyrophoric solids
Data for the substance are not available. The substance is stable in air, there is no spontaneous ignition.
Self-heating substances and mixtures
Data for the substance are not available. The substance is not classified as self-heating.
Substances and mixtures, which emit flammable gases in contact with water
Data for the substance are not available. The substance is soluble in water and forms a stable mixture with it.
Oxidising liquids
It is not liquid.
Oxidising solids
Data for the substance are not available. The substance does not contain chemical groups associated with oxidising properties.
Organic peroxides
Data for the substance are not available. The substance does not contain a bivalent group -O-O- with at least one organic radical.
Corrosive to metals
Data for the substance are not available. The substance is classified as corrosive to metal category 1.
Desensitised explosives
Data for the substance are not available. The substance does not contain chemical groups associated with explosive properties.
Disodium metasilicate ES: 229-912-9
Explosives
Data for the substance are not available. The substance does not contain chemical groups associated with explosive properties.

Flammable gases
It is not gas.
Aerosols
It is not aerosol.
Oxidising gases
It is not gas.
Gases under pressure
It is not gas.
Flammable liquids
It is not liquid.
Flammable solids
Data for the substance are not available. The substance is not classified as flammable solid.
Self-reactive substances and mixtures
Data for the substance are not available. The substance does not contain chemical groups associated with explosive or self-reactive properties.
Pyrophoric liquids
It is not liquid.
Pyrophoric solids
Data for the substance are not available. The substance is stable in air, there is no spontaneous ignition.
Self-heating substances and mixtures
Data for the substance are not available. The substance is not classified as self-heating.
Substances and mixtures, which emit flammable gases in contact with water
Data for the substance are not available. The substance is soluble in water and forms a stable mixture with it.
Oxidising liquids
It is not liquid.
Oxidizing solids
Data for the substance are not available. It is an inorganic substance does not contain chemical groups associated with oxidising properties.
Organic peroxides
Data for the substance are not available. The substance does not contain a bivalent group -O-O- with at least one organic radical.
Corrosive to metals
Data for the substance are not available. The substance is classified as corrosive to metal category 1.

Desensitised explosives
Data for the substance are not available. The substance does not contain chemical groups associated with explosive properties.
Sodium hypochlorite CAS: 7681-52-9
Explosives
Data for the substance are not available. The substance does not contain chemical groups associated with explosive properties.
Flammable gases
It is not gas.
Aerosols
It is not aerosol.
Oxidising gases
It is not gas.
Gases under pressure
It is not gas.
Flammable liquids
Data for the substance are not available. The substance is not classified as a flammable liquid, it is an aqueous solution of an inorganic salt.
Flammable solids
It is not solid.
Self-reactive substances and mixtures
Data for the substance are not available. The substance does not contain chemical groups associated with explosive or self-reactive properties.
Pyrophoric liquids
Data for the substance are not available. The substance is stable in air, there is no spontaneous ignition.
Pyrophoric solids
It is not solid.
Self-heating substances and mixtures
Data for the substance are not available. The substance is not classified as self-heating.
Substances and mixtures, which emit flammable gases in contact with water
Data for the substance are not available. The substance is produced in an aqueous solution.
Oxidising liquids
Data for the substance are not available. It is an inorganic substance does not contain chemical groups associated with oxidising properties.
Oxidizing solids

It is not solid.

Organic peroxides

Data for the substance are not available.
The substance does not contain a bivalent group -O-O- with at least one organic radical.

Corrosive to metals

Data for the substance are not available.
The substance is classified as corrosive to metal category 1.

Desensitised explosives

Data for the substance are not available.
The substance does not contain chemical groups associated with explosive properties.

9.2.2. Other safety characteristics

Mechanical sensitivity	Not determined, it is not an explosive substance.
Self-accelerating polymerisation temperature	Not determined, it is not a polymerising substance.
Formation of explosible dust/air mixtures	Not determined, it is not a dust.
Acid/alkaline reserve	Not determined.
Evaporation rate	Not determined.
Miscibility	Not determined.
Conductivity	Not determined.
Corrosiveness	Not determined.
Gas group	Not determined, it is not gas.
Redox potential	Not determined.
Radical formation potential	Not determined.
Photocatalytic properties	Not determined.

SECTION 10: Stability and reactivity

10.1. Reactivity

The mixture is stable under normal conditions of use. There aren´t any hazardous reaction.

10.2. Chemical stability

Stable under recommended storage conditions.

10.3. Possibility of hazardous reactions

Hazardous reactions aren´t known under normal conditions of use.

10.4. Conditions to avoid

Protect from frost.

10.5. Incompatible materials

Strong oxidising agents, acids. Mixture is corrosive to metals. Do not use together with other products. May release dangerous gases (chlorine).

10.6. Hazardous decomposition products

They do not form under normal use. Burning releases carbon oxides, nitrogen oxides, ammonia, chlorine oxides, chlorine, hydrogen chloride, silicon oxides and products of incomplete combustion.

SECTION 11: Toxicological information

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

Mixture

Acute toxicity

The mixture is not classified as toxic for all routes of exposure.

Oral Data for the mixture are not available.

The mixture does not contain relevant substances classified as an acute toxicity by oral route of exposure or the concentration of substance(s) is lower than the limit for inclusion in Section 3.

Dermal Data for the mixture are not available.

The mixture does not contain relevant 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.

Inhalation Data for the mixture are not available.

The mixture does not contain relevant 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 1A based on the general/specific concentration limits of substance(s).

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.

STOT – 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).

STOT – 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 sections 2 and 4.

Sodium hydroxide CAS: 1310-73-2

Acute toxicity

Oral	Data for the substance are not available.
Dermal	Data for the substance are not available.
Inhalation	Data for the substance are not available.

Skin corrosion/irritation

The substance is classified as skin corrosive category 1A.

Irritating to the skin at a concentration of 0.95 % by weight - intact skin - mean erythema score = 2 after 24 hours, 1.7 after 72 hours, 0.7 after 8 days (irreversible for 1/6 animals, scale on the skin) and edema = 0.3 after 24 h, 0 after 72 h, 0 after 8 d (fully reversible in 72 h), broken skin - mean erythema score = 2.3 after 24 h, 2 after 72 h, 2.7 after 8 d (irreversible for 1/6 animals, skin necrosis) and edema = 2 after 24 h, 0.3 after 72 h, 0 after 8 d (fully reversible in 8 days), primary dermal irritation index PDII = 2.7 (rabbit, Draize test).

Corrosive skin at a concentration of 4.98% by weight - intact skin - mean erythema score = 4 after 24 h, 4 after 72 h, 4 after 8 d (irreversible, skin necrosis) and edema = 2 after 24 h, 1 after 72 h , 1 after 8 days (irreversible for 8 days), broken skin - mean erythema score = 4 after 24 h, 4 after 72 h, 4 after 8 d (irreversible, skin necrosis) and edema = 2 after 24 h, after 72 hours, 1 after 8 days (irreversible for 8 days), primary dermal irritation index PDII = 5.6 (rabbit, Draize test).

Serious eye damage/irritation

Substance is classified as serious eye damage.

Mean corneal opacity > 2, conjunctival redness > 2.5 (2 wt.%, rabbit, 72 h, OECD 405).

Respiratory or skin sensitization

Based on available data, the classification criteria are not met.

Not skin sensitising (human).

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.

STOT – single exposure

Data for the substance are not available.

STOT – 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 mm^2/s or less at 40 °C.

Disodium metasilicate ES: 229-912-9

Acute toxicity

Oral	Based on available data, the classification criteria are not met. LD_{50} = 1 152 - 1 349 mg/kg bw (rat, female, toxicity based on corrosive effect, literature).
Dermal	Based on available data, the classification criteria are not met. LD_{50} > 5 000 mg/kg bw (rat, EPA OPPTS 870.1200).
Inhalation	Based on available data, the classification criteria are not met. LC_{50} > 2.06 mg/l (vapour, rat, 4 hrs, toxicity based on corosive effect, EPA OPPTS 870.1300).

Skin corrosion/irritation

The substance is classified as skin corrosion in category 1B.

Corrosive - primary dermal irritation index (PDII) = 8 (not reversible), mean erythema score = 4 (not reversible) and edema = 4 (not reversible) (humidified, rabbit, OECD 404).

Irritant - primary dermal irritation index (PDII) = 3.67, mean erythema score = 2.33 and edema = 1.33 (50% aqueous solution, rabbit, OECD 404).

Slightly irritant - primary dermal irritation index (PDII) = 1.22, mean erythema score = 1.11 and edema = 0.11 (10% aqueous solution, rabbit, OECD 404).

Serious eye damage/irritation

The substance is classified as seriously damaging to the eyes.

Respiratory or skin sensitisation

Based on available data, the classification criteria are not met.

Not skin sensitising (mouse, OECD 429).

Germ cell mutagenicity

Based on available data, the classification criteria are not met.

Negative (OECD 471, OECD 473, OECD 476).

Carcinogenicity

Data for the substance are not available.

Reproductive toxicity

Based on available data, the classification criteria are not met.
NOAEL > 159 mg/kg/day (mortality, rat, female, oral, generation P0).

STOT – single exposure

The substance may cause respiratory irritation.

STOT – repeated exposure

Based on available data, the classification criteria are not met.
NOAEL > 227 - 237 mg/kg/day (rat, oral, 90 days, 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.

Sodium hypochlorite CAS: 7681-52-9

Acute toxicity

Oral	Based on available data, the classification criteria are not met. LD_{50} = 1 100 mg/kg bw (aqueous solution, active chlorine content 12.5%, calculation, rat, male, OECD 401).
Dermal	Based on available data, the classification criteria are not met. LD_{50} > 20 000 mg/kg bw (aqueous solution, active chlorine content 12.5%, rabbit, OECD 402).
Inhalation	Based on available data, the classification criteria are not met. LC_{50} = 10.5 mg/l (1 hrs., vapour, rat, male, OECD 403).

Skin corrosion/irritation

The substance is classified as skin corrosion in category 1B according to harmonized classification.
Primary dermal irritation index PDII = 1.2 (max. 8, rabbit, OECD 404).

Serious eye damage/irritation

The substance is classified as seriously damaging to the eyes according to harmonized classification.

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.
In vitro:
Negative (OECD 471).
Positive (OECD 473).
In vivo:
Negative (OECD 474, OECD 475).

Carcinogenicity

Based on available data, the classification criteria are not met.
LOAEL = 100 mg/kg/day (toxicity, rat, male, oral, OECD 453).
LOAEL = 114 mg/kg/day (toxicity, rat, female, orally, OECD 453).
NOAEL = 50 mg/kg/day (toxicity, rat, male, orally, OECD 453).
NOAEL = 57.2 mg/kg/day (toxicity, rat, female, oral, OECD 453).

Reproductive toxicity

Based on available data, the classification criteria are not met.
LOAEL > 5 mg/kg/day (rat, oral, generation P0, OECD 415).
NOAEL ≥ 5 mg/kg/day (rat, oral, generation P0, OECD 415).
LOAEL > 5 mg/kg/day (rat, oral, generation F1, OECD 415).
NOAEL ≥ 5 mg/kg/day (rat, oral, generation F1, OECD 415).

STOT – single exposure

The substance may cause respiratory irritation.

STOT – repeated exposure

Based on available data, the classification criteria are not met.
LOAEL = 100 mg/kg/day (toxicity, rat, male, oral, OECD 453).
LOAEL = 114 mg/kg/day (toxicity, rat, female, orally, OECD 453).
NOAEL = 50 mg/kg/day (toxicity, rat, male, orally, OECD 453).
NOAEL = 57.2 mg/kg/day (toxicity, rat, female, oral, OECD 453).

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.

11.2. Information on other hazards

The mixture does not contain substance(s) meeting the criteria for persistent, bioaccumulative and toxic (PBT) or very persistent and very bioaccumulative (vPvB) in accordance with Annex XIII of REACH regulation. The mixture and its substances are not mentioned on the Candidate list for possible inclusion in Annex XIV of REACH at the date of the revision of the safety data sheet and given in the list (established in accordance with Article 59(1) for having endocrine disrupting properties of REACH regulation.

The mixture does not contain the substance(s) 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.There is no other relevant information on adverse health effects that is not required according to the classification criteria set out in CLP Regulation.

SECTION 12: Ecological information

12.1. Toxicity

Mixture

Data for the mixture are not available.

Acute aquatic toxicity

The mixture is not classified as acute aquatic toxicity based on calculation according to the summation method.

category 1	∑ < 22.65

Chronic aquatic toxicity

The mixture is classified as Aquatic Chronic 3; H412 based on calculation according to the summation method.

category	1	2	3	4
∑	< 2.25	< 22.5	< 225	not relevant

Sodium hydroxide CAS: 1310-73-2

The substance is not classified as dangerous for the aquatic environment.

Fish

LC_{50}, 48 hrs, Leuciscus idus: 189 mg/l (mortality).

Crustaceans

EC_{50}, 48 hrs, Ceriodaphnia sp.: 40.4 mg/l (immobility).

Algae

Data for the substance are not available.

Disodium metasilicate ES: 229-912-9

The substance is not classified as hazardous for the aquatic environment.

Fish

LC_{50}, 96 hrs., Danio rerio: 210 mg/l (OECD 203).

Crustaceans

EC_{50}, 48 hod., Daphnia Magna: 1 700 mg/l (OECD 202).

Algae

EC_{50}, 72 hrs., Desmodesmus subspicatus: 207 mg/l (biomass, DIN 38412).
EC_0, 72 hrs., Desmodesmus subspicatus: > 345.4 mg/l (growth rate, DIN 38412).

Sodium hypochlorite CAS: 7681-52-9

The substance is classified as Aquatic Acute 1; H400 (M=10) and Aquatic Chronic 1; H410 (M=1).

Fish

LC_{50}, 96 hrs., Oncorhynchus kisutch: 0.032 mg TRO/l (mortality).
LC_{50}, 96 hrs., Oncorhynchus gorbuscha: > 0.023 - < 0.052 mg TRO/l (mortality).
LC_{50}, 96 hrs., Onchorhynchus tschawytscha: > 0.038 - < 0.065 mg TRO/l (mortality).
LC_{50}, 96 hrs., Clupea herengus: 0.065 mg TRO/l (mortality).
NOEC, 28 d., Menidia peninsulae: 0.04 mg CPO/l (mortality).
TRO - total residual oxidants.
CPO - total residual chlorine.

Crustaceans

EC_{50}, 48 hrs., Daphnia Magna: 141 µg active chlorine/l (mortality, OECD 202).
NOEC, 48 hrs., Daphnia Magna: 50 µg active chlorine/l (mortality, OECD 202).

Algae

EC_{50}, 72 hrs., Pseudokirchneriella subcapitata: 0.36 mg/l (growth rate, OECD 201).
NOEC, 72 hrs., Pseudokirchneriella subcapitata: 0.005 mg/l (growth rate, OECD 201).

12.2. Persistence and degradability

Mixture

Data for the mixture are not available.

Sodium hydroxide CAS: 1310-73-2

Not determined, it is an inorganic substance.

Disodium metasilicate ES: 229-912-9

Not determined, it is an inorganic substance.

Sodium hypochlorite CAS: 7681-52-9

Not determined, it is an inorganic substance.

12.3. Bioaccumulative potential

Mixture

Data for the mixture are not available.

Sodium hydroxide CAS: 1310-73-2

Not determined, it is an inorganic substance.

Disodium metasilicate ES: 229-912-9

Not determined, it is an inorganic substance.

Sodium hypochlorite CAS: 7681-52-9

Not determined, it is an inorganic substance.

12.4. Mobility in soil

Mixture

Data for the mixture are not available.

Sodium hydroxide CAS: 1310-73-2

Not determined, it is an inorganic substance.

Disodium metasilicate ES: 229-912-9

Not determined, it is an inorganic substance.

Sodium hypochlorite CAS: 7681-52-9

Not determined, it is an inorganic substance.

12.5. Results of PBT and vPvB assessment

The mixture does not contain substance(s) meeting the criteria for persistent, bioaccumulative and toxic (PBT) or very persistent and very bioaccumulative (vPvB) in accordance with Annex XIII of REACH Regulation. The mixture and its substances are not mentioned on the Candidate list for possible inclusion in Annex XIV of REACH at the date of the revision of the safety data sheet (established in accordance with Article 59(1) of REACH Regulation.

12.6. Endocrine disrupting properties

The mixture and its substances are not mentioned on the Candidate list for possible inclusion in Annex XIV of REACH at the date of the revision of the safety data sheet (established in accordance with Article 59(1) of REACH Regulation. Mixture does not contain the substance(s) 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.

12.7. 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

Dispose according to the applicable European and local regulations (eg. in a hazardous waste incinerator). Do not empty unused product into drainage systems. Do not contaminate ponds or ditches with the product or used container. Hand over the residual amounts and solutions to a licensed disposal company.

Hand over the remaining quantities and unregenerate solutions to an authorized person (specialized company with authorization) or to the collection yard in the hazardous waste section according to the worker's instructions. Empty, cleaned packaging can be stored at a landfill of the appropriate category or **in the sorted waste**.

Possible waste code

07 06 01* - aqueous washing liquids and mother liquors or 20 01 29* - detergents containing hazardous substances (mixture), 15 01 10* - packaging containing residues of or contaminated by hazardous substances (contaminated packaging), 15 01 02 - plastic packaging (clear packaging)

Physical/chemical properties that may affect waste treatment options

Corrosivity to metals.

Special precautions recommended for waste management

Not known.

Waste legislation

Directive 2008/98/EC on waste and repealing certain Directives, as amended.

SECTION 14: Transport information

14.1. UN number or ID number

UN 3266

14.2. UN proper shipping name

CORROSIVE LIQUID, BASIC, INORGANIC, N.O.S. (Sodium hydroxide, Disodium metasilicate pentahydrate).

14.3. Transport hazard class(es)

8

14.4. Packing group

II

14.5. Environmental hazards

It is not dangerous for the environment during transport.

14.6. Special precautions for user

Not given.

14.7. Maritime transport in bulk according to IMO instruments

Not available.

14.8. Other information

Labeling according to ADR

Additional data for ADR/RID	
Classification code	C5.
Labels	8.
Hazard identification code	80.
Tunnel restriction code	E (ADR), - (RID).
Limited quantities	1 l.
Excepted quantities	Maximum net quantity per inner packaging: 30 ml. Maximum net quantity per outer packaging: 500 ml.
Transport category	2.
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

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

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

Regulation No. 648/2004/EC on detergents, as amended

15.2. Chemical safety assessment

It has not been carried out for mixture.

SECTION 16: Other information

Reason for the revision of the safety data sheet

Change of composition in section 3. Change of packing group in section 14.

Key or legend to abbreviations and acronyms

Aquatic Acute 1	Acute aquatic hazard, cat. 1
Aquatic Chronic 1	Chronic aquatic hazard, cat. 1
Aquatic Chronic 3	Chronic aquatic hazard, cat. 3
Eye Dam. 1	Serious eye damage, cat. 1
Eye Irrit. 2	Eye irritation, cat. 2
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 Irrit. 2	Skin irritation, cat. 2
STOT SE 3	Specific target organ toxicity - single exposure, cat. 3
M	Multiplying factor
ADR	Accord Dangereuses Route
CLP	Regulation No. 1272/2008/EC, on Classification, Labelling and Packaging of substances and mixtures
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, concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals
RID	Regulation concerning the International Carriage of Dangerous Goods by Rail
STOT	Specific target organ toxicity
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

EUH031	Contact with acids liberates toxic gas.
EUH206	Warning! Do not use together with other products. May release dangerous gases (chlorine).
H290	May be corrosive to metals.
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.
H400	Very toxic to aquatic life.
H410	Very toxic to aquatic life with long lasting effects.
H412	Harmful to aquatic life with long lasting effects.
P102	Keep out of reach of children.
P234	Keep only in original packaging.
P273	Avoid release to the environment.
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. **Dispose of the cleaned packaging without any residual product content in the sorted waste.**

Training advice

According to SDS.

Other information

Classification according to data from the manufacturer. 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 safety data sheet has been prepared according to the best available knowledge. The safety data sheet has been compiled in good faith but without guarantee. Various factors may influence properties under specific conditions. It is the responsibility of the product user to assess the accuracy of the information for their specific application. This SDS was prepared and is to be used only for this product. If the product is used as a component in another product, this SDS information may not be applicable.

The safety data sheet is prepared in accordance with Regulation No. 2020/878/EC. There is no additional information in accordance with the local and national legislation of the Member State in the European Union, in the safety data sheet.

The safety data sheet was prepared by LACHEPRA s.r.o.