

**Safety Data Sheet**

according to Regulation (EC) No 1907/2006

**sera NH4 Test, Reagenz 1**

Revision date: 06.09.2023

Product code: NH4-R1

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**SECTION 1: Identification of the substance/mixture and of the company/undertaking****1.1. Product identifier**

sera NH4 Test, Reagenz 1

**EAN**

4001942040020  
4001942040037  
4001942040044  
4001942049108  
4001942077156

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

Solution for monitoring water parameters in aquarium and tap water.

The product is intended for consumer use.

The product is intended for professional use.

**1.3. Details of the supplier of the safety data sheet**

Company name:	sera Werke Heimtierbedarf	
	J. Ravnak GmbH & Co. KG	
Street:	Borsigstraße 49	
Place:	D-52525 Heinsberg	
Post-office box:	1466	
	D-52518 Heinsberg	
Telephone:	+49 (0)2452 91260	Telefax: +49 (0)2452 5922
e-mail:	info@sera.de	
Contact person:	Dr. Matthias Dahm	
e-mail:	sds.info@sera.biz	
Internet:	www.sera.de	
Responsible Department:	Labor	

**1.4. Emergency telephone number:**

+49 (0)2452 91260 (Only available during office hours.)  
+49 (0)2452 9126555

**SECTION 2: Hazards identification****2.1. Classification of the substance or mixture****Regulation (EC) No 1272/2008**

This mixture is not classified as hazardous in accordance with Regulation (EC) No 1272/2008.

Voluntary safety information following the Safety Data Sheet format according to Regulation (EC) No. 1907/2006 (REACH).

**2.2. Label elements****Additional advice on labelling**

According to EC directives or the corresponding national regulations the product does not have to be labelled.

**2.3. Other hazards**

No information available.

**SECTION 3: Composition/information on ingredients****3.2. Mixtures****Chemical characterization**

Aqueous solution of organic and inorganic salts.

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**Hazardous components**

none (according to Regulation (EC) No 1907/2006 (REACH))

**SECTION 4: First aid measures****4.1. Description of first aid measures****General information**

Remove contaminated, saturated clothing immediately.

**After inhalation**

Provide fresh air. When in doubt or if symptoms are observed, get medical advice.

**After contact with skin**

Wash with plenty of water. Take off contaminated clothing and wash it before reuse. In case of skin reactions, consult a physician.

**After contact with eyes**

In case of contact with eyes flush immediately with plenty of flowing water for 10 to 15 minutes holding eyelids apart and consult an ophthalmologist.

**After ingestion**

Observe risk of aspiration if vomiting occurs. Rinse mouth immediately and drink plenty of water. Do NOT induce vomiting. Call a doctor if you feel unwell.

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

No information available.

**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**

Co-ordinate fire-fighting measures to the fire surroundings.

**Unsuitable extinguishing media**

no restriction

**5.2. Special hazards arising from the substance or mixture**Non-flammable. The product itself does not burn. In case of fire may be liberated: Carbon monoxide, Carbon dioxide (CO<sub>2</sub>).**5.3. Advice for firefighters**

Wear a self-contained breathing apparatus and chemical protective clothing.

**Additional information**

Suppress gases/vapours/mists with water spray jet.

**SECTION 6: Accidental release measures****6.1. Personal precautions, protective equipment and emergency procedures****General advice**

Avoid contact with skin, eyes and clothes.

**For non-emergency personnel**

First aider: Pay attention to self-protection! Remove persons to safety.

**For emergency responders**

Absorb with liquid-binding material (sand, diatomaceous earth, acid- or universal binding agents).

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**6.2. Environmental precautions**

Do not allow to enter into surface water or drains. Do not allow to enter into soil/subsoil.

**6.3. Methods and material for containment and cleaning up****For containment**

Make sure spills can be contained, e.g. in sump pallets or kerbed areas. Contain leaks or spills within cabinets with removable trays.

**For cleaning up**

Large amounts of spillages: Use approved industrial vacuum cleaner for removal.

Small amounts of spillages: Wipe up with absorbent material (eg. cloth, fleece).

Clear contaminated areas thoroughly. Wash with plenty of water.

**Other information**

Treat the recovered material as prescribed in the section on waste disposal.

**6.4. Reference to other sections**

Safe handling: see section 7

Personal protection equipment: see section 8

Disposal: see section 13

**SECTION 7: Handling and storage****7.1. Precautions for safe handling****Advice on safe handling**

Keep out of reach of children.

**Advice on protection against fire and explosion**

No special fire protection measures are necessary.

**Advice on general occupational hygiene**

Keep away from food, drink and animal feedingstuffs. Do not eat, drink or smoke when using this product.

Wash hands before breaks and after work.

**Further information on handling**

Handle and open container with care. Put lids on containers immediately after use.

**7.2. Conditions for safe storage, including any incompatibilities****Requirements for storage rooms and vessels**

Keep container tightly closed. Keep/Store only in original container. Protect from direct sunlight.

Do not store at temperatures below 0°C. Recommended storage temperature: at room temperature.

**Hints on joint storage**

No materials to be specially mentioned

**Further information on storage conditions**

No special measures are necessary. The product is stable under storage at normal ambient temperatures.

**7.3. Specific end use(s)**

Solution for monitoring water parameters in aquarium and tap water.

**SECTION 8: Exposure controls/personal protection****8.1. Control parameters****Additional advice on limit values**

To date, no national critical limit values exist.

When using do not eat, drink, smoke, sniff.

**8.2. Exposure controls****Appropriate engineering controls**

No special technical protective measures are necessary.

**Individual protection measures, such as personal protective equipment**

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### Eye/face protection

Avoid contact with eyes. Suitable eye protection: goggles. not required under normal use.

### Hand protection

Avoid contact with skin. Hand protection is not required..

### Skin protection

Body protection: not required.

### Respiratory protection

Usually no personal respirative protection necessary.

### Thermal hazards

Non-flammable. The product itself does not burn. Thermal decomposition can lead to the escape of irritating gases and vapours. In case of fire may be liberated: Carbon monoxide, Carbon dioxide (CO<sub>2</sub>).

### Environmental exposure controls

Avoid release to the environment.

## SECTION 9: Physical and chemical properties

### 9.1. Information on basic physical and chemical properties

Physical state:	Liquid
Colour:	colourless
Odour:	odourless
Odour threshold:	not applicable
Melting point/freezing point:	0 °C
Boiling point or initial boiling point and boiling range:	100 °C
Flammability:	not applicable
Lower explosion limits:	not determined
Upper explosion limits:	not determined
Flash point:	> 100 °C
Auto-ignition temperature:	Non-flammable.
Decomposition temperature:	not determined
pH-Value (at 20 °C):	8,0-9,0
Viscosity / kinematic:	not determined
Water solubility:	completely miscible
Solubility in other solvents	not determined
Partition coefficient n-octanol/water:	not determined
Vapour pressure:	23 hPa
(at 20 °C)	
Density (at 20 °C):	1,36 g/cm <sup>3</sup>
Bulk density:	not applicable
Relative vapour density:	not determined

### 9.2. Other information

#### Information with regard to physical hazard classes

##### Explosive properties

No ignition, explosion, self-heating or visible decomposition.

The product is not: Explosive

##### Sustaining combustion:

Not sustaining combustion

##### Self-ignition temperature

Solid:

not applicable

Gas:

not applicable

##### Oxidizing properties

Not oxidising.

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**Other safety characteristics**

Evaporation rate:	not determined
Solvent separation test:	No data available
Solvent content:	not determined
Solid content:	not determined
Sublimation point:	not applicable
Softening point:	not applicable
Pour point:	not determined
Viscosity / dynamic:	not determined
Flow time:	not determined

**SECTION 10: Stability and reactivity****10.1. Reactivity**

No hazardous reaction when handled and stored according to provisions.

**10.2. Chemical stability**

The product is chemically stable under recommended conditions of storage, use and temperature.

**10.3. Possibility of hazardous reactions**

No known hazardous reactions.

**10.4. Conditions to avoid**

Protect from direct sunlight.

**10.5. Incompatible materials**

strong acids

**10.6. Hazardous decomposition products**

Carbon monoxide, Carbon dioxide (CO<sub>2</sub>).

Thermal decomposition can lead to the escape of irritating gases and vapours.

**SECTION 11: Toxicological information****11.1. Information on hazard classes as defined in Regulation (EC) No 1272/2008****Toxicokinetics, metabolism and distribution**

There are no data available on the preparation/mixture itself.

**Acute toxicity**

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

**Irritation and corrosivity**

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

**Sensitising effects**

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

**Carcinogenic/mutagenic/toxic effects for reproduction**

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

**STOT-single exposure**

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

**STOT-repeated exposure**

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

**Aspiration hazard**

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

**Information on likely routes of exposure**

Skin contact, Eye contact, Ingestion, Inhalation

**Specific effects in experiment on an animal**

There are no data available on the preparation/mixture itself.

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**Additional information on tests**

The mixture is classified as not hazardous according to regulation (EC) No 1272/2008 [CLP].

**Practical experience**

There are no data available on the preparation/mixture itself.

**11.2. Information on other hazards****Endocrine disrupting properties**

There are no data available on the preparation/mixture itself.

**Other information**

There are no data available on the preparation/mixture itself.

**Further information**

Handle in accordance with good industrial hygiene and safety practice.

Health injuries are not known or expected under normal use.

**SECTION 12: Ecological information****12.1. Toxicity**

There are no data available on the preparation/mixture itself. According to the criteria of the European classification and labelling system, the substance/the product has not to be labelled as "dangerous for the environment". Ecological injuries are not known or expected under normal use.

**12.2. Persistence and degradability**

The product has not been tested.

**12.3. Bioaccumulative potential**

The product has not been tested.

**12.4. Mobility in soil**

The product has not been tested.

**12.5. Results of PBT and vPvB assessment**

The substances in the mixture do not meet the PBT/vPvB criteria according to REACH, annex XIII.

**12.6. Endocrine disrupting properties**

This product does not contain a substance that has endocrine disrupting properties with respect to non-target organisms as no components meets the criteria.

**12.7. Other adverse effects**

No information available.

**Further information**

Avoid release to the environment.

**SECTION 13: Disposal considerations****13.1. Waste treatment methods****Disposal recommendations**

Do not allow to enter into surface water or drains. Dispose of waste according to applicable legislation.

**List of Wastes Code - residues/unused products**

161002 WASTES NOT OTHERWISE SPECIFIED IN THE LIST; aqueous liquid wastes destined for off-site treatment; aqueous liquid wastes other than those mentioned in 16 10 01

**List of Wastes Code - used product**

160509 WASTES NOT OTHERWISE SPECIFIED IN THE LIST; gases in pressure containers and discarded chemicals; discarded chemicals other than those mentioned in 16 05 06, 16 05 07 or 16 05 08

**List of Wastes Code - contaminated packaging**

150102 WASTE PACKAGING; ABSORBENTS, WIPING CLOTHS, FILTER MATERIALS AND PROTECTIVE CLOTHING NOT OTHERWISE SPECIFIED; packaging (including separately collected municipal packaging waste); plastic packaging

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### Contaminated packaging

Wash with plenty of water. Completely emptied packages can be recycled.

## SECTION 14: Transport information

### Land transport (ADR/RID)

<u>14.1. UN number or ID number:</u>	No dangerous good in sense of this transport regulation.
<u>14.2. UN proper shipping name:</u>	No dangerous good in sense of this transport regulation.
<u>14.3. Transport hazard class(es):</u>	No dangerous good in sense of this transport regulation.
<u>14.4. Packing group:</u>	No dangerous good in sense of this transport regulation.

### Inland waterways transport (ADN)

<u>14.1. UN number or ID number:</u>	No dangerous good in sense of this transport regulation.
<u>14.2. UN proper shipping name:</u>	No dangerous good in sense of this transport regulation.
<u>14.3. Transport hazard class(es):</u>	No dangerous good in sense of this transport regulation.
<u>14.4. Packing group:</u>	No dangerous good in sense of this transport regulation.

### Marine transport (IMDG)

<u>14.1. UN number or ID number:</u>	No dangerous good in sense of this transport regulation.
<u>14.2. UN proper shipping name:</u>	No dangerous good in sense of this transport regulation.
<u>14.3. Transport hazard class(es):</u>	No dangerous good in sense of this transport regulation.
<u>14.4. Packing group:</u>	No dangerous good in sense of this transport regulation.

### Air transport (ICAO-TI/IATA-DGR)

<u>14.1. UN number or ID number:</u>	No dangerous good in sense of this transport regulation.
<u>14.2. UN proper shipping name:</u>	No dangerous good in sense of this transport regulation.
<u>14.3. Transport hazard class(es):</u>	No dangerous good in sense of this transport regulation.
<u>14.4. Packing group:</u>	No dangerous good in sense of this transport regulation.

### 14.5. Environmental hazards

ENVIRONMENTALLY HAZARDOUS: No

### 14.6. Special precautions for user

No information available.

### 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 regulatory information

2004/42/EC (VOC):	60,6 % (824,16 g/l)
Information according to 2012/18/EU (SEVESO III):	Not subject to 2012/18/EU (SEVESO III)

#### Additional information

The mixture is classified as not hazardous according to regulation (EC) No 1272/2008 [CLP].

#### National regulatory information

Water hazard class (D): 1 - slightly hazardous to water

### 15.2. Chemical safety assessment

Chemical safety assessments for substances in this mixture were not carried out.

## SECTION 16: Other information

### Changes

This data sheet contains changes from the previous version in section(s): 2.

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**Abbreviations and acronyms**

ADR: Accord européen sur le transport des marchandises dangereuses par Route  
(European Agreement concerning the International Carriage of Dangerous Goods by Road)  
IMDG: International Maritime Code for Dangerous Goods  
IATA: International Air Transport Association  
GHS: Globally Harmonized System of Classification and Labelling of Chemicals  
EINECS: European Inventory of Existing Commercial Chemical Substances  
ELINCS: European List of Notified Chemical Substances  
CAS: Chemical Abstracts Service  
LC50: Lethal concentration, 50%  
LD50: Lethal dose, 50%

**Key literature references and sources for data**

Safety Data Sheet, ECHA

**Further Information**

Classification for mixtures and used evaluation method according to regulation (EC) No 1272/2008 [CLP].  
The above information describes exclusively the safety requirements of the product and is based on our present-day knowledge. The information is intended to give you advice about the safe handling of the product named in this safety data sheet, for storage, processing, transport and disposal. The information cannot be transferred to other products. In the case of mixing the product with other products or in the case of processing, the information on this safety data sheet is not necessarily valid for the new made-up material. The receiver of our product is singularly responsible for adhering to existing laws and regulations.

*(The data for the hazardous ingredients were taken respectively from the last version of the sub-contractor's safety data sheet.)*



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**SECTION 1: Identification of the substance/mixture and of the company/undertaking****1.1. Product identifier**

sera NH4 Test, Reagenz 2

**EAN**

4001942040020  
4001942040037  
4001942040044  
4001942049108  
4001942077156

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

Solution for monitoring water parameters in aquarium and tap water.

The product is intended for consumer use.

The product is intended for professional use.

**1.3. Details of the supplier of the safety data sheet**

Company name:	sera Werke Heimtierbedarf	
	J. Ravnak GmbH & Co. KG	
Street:	Borsigstraße 49	
Place:	D-52525 Heinsberg	
Post-office box:	1466	
	D-52518 Heinsberg	
Telephone:	+49 (0)2452 91260	Telefax: +49 (0)2452 5922
e-mail:	info@sera.de	
Contact person:	Dr. Matthias Dahm	
e-mail:	sds.info@sera.biz	
Internet:	www.sera.de	
Responsible Department:	Labor	

**1.4. Emergency telephone number:**

+49 (0)2452 91260 (Only available during office hours.)  
+49 (0)2452 9126555

**SECTION 2: Hazards identification****2.1. Classification of the substance or mixture****Regulation (EC) No 1272/2008**

This mixture is not classified as hazardous in accordance with Regulation (EC) No 1272/2008.

**2.2. Label elements****Additional advice on labelling**

According to EC directives or the corresponding national regulations the product does not have to be labelled.

**2.3. Other hazards**

No information available.

**SECTION 3: Composition/information on ingredients****3.2. Mixtures****Chemical characterization**

Non-aqueous solution of inorganic and organic substances.

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### Hazardous components

CAS No	Chemical name			Quantity
	EC No	Index No	REACH No	
	Classification (Regulation (EC) No 1272/2008)			
13755-38-9	Sodium nitroferricyanide(III) dihydrate			< 2 %
	238-373-9			
	Acute Tox. 3; H301			

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

### Specific Conc. Limits, M-factors and ATE

CAS No	EC No	Chemical name	Quantity
	Specific Conc. Limits, M-factors and ATE		
13755-38-9	238-373-9	Sodium nitroferricyanide(III) dihydrate	< 2 %
	oral: LD50 = 99 mg/kg		

## SECTION 4: First aid measures

### 4.1. Description of first aid measures

#### General information

Remove contaminated, saturated clothing immediately.

#### After inhalation

Provide fresh air. After inhaling vapours, first symptoms of poisoning may develop hours later, so always consult a doctor.

#### After contact with skin

Wash with plenty of water. Take off immediately all contaminated clothing and wash it before reuse. In case of skin reactions, consult a physician.

#### After contact with eyes

In case of contact with eyes flush immediately with plenty of flowing water for 10 to 15 minutes holding eyelids apart and consult an ophthalmologist.

#### After ingestion

Observe risk of aspiration if vomiting occurs. Rinse mouth immediately and drink plenty of water. Induce vomiting when the affected person is not unconscious. Call a physician immediately.

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

No information available.

### 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

Co-ordinate fire-fighting measures to the fire surroundings.

#### Unsuitable extinguishing media

no restriction

### 5.2. Special hazards arising from the substance or mixture

Non-flammable. Vapours can form explosive mixtures with air. In case of fire and/or explosion do not breathe fumes. In case of fire may be liberated: Nitrogen oxides (NOx), Hydrogen cyanide (hydrocyanic acid), Carbon monoxide, Carbon dioxide (CO2).

### 5.3. Advice for firefighters

Wear a self-contained breathing apparatus and chemical protective clothing.

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**Additional information**

Use water spray jet to protect personnel and to cool endangered containers. Suppress gases/vapours/mists with water spray jet. Collect contaminated fire extinguishing water separately. Do not allow entering drains or surface water.

**SECTION 6: Accidental release measures****6.1. Personal precautions, protective equipment and emergency procedures****General advice**

Provide adequate ventilation. Do not breathe vapour. Avoid contact with skin, eyes and clothes.

**For non-emergency personnel**

First aider: Pay attention to self-protection! Remove persons to safety.

**For emergency responders**

Cover drains. Absorb with liquid-binding material (sand, diatomaceous earth, acid- or universal binding agents). Use personal protection equipment.

**6.2. Environmental precautions**

Do not allow to enter into surface water or drains. Do not allow to enter into soil/subsoil.

**6.3. Methods and material for containment and cleaning up****For containment**

Make sure spills can be contained, e.g. in sump pallets or kerbed areas. Contain leaks or spills within cabinets with removable trays.

**For cleaning up**

Large amounts of spillages: Use approved industrial vacuum cleaner for removal.  
Small amounts of spillages: Wipe up with absorbent material (eg. cloth, fleece).  
Clear contaminated areas thoroughly. Wash with plenty of water.

**Other information**

Treat the recovered material as prescribed in the section on waste disposal.

**6.4. Reference to other sections**

Safe handling: see section 7  
Personal protection equipment: see section 8  
Disposal: see section 13

**SECTION 7: Handling and storage****7.1. Precautions for safe handling****Advice on safe handling**

Keep out of reach of children.

**Advice on protection against fire and explosion**

No special fire protection measures are necessary.

**Advice on general occupational hygiene**

Avoid contact with skin, eyes and clothes. Remove contaminated, saturated clothing immediately.  
Keep away from food, drink and animal feedingstuffs. Do not eat, drink or smoke when using this product.  
Wash hands and face before breaks and after work and take a shower if necessary. Draw up and observe skin protection programme.

**Further information on handling**

Handle and open container with care. Put lids on containers immediately after use.

**7.2. Conditions for safe storage, including any incompatibilities****Requirements for storage rooms and vessels**

Keep container tightly closed. Keep locked up. Keep/Store only in original container. Protect from direct sunlight.  
Do not store at temperatures below 0°C. Recommended storage temperature: at room temperature.

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### Hints on joint storage

No materials to be specially mentioned

### Further information on storage conditions

No special measures are necessary. The product is stable under storage at normal ambient temperatures.

### 7.3. Specific end use(s)

Solution for monitoring water parameters in aquarium and tap water.

## SECTION 8: Exposure controls/personal protection

### 8.1. Control parameters

#### Occupational exposure limits

CAS No	Substance	ppm	mg/m <sup>3</sup>	fib/cm <sup>3</sup>	Category	Origin
64-17-5	Ethanol	1000	-		STEL (15 min)	
57-55-6	Propane-1,2-diol, total (vapour and particulates)	150	470		TWA (8 h)	

#### DNEL/DMEL values

CAS No	Substance	Exposure route	Effect	Value
57-55-6	propyleneglycol			
Worker DNEL, long-term	inhalation	systemic	168 mg/m <sup>3</sup>	
Worker DNEL, long-term	inhalation	local	10 mg/m <sup>3</sup>	
Consumer DNEL, long-term	inhalation	systemic	50 mg/m <sup>3</sup>	
Consumer DNEL, long-term	inhalation	local	10 mg/m <sup>3</sup>	
Consumer DNEL, long-term	dermal	systemic	213 mg/kg bw/day	
Consumer DNEL, long-term	oral	systemic	85 mg/kg bw/day	
.				

#### PNEC values

CAS No	Substance	Value
57-55-6	propyleneglycol	
Freshwater		260 mg/l
Marine water		26 mg/l
Freshwater sediment		572 mg/kg
Marine sediment		57,2 mg/kg
Micro-organisms in sewage treatment plants (STP)		20000 mg/l
Soil		50 mg/kg

### Additional advice on limit values

To date, no national critical limit values exist.

When using do not eat, drink, smoke, sniff.

### 8.2. Exposure controls

#### Appropriate engineering controls

No special technical protective measures are necessary.

#### Individual protection measures, such as personal protective equipment

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**Eye/face protection**

Avoid contact with eyes. Suitable eye protection: goggles. not required under normal use.

**Hand protection**

Avoid contact with skin. Wear suitable gloves.

Suitable material: NBR (Nitrile rubber)

Thickness of the glove material: 0,2-0,3 mm

Permeation time (maximum wear duration): 8 h

When handling with chemical substances, protective gloves must be worn with the CE-label including the four control digits. The quality of the protective gloves resistant to chemicals must be chosen as a function of the specific working place concentration and quantity of hazardous substances. For special purposes, it is recommended to check the resistance to chemicals of the protective gloves mentioned above together with the supplier of these gloves.

**Skin protection**

Wear suitable protective clothing. Not required because of small size of the container

**Respiratory protection**

Usually no personal respirative protection necessary. In case of inadequate ventilation wear respiratory protection. In the case of vapour formation use a respirator with filter model A2B2E2K2-P3 (according to DIN 3181, 1980).

**Thermal hazards**

Non-flammable. The product itself does not burn. Thermal decomposition can lead to the escape of irritating gases and vapours. In case of fire may be liberated: Nitrogen oxides (NO<sub>x</sub>), Hydrogen cyanide (hydrocyanic acid), Carbon monoxide, Carbon dioxide (CO<sub>2</sub>).

**Environmental exposure controls**

Avoid release to the environment.

**SECTION 9: Physical and chemical properties****9.1. Information on basic physical and chemical properties**

Physical state:	Liquid
Colour:	red brown
Odour:	phenolic
Odour threshold:	5 ppb
Melting point/freezing point:	< -50 °C
Boiling point or initial boiling point and boiling range:	> 78 °C
Flammability:	not applicable
Lower explosion limits:	2,6 vol. %
Upper explosion limits:	17,4 vol. %
Flash point:	No data available
Auto-ignition temperature:	371 °C
Decomposition temperature:	not determined
pH-Value:	not applicable
Viscosity / kinematic:	not determined
Water solubility:	completely miscible
Solubility in other solvents	not determined
Partition coefficient n-octanol/water:	not determined
Vapour pressure:	not determined
Density:	0,98 g/cm <sup>3</sup>
Bulk density:	not applicable
Relative vapour density:	not determined

**9.2. Other information**

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**Information with regard to physical hazard classes**

Explosive properties

No data available

Sustaining combustion:

Not sustaining combustion

Self-ignition temperature

Solid:

not applicable

Gas:

not applicable

Oxidizing properties

Not oxidising.

**Other safety characteristics**

Evaporation rate:

not determined

Solvent separation test:

No data available

Solvent content:

97,76 %

Solid content:

2,24 %

Sublimation point:

not applicable

Softening point:

No data available

Pour point:

not determined

Viscosity / dynamic:

not determined

Flow time:

not determined

**SECTION 10: Stability and reactivity****10.1. Reactivity**

No hazardous reaction when handled and stored according to provisions.

**10.2. Chemical stability**

The product is chemically stable under recommended conditions of storage, use and temperature.

**10.3. Possibility of hazardous reactions**

Vapours can form explosive mixtures with air.

**10.4. Conditions to avoid**

Direct heating, dirt, chemical contamination, sunlight, UV or ionizing radiation

**10.5. Incompatible materials**

Acid

**10.6. Hazardous decomposition products**Nitrogen oxides (NO<sub>x</sub>), Hydrogen cyanide (hydrocyanic acid), Carbon monoxide, Carbon dioxide (CO<sub>2</sub>).

Thermal decomposition can lead to the escape of irritating gases and vapours.

**SECTION 11: Toxicological information****11.1. Information on hazard classes as defined in Regulation (EC) No 1272/2008****Toxicokinetics, metabolism and distribution**

There are no data available on the preparation/mixture itself.

**Acute toxicity**

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

**ATEmix calculated**

ATE (oral) 4437,9 mg/kg; ATE (dermal) 32608,7 mg/kg; ATE (inhalation vapour) 326,09 mg/l; ATE (inhalation dust/mist) 54,348 mg/l

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CAS No	Chemical name				
	Exposure route	Dose	Species	Source	Method
13755-38-9	Sodium nitroferricyanide(III) dihydrate				
	oral	LD50 99 mg/kg	Rat	RTECS	

### Irritation and corrosivity

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

### Sensitising effects

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

### Carcinogenic/mutagenic/toxic effects for reproduction

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

### STOT-single exposure

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

### STOT-repeated exposure

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

### Aspiration hazard

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

### Information on likely routes of exposure

Skin contact, Eye contact, Ingestion, Inhalation

### Specific effects in experiment on an animal

There are no data available on the preparation/mixture itself.

### Additional information on tests

The mixture is classified as not hazardous according to regulation (EC) No 1272/2008 [CLP].

### Practical experience

There are no data available on the preparation/mixture itself.

## 11.2. Information on other hazards

### Endocrine disrupting properties

There are no data available on the preparation/mixture itself.

### Other information

There are no data available on the preparation/mixture itself.

### Further information

Handle in accordance with good industrial hygiene and safety practice.

Health injuries are not known or expected under normal use.

## SECTION 12: Ecological information

### 12.1. Toxicity

There are no data available on the preparation/mixture itself. According to the criteria of the European classification and labelling system, the substance/the product has not to be labelled as "dangerous for the environment". Ecological injuries are not known or expected under normal use.

### 12.2. Persistence and degradability

The product has not been tested.

### 12.3. Bioaccumulative potential

The product has not been tested.

### 12.4. Mobility in soil

The product has not been tested.

### 12.5. Results of PBT and vPvB assessment

The substances in the mixture do not meet the PBT/vPvB criteria according to REACH, annex XIII.

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#### 12.6. Endocrine disrupting properties

This product does not contain a substance that has endocrine disrupting properties with respect to non-target organisms as no components meets the criteria.

#### 12.7. Other adverse effects

No information available.

#### Further information

Avoid release to the environment.

### SECTION 13: Disposal considerations

#### 13.1. Waste treatment methods

##### Disposal recommendations

Do not allow to enter into surface water or drains. Do not allow to enter into soil/subsoil. Dispose of waste according to applicable legislation.

##### List of Wastes Code - residues/unused products

160303 WASTES NOT OTHERWISE SPECIFIED IN THE LIST; off-specification batches and unused products; inorganic wastes containing hazardous substances; hazardous waste

##### List of Wastes Code - used product

160507 WASTES NOT OTHERWISE SPECIFIED IN THE LIST; gases in pressure containers and discarded chemicals; discarded inorganic chemicals consisting of or containing hazardous substances; hazardous waste

##### List of Wastes Code - contaminated packaging

150110 WASTE PACKAGING; ABSORBENTS, WIPING CLOTHS, FILTER MATERIALS AND PROTECTIVE CLOTHING NOT OTHERWISE SPECIFIED; packaging (including separately collected municipal packaging waste); packaging containing residues of or contaminated by hazardous substances; hazardous waste

##### Contaminated packaging

Wash with plenty of water. Completely emptied packages can be recycled.

### SECTION 14: Transport information

#### Land transport (ADR/RID)

##### 14.1. UN number or ID number:

No dangerous good in sense of this transport regulation.

##### 14.2. UN proper shipping name:

No dangerous good in sense of this transport regulation.

##### 14.3. Transport hazard class(es):

No dangerous good in sense of this transport regulation.

##### 14.4. Packing group:

No dangerous good in sense of this transport regulation.

#### Inland waterways transport (ADN)

##### 14.1. UN number or ID number:

No dangerous good in sense of this transport regulation.

##### 14.2. UN proper shipping name:

No dangerous good in sense of this transport regulation.

##### 14.3. Transport hazard class(es):

No dangerous good in sense of this transport regulation.

##### 14.4. Packing group:

No dangerous good in sense of this transport regulation.

#### Marine transport (IMDG)

##### 14.1. UN number or ID number:

No dangerous good in sense of this transport regulation.

##### 14.2. UN proper shipping name:

No dangerous good in sense of this transport regulation.

##### 14.3. Transport hazard class(es):

No dangerous good in sense of this transport regulation.

##### 14.4. Packing group:

No dangerous good in sense of this transport regulation.

#### Air transport (ICAO-TI/IATA-DGR)

##### 14.1. UN number or ID number:

No dangerous good in sense of this transport regulation.

##### 14.2. UN proper shipping name:

No dangerous good in sense of this transport regulation.

##### 14.3. Transport hazard class(es):

No dangerous good in sense of this transport regulation.

##### 14.4. Packing group:

No dangerous good in sense of this transport regulation.



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**14.5. Environmental hazards**

ENVIRONMENTALLY HAZARDOUS: No

**14.6. Special precautions for user**

Handle in accordance with good industrial hygiene and safety practice.

**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 regulatory information**

Restrictions on use (REACH, annex XVII):

Entry 40, Entry 75

2010/75/EU (VOC): 98,68 % (967,064 g/l)

2004/42/EC (VOC): 98,68 % (967,064 g/l)

Information according to 2012/18/EU (SEVESO III): Not subject to 2012/18/EU (SEVESO III)

**Additional information**

To follow: 850/2004/EC, 79/117/EEC, 689/2008/EC

**National regulatory information**

Water hazard class (D): 1 - slightly hazardous to water

**15.2. Chemical safety assessment**

Chemical safety assessments for substances in this mixture were not carried out.

**SECTION 16: Other information****Changes**

This data sheet contains changes from the previous version in section(s): 2.

**Abbreviations and acronyms**ADR: Accord européen sur le transport des marchandises dangereuses par Route  
(European Agreement concerning the International Carriage of Dangerous Goods by Road)

IMDG: International Maritime Code for Dangerous Goods

IATA: International Air Transport Association

GHS: Globally Harmonized System of Classification and Labelling of Chemicals

EINECS: European Inventory of Existing Commercial Chemical Substances

ELINCS: European List of Notified Chemical Substances

CAS: Chemical Abstracts Service

LC50: Lethal concentration, 50%

LD50: Lethal dose, 50%

**Key literature references and sources for data**

Safety Data Sheet, ECHA

**Relevant H and EUH statements (number and full text)**

H301 Toxic if swallowed.

**Further Information**

Classification for mixtures and used evaluation method according to regulation (EC) No 1272/2008 [CLP].

The above information describes exclusively the safety requirements of the product and is based on our present-day knowledge. The information is intended to give you advice about the safe handling of the product named in this safety data sheet, for storage, processing, transport and disposal. The information cannot be transferred to other products. In the case of mixing the product with other products or in the case of



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processing, the information on this safety data sheet is not necessarily valid for the new made-up material. The receiver of our product is singularly responsible for adhering to existing laws and regulations.

*(The data for the hazardous ingredients were taken respectively from the last version of the sub-contractor's safety data sheet.)*

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**SECTION 1: Identification of the substance/mixture and of the company/undertaking****1.1. Product identifier**

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**EAN**

4001942040020

4001942040037

4001942040044

4001942049108

4001942077156

UFI:

2A6C-G8QP-MKSX-TYQD

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

Solution for monitoring water parameters in aquarium and tap water.

The product is intended for consumer use.

The product is intended for professional use.

**1.3. Details of the supplier of the safety data sheet**

Company name: sera Werke Heimtierbedarf

J. Ravnak GmbH &amp; Co. KG

Street: Borsigstraße 49

Place: D-52525 Heinsberg

Post-office box: 1466

D-52518 Heinsberg

Telephone: +49 (0)2452 91260

Telefax: +49 (0)2452 5922

e-mail: info@sera.de

Contact person: Dr. Matthias Dahm

e-mail: sds.info@sera.biz

Internet: www.sera.de

Responsible Department: Labor

**1.4. Emergency telephone** +49 (0)2452 91260 (Only available during office hours.)**number:** +49 (0)2452 9126555**SECTION 2: Hazards identification****2.1. Classification of the substance or mixture****Regulation (EC) No 1272/2008**

Skin Corr. 1A; H314

Eye Dam. 1; H318

Aquatic Acute 1; H400

Aquatic Chronic 2; H411

Full text of hazard statements: see SECTION 16.

**2.2. Label elements****Regulation (EC) No 1272/2008****Hazard components for labelling**

sodium hypochlorite, solution 14% Cl active

sodium hydroxide; caustic soda

**Signal word:** Danger

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### Pictograms:



### Hazard statements

- H314 Causes severe skin burns and eye damage.  
H400 Very toxic to aquatic life.  
H411 Toxic to aquatic life with long lasting effects.

### Precautionary statements

- P101 If medical advice is needed, have product container or label at hand.  
P102 Keep out of reach of children.  
P273 Avoid release to the environment.  
P280 Wear protective gloves and eye/face protection.  
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.

### Special labelling of certain mixtures

- EUH031 Contact with acids liberates toxic gas.  
EUH206 Warning! Do not use together with other products. May release dangerous gases (chlorine).

### Additional advice on labelling

The product is classified and labelled according to EC directives or corresponding national laws.

### 2.3. Other hazards

No information available.

## SECTION 3: Composition/information on ingredients

### 3.2. Mixtures

#### Chemical characterization

Product/Substance is inorganic. Aqueous solution of alkali salts.

#### Hazardous components

CAS No	Chemical name			Quantity
	EC No	Index No	REACH No	
	Classification (Regulation (EC) No 1272/2008)			
7681-52-9	sodium hypochlorite, solution 14% Cl active			10 - < 15 %
	231-668-3	017-011-00-1		
	Met. Corr. 1, Skin Corr. 1B, Eye Dam. 1, Aquatic Acute 1, Aquatic Chronic 1; H290 H314 H318 H400 H410 EUH031			
497-19-8	sodium carbonate			10 - < 15 %
	207-838-8	011-005-00-2	01-2119485498-19	
	Eye Irrit. 2; H319			
1310-73-2	sodium hydroxide; caustic soda			5 - < 10 %
	215-185-5	011-002-00-6	01-2119457892-27	
	Met. Corr. 1, Skin Corr. 1A; H290 H314			

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

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### Specific Conc. Limits, M-factors and ATE

CAS No	EC No	Chemical name	Quantity
		Specific Conc. Limits, M-factors and ATE	
7681-52-9	231-668-3	sodium hypochlorite, solution 14% Cl active	10 - < 15 %
		dermal: LD50 = > 20000 mg/kg; oral: LD50 = > 8200 mg/kg Aquatic Acute 1; H400: M=10 Aquatic Chronic 1; H410: M=1 EUH; EUH031: >= 5 - 100	
497-19-8	207-838-8	sodium carbonate	10 - < 15 %
		dermal: LD50 = > 2000 mg/kg; oral: LD50 = 2800 mg/kg	
1310-73-2	215-185-5	sodium hydroxide; caustic soda	5 - < 10 %
		Skin Corr. 1A; H314: >= 5 - 100 Skin Corr. 1B; H314: >= 2 - < 5 Skin Irrit. 2; H315: >= 0,5 - < 2 Eye Irrit. 2; H319: >= 0,5 - < 2	

### Further Information

Strong alkali

## SECTION 4: First aid measures

### 4.1. Description of first aid measures

#### General information

Remove contaminated, saturated clothing immediately.

#### After inhalation

Provide fresh air. After inhaling vapours, first symptoms of poisoning may develop hours later, so always consult a doctor.

#### After contact with skin

Wash with plenty of water. Take off contaminated clothing and wash it before reuse. In case of skin reactions, consult a physician.

#### After contact with eyes

In case of contact with eyes flush immediately with plenty of flowing water for 10 to 15 minutes holding eyelids apart and consult an ophthalmologist.

#### After ingestion

Observe risk of aspiration if vomiting occurs. Do NOT induce vomiting. Do not allow a neutralisation agent to be drunk. Rinse mouth immediately and drink plenty of water. Call a physician immediately.

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

Serious eye damage/eye irritation

Skin corrosion/irritation

If swallowed danger of perforation of the esophagus and the stomach (strong corrosive effects).

After inhaling vapours, first symptoms of poisoning may develop hours later, so always consult a doctor.

Subsequent observance for pneumonia and lung oedema.

### 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

Co-ordinate fire-fighting measures to the fire surroundings.

#### Unsuitable extinguishing media

no restriction

### 5.2. Special hazards arising from the substance or mixture

Non-flammable. The product itself does not burn. In case of fire may be liberated: Chlorine (Cl<sub>2</sub>), Hydrogen chloride (HCl), Carbon dioxide (CO<sub>2</sub>), Carbon monoxide. Wear breathing apparatus if exposed to vapours/dusts/aerosols.

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**5.3. Advice for firefighters**

Wear a self-contained breathing apparatus and chemical protective clothing. Full protection suit.

**Additional information**

Suppress gases/vapours/mists with water spray jet. Collect contaminated fire extinguishing water separately.

Do not allow entering drains or surface water. Fire fighting water forms corrosive alkaline solutions - slip hazard!

**SECTION 6: Accidental release measures****6.1. Personal precautions, protective equipment and emergency procedures****General advice**

Provide adequate ventilation. Do not breathe vapour. Avoid contact with skin, eyes and clothes. Use personal protection equipment.

**For non-emergency personnel**

First aider: Pay attention to self-protection! Remove persons to safety.

**For emergency responders**

Cover drains. Absorb with liquid-binding material (sand, diatomaceous earth, acid- or universal binding agents). Use personal protection equipment.

**6.2. Environmental precautions**

Do not allow to enter into surface water or drains. Do not allow to enter into soil/subsoil.

The product is an alkali. Before discharge into sewage plants the product normally needs to be neutralised.

Suitable material for diluting or neutralizing: Water

**6.3. Methods and material for containment and cleaning up****For containment**

Make sure spills can be contained, e.g. in sump pallets or kerbed areas. Contain leaks or spills within cabinets with removable trays.

**For cleaning up**

Large amounts of spillages: Use approved industrial vacuum cleaner for removal.

Small amounts of spillages: Wipe up with absorbent material (eg. cloth, fleece).

Clear contaminated areas thoroughly. Wash with plenty of water.

**Other information**

Treat the recovered material as prescribed in the section on waste disposal.

**6.4. Reference to other sections**

Safe handling: see section 7

Personal protection equipment: see section 8

Disposal: see section 13

**SECTION 7: Handling and storage****7.1. Precautions for safe handling****Advice on safe handling**

If handled uncovered, arrangements with local exhaust ventilation have to be used. Do not breathe vapour.

Keep out of reach of children.

**Advice on protection against fire and explosion**

No special fire protection measures are necessary.

**Advice on general occupational hygiene**

Avoid contact with skin, eyes and clothes. Remove contaminated, saturated clothing immediately.

Keep away from food, drink and animal feedingstuffs. Do not eat, drink or smoke when using this product.

Wash hands and face before breaks and after work and take a shower if necessary. Draw up and observe skin protection programme.

**Further information on handling**

Open drum carefully as content may be under pressure. Put lids on containers immediately after use.

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**7.2. Conditions for safe storage, including any incompatibilities**
**Requirements for storage rooms and vessels**

Keep container tightly closed. Keep locked up. Store in a place accessible by authorized persons only.

Keep/Store only in original container. Ensure adequate ventilation of the storage area.

Do not store at temperatures below 0°C. Recommended storage temperature: at room temperature

**Hints on joint storage**

Do not store near acids.

**Further information on storage conditions**

No special measures are necessary. The product is stable under storage at normal ambient temperatures.

**7.3. Specific end use(s)**

Solution for monitoring water parameters in aquarium and tap water.

**SECTION 8: Exposure controls/personal protection**
**8.1. Control parameters**
**Occupational exposure limits**

CAS No	Substance	ppm	mg/m <sup>3</sup>	fib/cm <sup>3</sup>	Category	Origin
1310-73-2	Sodium hydroxide	-	2		STEL (15 min)	

**DNEL/DMEL values**

CAS No	Substance	Exposure route	Effect	Value
7681-52-9	sodium hypochlorite, solution 14% Cl active			
Worker DNEL, long-term		dermal	local	0,50 %
Worker DNEL, long-term		inhalation	local	1,55 mg/m <sup>3</sup>
Worker DNEL, long-term		inhalation	systemic	1,55 mg/m <sup>3</sup>
Worker DNEL, acute		inhalation	local	3,1 mg/m <sup>3</sup>
Worker DNEL, acute		inhalation	systemic	3,1 mg/m <sup>3</sup>
497-19-8	sodium carbonate			
Worker DNEL, long-term		inhalation	local	10 mg/m <sup>3</sup>

**PNEC values**

CAS No	Substance	Value
7681-52-9	sodium hypochlorite, solution 14% Cl active	
Freshwater		0,00021 mg/l
Marine water		0,000042 mg/l
Secondary poisoning		11,1 mg/kg
Micro-organisms in sewage treatment plants (STP)		4,69 mg/l

**Additional advice on limit values**

To date, no national critical limit values exist.

When using do not eat, drink, smoke, sniff.

**8.2. Exposure controls**
**Appropriate engineering controls**

If handled uncovered, arrangements with local exhaust ventilation have to be used.

**Individual protection measures, such as personal protective equipment**

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#### Eye/face protection

Avoid contact with eyes. Wear eye/face protection. Suitable eye protection: goggles.

#### Hand protection

Avoid contact with skin. Wear suitable gloves.

Suitable gloves type: alkali-resistant

Suitable material: NBR (Nitrile rubber)

Thickness of the glove material: 0,2-0,3 mm

Permeation time (maximum wear duration): > 8 h

When handling with chemical substances, protective gloves must be worn with the CE-label including the four control digits. The quality of the protective gloves resistant to chemicals must be chosen as a function of the specific working place concentration and quantity of hazardous substances. For special purposes, it is recommended to check the resistance to chemicals of the protective gloves mentioned above together with the supplier of these gloves.

#### Skin protection

Wear suitable protective clothing. Not required because of small size of the container

#### Respiratory protection

Usually no personal respirative protection necessary. In case of inadequate ventilation wear respiratory protection. In the case of vapour formation use a respirator with filter model B2 (according to DIN 3181, 1980).

#### Thermal hazards

Non-flammable. The product itself does not burn. Thermal decomposition can lead to the escape of irritating gases and vapours. In case of fire may be liberated: Chlorine (Cl<sub>2</sub>), Hydrogen chloride (HCl), Carbon dioxide (CO<sub>2</sub>), Carbon monoxide.

#### Environmental exposure controls

Avoid release to the environment.

## SECTION 9: Physical and chemical properties

### 9.1. Information on basic physical and chemical properties

Physical state:	Liquid
Colour:	colourless
Odour:	like: Chlorine
Odour threshold:	0,3 ppm
Melting point/freezing point:	< 0 °C
Boiling point or initial boiling point and boiling range:	> 60 °C
Flammability:	not applicable
Lower explosion limits:	not determined
Upper explosion limits:	not determined
Flash point:	> 100 °C
Auto-ignition temperature:	Non-flammable.
Decomposition temperature:	not determined
pH-Value (at 20 °C):	13,5-14,5
Viscosity / kinematic:	not determined
Water solubility: (at 20 °C)	completely miscible
Solubility in other solvents	not determined
Partition coefficient n-octanol/water:	Not applicable for inorganic substances.
Vapour pressure: (at 20 °C)	23 hPa
Density (at 20 °C):	1,13 g/cm <sup>3</sup>
Bulk density:	not applicable



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Relative vapour density: not determined

**9.2. Other information****Information with regard to physical hazard classes****Explosive properties**

No ignition, explosion, self-heating or visible decomposition.

The product is not: Explosive

**Sustaining combustion:**

Not sustaining combustion

**Self-ignition temperature**

Solid:

not applicable

Gas:

not applicable

**Oxidizing properties**

Not oxidising.

**Other safety characteristics**

Evaporation rate:

not determined

Solvent separation test:

No data available

Solvent content:

not determined

Solid content:

not determined

Sublimation point:

not applicable

Softening point:

not applicable

Pour point:

not determined

Viscosity / dynamic:

not determined

Flow time:

not determined

**SECTION 10: Stability and reactivity****10.1. Reactivity**

No hazardous reaction when handled and stored according to provisions.

**10.2. Chemical stability**

The product is chemically stable under recommended conditions of storage, use and temperature.

**10.3. Possibility of hazardous reactions**

Exothermic reaction with: Acid, Peroxides, Oxidising agent. The product develops hydrogen in an aqueous solution in contact with metals. Contact with acids liberates toxic gas.

No hazardous reaction when handled and stored according to provisions.

**10.4. Conditions to avoid**

Protect from direct sunlight.

**10.5. Incompatible materials**

Keep away from: Acid, Oxidising agent, Peroxides. Alkali metals, Light metals, Ammonium salts

May develop chlorine if mixed with acidic solutions.

**10.6. Hazardous decomposition products**Chlorine, Hydrogen chloride (HCl), Carbon monoxide, Carbon dioxide (CO<sub>2</sub>).

Thermal decomposition can lead to the escape of irritating gases and vapours.

**SECTION 11: Toxicological information****11.1. Information on hazard classes as defined in Regulation (EC) No 1272/2008****Toxicokinetics, metabolism and distribution**

There are no data available on the preparation/mixture itself.

**Acute toxicity**

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

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CAS No	Chemical name				
	Exposure route	Dose	Species	Source	Method
7681-52-9	sodium hypochlorite, solution 14% Cl active				
	oral	LD50 mg/kg > 8200	Rat	IUCLID	
	dermal	LD50 mg/kg > 20000	Rabbit	SDB	OECD 402
497-19-8	sodium carbonate				
	oral	LD50 mg/kg 2800	Rat	ECHA	OECD-SIDS
	dermal	LD50 mg/kg > 2000	Rabbit	ECHA	EPA 16 CFR 1500.40

### Irritation and corrosivity

Causes severe skin burns and eye damage.

Causes serious eye damage.

If swallowed danger of perforation of the esophagus and the stomach (strong corrosive effects).

### Sensitising effects

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

### Carcinogenic/mutagenic/toxic effects for reproduction

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

### STOT-single exposure

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

### STOT-repeated exposure

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

### Aspiration hazard

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

### Information on likely routes of exposure

Skin contact, Eye contact, Inhalation, Ingestion

### Specific effects in experiment on an animal

There are no data available on the preparation/mixture itself.

### Additional information on tests

The mixture is classified as hazardous according to regulation (EC) No 1272/2008 [CLP].

### Practical experience

There are no data available on the preparation/mixture itself.

## 11.2. Information on other hazards

### Endocrine disrupting properties

There are no data available on the preparation/mixture itself.

### Other information

There are no data available on the preparation/mixture itself.

### Further information

Description of possible hazardous to health effects is based on experience and/or toxicological characteristics of several components.

Handle in accordance with good industrial hygiene and safety practice.

Health injuries are not known or expected under normal use.

## SECTION 12: Ecological information

### 12.1. Toxicity

There are no data available on the preparation/mixture itself. The ecotoxicological properties of this mixture are determined by the ecotoxicological properties of the single components (see section 3).

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CAS No	Chemical name					
	Aquatic toxicity	Dose	[h]   [d]	Species	Source	Method
7681-52-9	sodium hypochlorite, solution 14% Cl active					
	Acute fish toxicity	LC50 mg/l	0,08	96 h	Pimephales promelas (fathead minnow)	ECOTOX
	Acute algae toxicity	ErC50 mg/l	0,036	72 h	Pseudokirchneriella subcapitata	OECD 201
	Acute crustacea toxicity	EC50 mg/l	0,04	48 h	Daphnia magna (Big water flea)	ECOTOX
	Acute bacteria toxicity	(EC50 mg/l)	77,1	3 h	Activated sludge	OECD 209
497-19-8	sodium carbonate					
	Acute fish toxicity	LC50	300 mg/l	96 h	Lepomis macrochirus (Bluegill)	ECHA
	Acute crustacea toxicity	EC50 mg/l	200-227	48 h	Ceriodaphnia spec	ECHA

### 12.2. Persistence and degradability

The methods for determining the biological degradability are not applicable to inorganic substances.

### 12.3. Bioaccumulative potential

The study does not need to be conducted because the substance is inorganic.

### 12.4. Mobility in soil

The study does not need to be conducted because the substance is inorganic.

### 12.5. Results of PBT and vPvB assessment

The substances in the mixture do not meet the PBT/vPvB criteria according to REACH, annex XIII.

### 12.6. Endocrine disrupting properties

This product does not contain a substance that has endocrine disrupting properties with respect to non-target organisms as no components meets the criteria.

### 12.7. Other adverse effects

No information available.

### Further information

Avoid release to the environment.

## SECTION 13: Disposal considerations

### 13.1. Waste treatment methods

#### Disposal recommendations

Do not allow to enter into surface water or drains. Do not allow to enter into soil/subsoil. Dispose of waste according to applicable legislation.

#### List of Wastes Code - residues/unused products

160303 WASTES NOT OTHERWISE SPECIFIED IN THE LIST; off-specification batches and unused products; inorganic wastes containing hazardous substances; hazardous waste

#### List of Wastes Code - used product

160507 WASTES NOT OTHERWISE SPECIFIED IN THE LIST; gases in pressure containers and discarded chemicals; discarded inorganic chemicals consisting of or containing hazardous substances; hazardous waste

#### List of Wastes Code - contaminated packaging

150110 WASTE PACKAGING; ABSORBENTS, WIPING CLOTHS, FILTER MATERIALS AND PROTECTIVE CLOTHING NOT OTHERWISE SPECIFIED; packaging (including separately collected municipal packaging waste); packaging containing residues of or contaminated by hazardous substances; hazardous waste

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### Contaminated packaging

Non-contaminated packages may be recycled. Handle contaminated packages in the same way as the substance itself. Dispose of waste according to applicable legislation.

## SECTION 14: Transport information

### Land transport (ADR/RID)

<b>14.1. UN number or ID number:</b>	UN 1719
<b>14.2. UN proper shipping name:</b>	CAUSTIC ALKALI LIQUID, N.O.S. (sodium hypochlorite, solution 14% Cl active; sodium hydroxide; caustic soda)
<b>14.3. Transport hazard class(es):</b>	8
<b>14.4. Packing group:</b>	III
Hazard label:	8
Classification code:	C5
Special Provisions:	274
Limited quantity:	5 L
Excepted quantity:	E1
Transport category:	3
Hazard No:	80
Tunnel restriction code:	E

### Inland waterways transport (ADN)

<b>14.1. UN number or ID number:</b>	UN 1719
<b>14.2. UN proper shipping name:</b>	CAUSTIC ALKALI LIQUID, N.O.S. (sodium hypochlorite, solution 14% Cl active; sodium hydroxide; caustic soda)
<b>14.3. Transport hazard class(es):</b>	8
<b>14.4. Packing group:</b>	III
Hazard label:	8
Classification code:	C5
Special Provisions:	274
Limited quantity:	5 L
Excepted quantity:	E1

### Marine transport (IMDG)

<b>14.1. UN number or ID number:</b>	UN 1719
<b>14.2. UN proper shipping name:</b>	CAUSTIC ALKALI LIQUID, N.O.S. (sodium hypochlorite, solution 14% Cl active; sodium hydroxide; caustic soda)
<b>14.3. Transport hazard class(es):</b>	8
<b>14.4. Packing group:</b>	III
Hazard label:	8
Special Provisions:	223 274
Limited quantity:	5 L
Excepted quantity:	E1
EmS:	F-A, S-B
Segregation group:	18 - alkalis

### Air transport (ICAO-TI/IATA-DGR)

<b>14.1. UN number or ID number:</b>	UN 1719
<b>14.2. UN proper shipping name:</b>	CAUSTIC ALKALI LIQUID, N.O.S. (sodium hypochlorite, solution 14% Cl active; sodium hydroxide; caustic soda)
<b>14.3. Transport hazard class(es):</b>	8
<b>14.4. Packing group:</b>	III
Hazard label:	8
Special Provisions:	A3 A803
Limited quantity Passenger:	1 L
Passenger LQ:	Y841
Excepted quantity:	E1

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IATA-packing instructions - Passenger:	852
IATA-max. quantity - Passenger:	5 L
IATA-packing instructions - Cargo:	856
IATA-max. quantity - Cargo:	60 L

**14.5. Environmental hazards**

ENVIRONMENTALLY HAZARDOUS:	Yes
Danger releasing substance:	sodium hypochlorite, solution 14% Cl active sodium hydroxide; caustic soda

**14.6. Special precautions for user**

Warning: strongly corrosive. Safe handling: see section 7  
Personal protection equipment: see section 8

**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 regulatory information**

Restrictions on use (REACH, annex XVII):

Entry 3, Entry 75

Information according to 2012/18/EU (SEVESO III): Not subject to 2012/18/EU (SEVESO III)

**Additional information**

To follow: 850/2004/EC, 79/117/EEC, 689/2008/EC

**National regulatory information**

Employment restrictions:	Observe restrictions to employment for juveniles according to the 'juvenile work protection guideline' (94/33/EC).
Water hazard class (D):	2 - obviously hazardous to water

**15.2. Chemical safety assessment**

Chemical safety assessments for substances in this mixture were not carried out.

**SECTION 16: Other information****Changes**

This data sheet contains changes from the previous version in section(s): 2,4,6,7,8,9,10,12,14,15.

**Abbreviations and acronyms**

ADR: Accord européen sur le transport des marchandises dangereuses par Route  
(European Agreement concerning the International Carriage of Dangerous Goods by Road)  
IMDG: International Maritime Code for Dangerous Goods  
IATA: International Air Transport Association  
GHS: Globally Harmonized System of Classification and Labelling of Chemicals  
EINECS: European Inventory of Existing Commercial Chemical Substances  
ELINCS: European List of Notified Chemical Substances  
CAS: Chemical Abstracts Service  
LC50: Lethal concentration, 50%  
LD50: Lethal dose, 50%

**Key literature references and sources for data**

Safety Data Sheet, ECHA

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**Classification for mixtures and used evaluation method according to Regulation (EC) No 1272/2008 [CLP]**

Classification	Classification procedure
Skin Corr. 1A; H314	Calculation method
Eye Dam. 1; H318	Calculation method
Aquatic Acute 1; H400	Calculation method
Aquatic Chronic 2; H411	Calculation method

**Relevant H and EUH statements (number and full text)**

H290	May be corrosive to metals.
H314	Causes severe skin burns and eye damage.
H318	Causes serious eye damage.
H319	Causes serious eye 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.
EUH031	Contact with acids liberates toxic gas.
EUH206	Warning! Do not use together with other products. May release dangerous gases (chlorine).

**Further Information**

Classification for mixtures and used evaluation method according to regulation (EC) No 1272/2008 [CLP].

The above information describes exclusively the safety requirements of the product and is based on our present-day knowledge. The information is intended to give you advice about the safe handling of the product named in this safety data sheet, for storage, processing, transport and disposal. The information cannot be transferred to other products. In the case of mixing the product with other products or in the case of processing, the information on this safety data sheet is not necessarily valid for the new made-up material. The receiver of our product is singularly responsible for adhering to existing laws and regulations.

*(The data for the hazardous ingredients were taken respectively from the last version of the sub-contractor's safety data sheet.)*