

# SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006

Revision Date 22.03.2019

Version 10.1

## SECTION 1. Identification of the substance/mixture and of the company/undertaking

### 1.1 Product identifier

|                           |   |
|---------------------------|---|
| Catalogue No.             | 116892  |
| Product name              | Ammonium Test Method: reflectometric with test strips and reagents 0.2 - 7.0 mg/l NH <sub>4</sub> <sup>+</sup> Reflectoquant® |
|                           | NH <sub>4</sub> -1  |
| REACH Registration Number | This product is a mixture. REACH Registration Number see section 3.   |

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

|                 |   |
|-----------------|---|
| Identified uses | Reagent for analysis<br>For additional information on uses please refer to the Merck Chemicals portal ( <a href="http://www.merckgroup.com">www.merckgroup.com</a> ). |
|-----------------|---|

### 1.3 Details of the supplier of the safety data sheet

|                        |   |
|------------------------|---|
| Company                | Merck KGaA * 64271 Darmstadt * Germany * Phone: +49 6151 72-0                         |
| Responsible Department | LS-QHC * e-mail: <a href="mailto:prodsafe@merckgroup.com">prodsafe@merckgroup.com</a> |

### 1.4 Emergency telephone number

**Please contact the regional company representation in your country.**

## SECTION 2. Hazards identification

### 2.1 Classification of the substance or mixture

#### Classification (REGULATION (EC) No 1272/2008)

Corrosive to metals, Category 1, H290

Skin corrosion, Category 1B, H314

For the full text of the H-Statements mentioned in this Section, see Section 16.

# SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006

Catalogue No. 116892  
Product name Ammonium Test Method: reflectometric with test strips and reagents 0.2 - 7.0 mg/l NH<sub>4</sub><sup>+</sup> Reflectoquant® NH<sub>4</sub>-1

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## 2.2 Label elements

### Labelling.(REGULATION (EC) No 1272/2008)

*Hazard pictograms*



*Signal word*  
Danger

*Hazard statements*

H290 May be corrosive to metals.  
H314 Causes severe skin burns and eye damage.

*Precautionary statements*

Prevention

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

Response

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

P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes.

Remove contact lenses, if present and easy to do. Continue rinsing.

P308 + P310 IF exposed or concerned: immediately call a POISON CENTER or doctor/ physician.

### Reduced labelling (≤125 ml)

*Hazard pictograms*



*Signal word*  
Danger

*Hazard statements*

H314 Causes severe skin burns and eye damage.

*Precautionary statements*

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

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

P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P308 + P310 IF exposed or concerned: immediately call a POISON CENTER or doctor/ physician.

Contains: sodium hydroxide

## 2.3 Other hazards

None known.

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## SECTION 3. Composition/information on ingredients

Chemical nature Aqueous solution of inorganic and organic compounds.

### 3.1 Substance

Not applicable

### 3.2 Mixture

#### Hazardous components (REGULATION (EC) No 1272/2008)

*Chemical name (Concentration)*

| CAS-No.  | Registration number | Classification |
|--|---------------------|----------------|
| Tetrasodium (1-hydroxyethylidene)bisphosphonate (>= 3 % - < 10 % ) |                     |                |
| 3794-83-0  | *                   |                |

Acute toxicity, Category 4, H302

Eye irritation, Category 2, H319

sodium hydroxide (>= 2 % - < 5 % )

*PBT/vPvB: Not applicable for inorganic substances*

|           |                       |  |
|-----------|-----------------------|--|
| 1310-73-2 | 01-2119457892-27-XXXX |  |
|-----------|-----------------------|--|

Corrosive to metals, Category 1, H290

Skin corrosion, Category 1A, H314

\*) A registration number is not available for this substance as the substance or its use are exempted from registration according to Article 2 REACH Regulation (EC) No 1907/2006, the annual tonnage does not require a registration or the registration is envisaged for a later registration deadline.

For the full text of the H-Statements mentioned in this Section, see Section 16.

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## SECTION 4. First aid measures

### 4.1 Description of first aid measures

*General advice*

First aider needs to protect himself.

After inhalation: fresh air. Call in physician.

In case of skin contact: Take off immediately all contaminated clothing. Rinse skin with water/ shower. Call a physician immediately.

After eye contact: rinse out with plenty of water. Immediately call in ophthalmologist. Remove contact lenses.

After swallowing: make victim drink water (two glasses at most), avoid vomiting (risk of perforation). Call a physician immediately. Do not attempt to neutralise.

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

collapse, death

Irritation and corrosion, Cough, Shortness of breath

Risk of blindness!

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|               |  |
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## 4.3 Indication of any immediate medical attention and special treatment needed

No information available.

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## SECTION 5. Firefighting measures

### 5.1 Extinguishing media

#### *Suitable extinguishing media*

Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

#### *Unsuitable extinguishing media*

For this substance/mixture no limitations of extinguishing agents are given.

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

Not combustible.

Ambient fire may liberate hazardous vapours.

### 5.3 Advice for firefighters

#### *Special protective equipment for firefighters*

Stay in danger area only with self-contained breathing apparatus. Prevent skin contact by keeping a safe distance or by wearing suitable protective clothing.

#### *Further information*

Suppress (knock down) gases/vapours/mists with a water spray jet. Prevent fire extinguishing water from contaminating surface water or the ground water system.

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## SECTION 6. Accidental release measures

### 6.1 Personal precautions, protective equipment and emergency procedures

Advice for non-emergency personnel: Do not breathe vapours, aerosols. Avoid substance contact. Ensure adequate ventilation. Evacuate the danger area, observe emergency procedures, consult an expert.

Advice for emergency responders:

Protective equipment see section 8.

### 6.2 Environmental precautions

Do not let product enter drains.

### 6.3 Methods and materials for containment and cleaning up

Cover drains. Collect, bind, and pump off spills. Observe possible material restrictions (see sections 7 and 10). Take up with liquid-absorbent and neutralising material (e.g. Chemizorb® OH<sup>-</sup>, Merck Art. No. 101596). Dispose of properly. Clean up affected area.

### 6.4 Reference to other sections

Indications about waste treatment see section 13.

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## SECTION 7. Handling and storage

### 7.1 Precautions for safe handling

#### *Advice on safe handling*

Observe label precautions.

#### *Hygiene measures*

Immediately change contaminated clothing. Apply preventive skin protection. Wash hands and face after working with substance.

### 7.2 Conditions for safe storage, including any incompatibilities

#### *Requirements for storage areas and containers*

No metal containers.

#### *Storage conditions*

Tightly closed.

Recommended storage temperature see product label.

The data applies to the entire pack.

### 7.3 Specific end use(s)

Apart from the uses mentioned in section 1.2 no other specific uses are stipulated.

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## SECTION 8. Exposure controls/personal protection

### 8.1 Control parameters

#### **Derived No Effect Level (DNEL)**

##### *sodium hydroxide (1310-73-2)*

|                                     |            |                     |
|-------------------------------------|------------|---------------------|
| Worker DNEL, Local effects longterm | inhalation | 1 mg/m <sup>3</sup> |
|-------------------------------------|------------|---------------------|

|                                       |            |                     |
|---------------------------------------|------------|---------------------|
| Consumer DNEL, Local effects longterm | inhalation | 1 mg/m <sup>3</sup> |
|---------------------------------------|------------|---------------------|

##### *sodium hydroxide (1310-73-2)*

PNEC no data available

### 8.2 Exposure controls

#### **Engineering measures**

Technical measures and appropriate working operations should be given priority over the use of personal protective equipment.

See section 7.1.

#### **Individual protection measures**

Protective clothing needs to be selected specifically for the workplace, depending on concentrations and quantities of the hazardous substances handled. The chemical resistance of the protective equipment should be enquired at the respective supplier.

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## *Eye/face protection*

Tightly fitting safety goggles

## *Hand protection*

full contact:

Glove material: Nitrile rubber  
Glove thickness: 0,11 mm  
Break through time: > 480 min

splash contact:

Glove material: Nitrile rubber  
Glove thickness: 0,11 mm  
Break through time: > 480 min

The protective gloves to be used must comply with the specifications of EC Directive 89/686/EEC and the related standard EN374, for example KCL 741 Dermatril® L (full contact), KCL 741 Dermatril® L (splash contact).

This recommendation applies only to the product stated in the safety data sheet, supplied by us and for the designated use. When dissolving in or mixing with other substances and under conditions deviating from those stated in EN374 please contact the supplier of CE-approved gloves (e.g. KCL GmbH, D-36124 Eichenzell, Internet: [www.kcl.de](http://www.kcl.de)).

## *Other protective equipment*

protective clothing

## *Respiratory protection*

required when vapours/aerosols are generated.

Recommended Filter type: Filter P 2 (acc. to DIN 3181) for solid and liquid particles of harmful substances

The entrepreneur has to ensure that maintenance, cleaning and testing of respiratory protective devices are carried out according to the instructions of the producer.

These measures have to be properly documented.

## **Environmental exposure controls**

Do not let product enter drains.

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## **SECTION 9. Physical and chemical properties**

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

|                 |                           |
|-----------------|---------------------------|
| Form            | liquid                    |
| Colour          | colourless                |
| Odour           | characteristic odour      |
| Odour Threshold | No information available. |
| pH              | ca. 14<br>at 20 °C        |

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|  |                                       |
|--|---------------------------------------|
| Melting point                          | No information available.             |
| Boiling point                          | No information available.             |
| Flash point                            | No information available.             |
| Evaporation rate                       | No information available.             |
| Flammability (solid, gas)              | No information available.             |
| Lower explosion limit                  | No information available.             |
| Upper explosion limit                  | No information available.             |
| Vapour pressure                        | No information available.             |
| Relative vapour density                | No information available.             |
| Density                                | ca.1,34 g/cm <sup>3</sup><br>at 20 °C |
| Relative density                       | No information available.             |
| Water solubility                       | at 20 °C<br>soluble                   |
| Partition coefficient: n-octanol/water | No information available.             |
| Auto-ignition temperature              | No information available.             |
| Decomposition temperature              | No information available.             |
| Viscosity, dynamic                     | No information available.             |
| Explosive properties                   | Not classified as explosive.          |
| Oxidizing properties                   | none                                  |

## 9.2 Other data

Corrosion May be corrosive to metals.

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## SECTION 10. Stability and reactivity

### 10.1 Reactivity

See section 10.3

### 10.2 Chemical stability

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The product is chemically stable under standard ambient conditions (room temperature) .

### 10.3 Possibility of hazardous reactions

Risk of ignition or formation of inflammable gases or vapours with:

Metals, Light metals

Possible formation of:

Hydrogen

Violent reactions possible with:

Nitriles, ammonium compounds, Cyanides, magnesium, organic nitro compounds, organic combustible substances, phenols, powdered alkaline earth metals, acids

### 10.4 Conditions to avoid

no information available

### 10.5 Incompatible materials

Aluminium, various plastics, brass, metal alloys, Zinc, Tin, Light metals, glass, quartzes/silicate ceramics, animal/vegetable tissues  
Metals

### 10.6 Hazardous decomposition products

in the event of fire: See section 5.

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## SECTION 11. Toxicological information

### 11.1 Information on toxicological effects

#### Mixture

*Acute oral toxicity*

Acute toxicity estimate: > 2.000 mg/kg

Calculation method

Symptoms: If ingested, severe burns of the mouth and throat, as well as a danger of perforation of the oesophagus and the stomach.

*Acute inhalation toxicity*

Symptoms: mucosal irritations, Cough, Shortness of breath, Possible damages:, damage of respiratory tract

*Acute dermal toxicity*

This information is not available.

*Skin irritation*

Mixture causes burns.

Necrosis

*Eye irritation*

Mixture causes serious eye damage. Risk of blindness!

Necrosis



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### *Sensitisation*

This information is not available.

### *Germ cell mutagenicity*

This information is not available.

### *Carcinogenicity*

This information is not available.

### *Reproductive toxicity*

This information is not available.

### *Teratogenicity*

This information is not available.

### *Specific target organ toxicity - single exposure*

This information is not available.

### *Specific target organ toxicity - repeated exposure*

This information is not available.

### *Aspiration hazard*

This information is not available.

## **11.2 Further information**

Systemic effects:

collapse, death

Other dangerous properties can not be excluded.

Handle in accordance with good industrial hygiene and safety practice.

## **Components**

### *Tetrasodium (1-hydroxyethylidene)bisphosphonate*

#### *Acute oral toxicity*

LD50 Rat: 940 mg/kg

OECD Test Guideline 401

#### *Acute dermal toxicity*

LD50 Rabbit: > 5.000 mg/kg

OECD Test Guideline 402

#### *Skin irritation*

Rabbit

Result: No skin irritation

OECD Test Guideline 404

#### *Eye irritation*

Rabbit

Result: irritating

OECD Test Guideline 405

### *sodium hydroxide*

#### *Skin irritation*

Rabbit

Result: Causes burns.

(External MSDS)

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#### *Eye irritation*

Rabbit  
Result: Irreversible effects on the eye  
(ECHA)

#### *Sensitisation*

Patch test: human  
Result: negative  
(ECHA)

#### *Germ cell mutagenicity*

*Genotoxicity in vitro*  
Mutagenicity (mammal cell test): micronucleus.  
Result: negative  
(Lit.)

#### Ames test

Result: negative  
(IUCLID)

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## SECTION 12. Ecological information

### Mixture

#### 12.1 Toxicity

No information available.

#### 12.2 Persistence and degradability

No information available.

#### 12.3 Bioaccumulative potential

No information available.

#### 12.4 Mobility in soil

No information available.

#### 12.5 Results of PBT and vPvB assessment

PBT/vPvB assessment not available as chemical safety assessment not required/not conducted.

#### 12.6 Other adverse effects

Discharge into the environment must be avoided.

### Components

#### *Tetrasodium (1-hydroxyethylidene)bisphosphonate*

##### *Toxicity to fish*

flow-through test LC50 *Oncorhynchus mykiss* (rainbow trout): 195 mg/l; 96 h  
Analytical monitoring: yes  
OECD Test Guideline 204 The value is given in analogy to the following substances:

##### *Toxicity to daphnia and other aquatic invertebrates*

static test EC50 *Daphnia magna* (Water flea): 527 mg/l; 48 h  
OECD Test Guideline 202 The value is given in analogy to the following substances:

##### *Toxicity to fish (Chronic toxicity)*

flow-through test NOEC *Oncorhynchus mykiss* (rainbow trout): 60 mg/l; 14 d

Analytical monitoring: yes

OECD Test Guideline 204 The value is given in analogy to the following substances:

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*Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity)*  
semi-static test NOEC Daphnia magna (Water flea): 6,75 mg/l; 28 d

US-EPA The value is given in analogy to the following substances:

*Biodegradability*

; 5 d; aerobic Biochemical oxygen demand within 5 days  
OECD Test Guideline 301D  
The value is given in analogy to the following substances:  
Not readily biodegradable.

*Partition coefficient: n-octanol/water*

log Pow: -3 (23 °C)  
OECD Test Guideline 107  
Bioaccumulation is not expected.

## *sodium hydroxide*

*Toxicity to fish*

LC50 Gambusia affinis (Mosquito fish): 125 mg/l; 96 h (External MSDS)

*Toxicity to daphnia and other aquatic invertebrates*

EC50 Ceriodaphnia (water flea): 40,4 mg/l; 48 h (ECHA)

*Toxicity to bacteria*

EC50 Photobacterium phosphoreum: 22 mg/l; 15 min (External MSDS)

*Biodegradability*

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

PBT/vPvB: Not applicable for inorganic substances

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## SECTION 13. Disposal considerations

### *Waste treatment methods*

See [www.retrologistik.com](http://www.retrologistik.com) for processes regarding the return of chemicals and containers, or contact us there if you have further questions.

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## SECTION 14. Transport information

### Land transport (ADR/RID)

**14.1 UN number** UN 3316  
**14.2 Proper shipping name** CHEMICAL KIT  
**14.3 Class** 9  
**14.4 Packing group** II  
**14.5 Environmentally hazardous** --  
**14.6 Special precautions for user** yes  
Tunnel restriction code E

### Inland waterway transport (ADN)

Not relevant

### Air transport (IATA)

**14.1 UN number** UN 3316  
**14.2 Proper shipping name** CHEMICAL KIT  
**14.3 Class** 9  
**14.4 Packing group** II  
**14.5 Environmentally hazardous** --  
**14.6 Special precautions for user** no

### Sea transport (IMDG)

**14.1 UN number** UN 3316  
**14.2 Proper shipping name** CHEMICAL KIT  
**14.3 Class** 9  
**14.4 Packing group** II  
**14.5 Environmentally hazardous** --  
**14.6 Special precautions for user** yes

# SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006

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EmS F-A S-P

## 14.7 Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Not relevant

THIS TRANSPORT DATA APPLIES TO THE ENTIRE PACK!

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## SECTION 15. Regulatory information

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

#### *EU regulations*

Major Accident Hazard 96/82/EC  
Legislation Directive 96/82/EC does not apply

SEVESO III  
Not applicable

Occupational restrictions Take note of Dir 94/33/EC on the protection of young people at work.

Regulation (EC) No 1005/2009 on substances not regulated  
that deplete the ozone layer

Regulation (EC) No 850/2004 of the not regulated  
European Parliament and of the Council of 29  
April 2004 on persistent organic pollutants  
and amending Directive 79/117/EEC

Substances of very high concern (SVHC) This product does not contain  
substances of very high concern  
according to Regulation (EC) No  
1907/2006 (REACH), Article 57  
above the respective regulatory  
concentration limit of  $\geq 0.1\%$   
(w/w).

#### *National legislation*

Storage class 8B  
The data applies to the entire pack.

### 15.2 Chemical safety assessment

For this product a chemical safety assessment was not carried out.

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## SECTION 16. Other information

### Full text of H-Statements referred to under sections 2 and 3.

|      |  |
|------|--|
| H290 | May be corrosive to metals.              |
| H302 | Harmful if swallowed.                    |
| H314 | Causes severe skin burns and eye damage. |
| H319 | Causes serious eye irritation.           |

### Training advice

Provide adequate information, instruction and training for operators.

### Labelling

*Hazard pictograms*



*Signal word*

Danger

*Hazard statements*

H290 May be corrosive to metals.  
H314 Causes severe skin burns and eye damage.

*Precautionary statements*

Prevention

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

Response

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

P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes.

Remove contact lenses, if present and easy to do. Continue rinsing.

P308 + P310 IF exposed or concerned: immediately call a POISON CENTER or doctor/ physician.

Contains: sodium hydroxide

### Key or legend to abbreviations and acronyms used in the safety data sheet

Used abbreviations and acronyms can be looked up at [www.wikipedia.org](http://www.wikipedia.org).

### Regional representation

This information is given on the authorised Safety Data Sheet for your country.

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*The information contained herein is based on the present state of our knowledge. It characterises the product with regard to the appropriate safety precautions. It does not represent a guarantee of any properties of the product.*

The branding on the header and/or footer of this document may temporarily not visually match the product purchased as we transition our branding. However, all of the information in the document regarding the product remains unchanged and matches the product ordered. For further information please contact [mlsbranding@sial.com](mailto:mlsbranding@sial.com).

## SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006

Revision Date 22.03.2019

Version 10.1

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

|                           |   |
|---------------------------|---|
| Catalogue No.             | 116892  |
| Product name              | Ammonium Test Method: reflectometric with test strips and reagents 0.2 - 7.0 mg/l NH <sub>4</sub> <sup>+</sup> Reflectoquant® |
|                           | NH <sub>4</sub> -2  |
| REACH Registration Number | This product is a mixture. REACH Registration Number see section 3.   |

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

|                 |   |
|-----------------|---|
| Identified uses | Reagent for analysis<br>For additional information on uses please refer to the Merck Chemicals portal ( <a href="http://www.merckgroup.com">www.merckgroup.com</a> ). |
|-----------------|---|

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

|                        |   |
|------------------------|---|
| Company                | Merck KGaA * 64271 Darmstadt * Germany * Phone: +49 6151 72-0                         |
| Responsible Department | LS-QHC * e-mail: <a href="mailto:prodsafe@merckgroup.com">prodsafe@merckgroup.com</a> |

**1.4 Emergency telephone number** **Please contact the regional company representation in your country.****SECTION 2. Hazards identification****2.1 Classification of the substance or mixture****Classification (REGULATION (EC) No 1272/2008)**

Long-term (chronic) aquatic hazard, Category 3, H412

For the full text of the H-Statements mentioned in this Section, see Section 16.

**2.2 Label elements****Labelling.(REGULATION (EC) No 1272/2008)***Hazard statements*

H412 Harmful to aquatic life with long lasting effects.



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according to Regulation (EC) No. 1907/2006

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## Precautionary statements

Prevention  
P273 Avoid release to the environment.

## Reduced labelling (≤125 ml)

*Hazard statements*  
H412 Harmful to aquatic life with long lasting effects.

## 2.3 Other hazards

None known.

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## SECTION 3. Composition/information on ingredients

Chemical nature Mixture of inorganic and organic compounds

### 3.1 Substance

Not applicable

### 3.2 Mixture

#### Hazardous components (REGULATION (EC) No 1272/2008)

*Chemical name (Concentration)*

| CAS-No.  | Registration number   | Classification  |
|--|-----------------------|---|
| troclosene sodium, dihydrate (>= 1 % - < 2,5 % ) |                       |   |
| 51580-86-0                                       | 01-2119489371-33-XXXX | Acute toxicity, Category 4, H302<br>Eye irritation, Category 2, H319<br>Specific target organ toxicity - single exposure, Category 3, H335<br>Short-term (acute) aquatic hazard, Category 1, H400<br>Long-term (chronic) aquatic hazard, Category 1, H410 |

For the full text of the H-Statements mentioned in this Section, see Section 16.

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## SECTION 4. First aid measures

### 4.1 Description of first aid measures

After inhalation: fresh air.

In case of skin contact: Take off immediately all contaminated clothing. Rinse skin with water/ shower.

After eye contact: rinse out with plenty of water. Remove contact lenses.

After swallowing: make victim drink water (two glasses at most). Consult doctor if feeling unwell.

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

Nausea, Vomiting

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## 4.3 Indication of any immediate medical attention and special treatment needed

No information available.

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## SECTION 5. Firefighting measures

### 5.1 Extinguishing media

#### *Suitable extinguishing media*

Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

#### *Unsuitable extinguishing media*

For this substance/mixture no limitations of extinguishing agents are given.

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

Not combustible.

Ambient fire may liberate hazardous vapours.

Fire may cause evolution of:

Hydrogen chloride gas, Sulphur oxides

### 5.3 Advice for firefighters

#### *Special protective equipment for firefighters*

Stay in danger area only with self-contained breathing apparatus. Prevent skin contact by keeping a safe distance or by wearing suitable protective clothing.

#### *Further information*

Suppress (knock down) gases/vapours/mists with a water spray jet. Prevent fire extinguishing water from contaminating surface water or the ground water system.

---

## SECTION 6. Accidental release measures

### 6.1 Personal precautions, protective equipment and emergency procedures

Advice for non-emergency personnel: Avoid inhalation of dusts. Evacuate the danger area, observe emergency procedures, consult an expert.

Advice for emergency responders:

Protective equipment see section 8.

### 6.2 Environmental precautions

Do not let product enter drains.

### 6.3 Methods and materials for containment and cleaning up

Cover drains. Collect, bind, and pump off spills. Observe possible material restrictions (see sections 7 and 10). Take up dry. Dispose of properly. Clean up affected area. Avoid generation of dusts.

### 6.4 Reference to other sections

Indications about waste treatment see section 13.

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## SECTION 7. Handling and storage

### 7.1 Precautions for safe handling

*Advice on safe handling*

Observe label precautions.

*Hygiene measures*

Change contaminated clothing. Wash hands after working with substance.

### 7.2 Conditions for safe storage, including any incompatibilities

*Storage conditions*

Tightly closed.

Recommended storage temperature see product label.

The data applies to the entire pack.

### 7.3 Specific end use(s)

Apart from the uses mentioned in section 1.2 no other specific uses are stipulated.

---

## SECTION 8. Exposure controls/personal protection

### 8.1 Control parameters

### 8.2 Exposure controls

#### Engineering measures

Technical measures and appropriate working operations should be given priority over the use of personal protective equipment.

See section 7.1.

#### Individual protection measures

Protective clothing needs to be selected specifically for the workplace, depending on concentrations and quantities of the hazardous substances handled. The chemical resistance of the protective equipment should be enquired at the respective supplier.

*Eye/face protection*

Safety glasses

*Hand protection*

not required

*Respiratory protection*

required when dusts are generated.

Recommended Filter type: Filter P 1 (acc. to DIN 3181) for solid particles of inert substances

The entrepreneur has to ensure that maintenance, cleaning and testing of respiratory protective devices are carried out according to the instructions of the producer.

These measures have to be properly documented.

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## Environmental exposure controls

Do not let product enter drains.

---

## SECTION 9. Physical and chemical properties

### 9.1 Information on basic physical and chemical properties

|  |                               |
|--|-------------------------------|
| Form                                   | solid                         |
| Colour                                 | No information available.     |
| Odour                                  | No strong odour known.        |
| Odour Threshold                        | No information available.     |
| pH                                     | No information available.     |
| Melting point                          | No information available.     |
| Boiling point                          | No information available.     |
| Flash point                            | Not applicable                |
| Evaporation rate                       | No information available.     |
| Flammability (solid, gas)              | The product is not flammable. |
| Lower explosion limit                  | Not applicable                |
| Upper explosion limit                  | Not applicable                |
| Vapour pressure                        | No information available.     |
| Relative vapour density                | No information available.     |
| Density                                | No information available.     |
| Relative density                       | No information available.     |
| Water solubility                       | No information available.     |
| Partition coefficient: n-octanol/water | No information available.     |
| Auto-ignition temperature              | No information available.     |
| Decomposition temperature              | No information available.     |
| Viscosity, dynamic                     | No information available.     |

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Explosive properties Not classified as explosive.

Oxidizing properties none

## 9.2 Other data

none

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## SECTION 10. Stability and reactivity

### 10.1 Reactivity

See section 10.3

### 10.2 Chemical stability

The product is chemically stable under standard ambient conditions (room temperature) .

### 10.3 Possibility of hazardous reactions

Risk of explosion/exothermic reaction with:

Alkali metals

Exothermic reaction with:

Lithium

### 10.4 Conditions to avoid

no information available

### 10.5 Incompatible materials

no information available

### 10.6 Hazardous decomposition products

in the event of fire: See section 5.

---

## SECTION 11. Toxicological information

### 11.1 Information on toxicological effects

#### Mixture

*Acute oral toxicity*

Acute toxicity estimate: > 2.000 mg/kg

Calculation method

Symptoms: Nausea, Vomiting

*Acute inhalation toxicity*

This information is not available.

*Acute dermal toxicity*

This information is not available.

*Skin irritation*

This information is not available.

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### *Eye irritation*

This information is not available.

### *Sensitisation*

This information is not available.

### *Germ cell mutagenicity*

This information is not available.

### *Carcinogenicity*

This information is not available.

### *Reproductive toxicity*

This information is not available.

### *Teratogenicity*

This information is not available.

### *Specific target organ toxicity - single exposure*

This information is not available.

### *Specific target organ toxicity - repeated exposure*

This information is not available.

### *Aspiration hazard*

This information is not available.

## **11.2 Further information**

Hazardous properties cannot be excluded but are unlikely when the product is handled appropriately.

Handle in accordance with good industrial hygiene and safety practice.

## **Components**

### *troclosene sodium, dihydrate*

#### *Acute oral toxicity*

LD50 Rat: 550 - 1.600 mg/kg (External MSDS)

#### *Acute dermal toxicity*

LD50 Rabbit: > 5.000 mg/kg (External MSDS)

LD50 Rat: > 5.000 mg/kg

US-EPA

#### *Sensitisation*

Sensitisation test (Magnusson and Kligman): Guinea pig

Result: negative

Method: OECD Test Guideline 406

#### *Germ cell mutagenicity*

#### *Genotoxicity in vivo*

Chromosome aberration test

Rat

male

Oral

Result: negative

Method: OECD Test Guideline 475

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---

*Genotoxicity in vitro*  
Ames test  
Escherichia coli  
Result: negative  
Method: OECD Test Guideline 471

---

## SECTION 12. Ecological information

### Mixture

#### 12.1 Toxicity

No information available.

#### 12.2 Persistence and degradability

No information available.

#### 12.3 Bioaccumulative potential

No information available.

#### 12.4 Mobility in soil

No information available.

#### 12.5 Results of PBT and vPvB assessment

PBT/vPvB assessment not available as chemical safety assessment not required/not conducted.

#### 12.6 Other adverse effects

Discharge into the environment must be avoided.

### Components

#### *troclosene sodium, dihydrate*

##### *Toxicity to fish*

LC50 Oncorhynchus mykiss (rainbow trout): 0,25 mg/l; 96 h (ECOTOX Database)

##### *Toxicity to daphnia and other aquatic invertebrates*

EC50 Daphnia magna (Water flea): 0,28 mg/l; 48 h (ECOTOX Database)

##### *Toxicity to bacteria*

NOEC activated sludge: 2.700 mg/l; 3 h  
OECD Test Guideline 209

##### *Toxicity to fish (Chronic toxicity)*

semi-static test NOEC Oncorhynchus mykiss (rainbow trout): 756 mg/l; 28 d

Analytical monitoring: yes

OECD Test Guideline 215 The value is given in analogy to the following substances:

##### *Partition coefficient: n-octanol/water*

log Pow: -0,056

EPI Suite™

EPI Suite™ (anhydrous) Bioaccumulation is not expected.

##### *Stability in water*

> 30 d

at 25 °C

at pH: 7

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## SECTION 13. Disposal considerations

### *Waste treatment methods*

See [www.retrologistik.com](http://www.retrologistik.com) for processes regarding the return of chemicals and containers, or contact us there if you have further questions.

---

## SECTION 14. Transport information

### Land transport (ADR/RID)

**14.1 UN number** UN 3316  
**14.2 Proper shipping name** CHEMICAL KIT  
**14.3 Class** 9  
**14.4 Packing group** II  
**14.5 Environmentally hazardous** --  
**14.6 Special precautions for user** yes  
Tunnel restriction code E

### Inland waterway transport (ADN)

Not relevant

### Air transport (IATA)

**14.1 UN number** UN 3316  
**14.2 Proper shipping name** CHEMICAL KIT  
**14.3 Class** 9  
**14.4 Packing group** II  
**14.5 Environmentally hazardous** --  
**14.6 Special precautions for user** no

### Sea transport (IMDG)

**14.1 UN number** UN 3316  
**14.2 Proper shipping name** CHEMICAL KIT  
**14.3 Class** 9  
**14.4 Packing group** II  
**14.5 Environmentally hazardous** --  
**14.6 Special precautions for user** yes



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EmS F-A S-P

## 14.7 Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Not relevant

THIS TRANSPORT DATA APPLIES TO THE ENTIRE PACK!

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## SECTION 15. Regulatory information

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

#### *EU regulations*

Major Accident Hazard 96/82/EC  
Legislation Directive 96/82/EC does not apply

SEVESO III  
Not applicable

Occupational restrictions Take note of Dir 94/33/EC on the protection of young people at work.

Regulation (EC) No 1005/2009 on substances not regulated  
that deplete the ozone layer

Regulation (EC) No 850/2004 of the not regulated  
European Parliament and of the Council of 29  
April 2004 on persistent organic pollutants  
and amending Directive 79/117/EEC

Substances of very high concern (SVHC) This product does not contain  
substances of very high concern  
according to Regulation (EC) No  
1907/2006 (REACH), Article 57  
above the respective regulatory  
concentration limit of  $\geq 0.1\%$   
(w/w).

#### *National legislation*

Storage class 8B  
The data applies to the entire pack.

### 15.2 Chemical safety assessment

For this product a chemical safety assessment was not carried out.

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## SECTION 16. Other information

### Full text of H-Statements referred to under sections 2 and 3.

|      |   |
|------|---|
| H302 | Harmful if swallowed.                                 |
| 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.    |

### Training advice

Provide adequate information, instruction and training for operators.

### Labelling

#### *Hazard statements*

H412 Harmful to aquatic life with long lasting effects.

#### *Precautionary statements*

##### Prevention

P273 Avoid release to the environment.

### Key or legend to abbreviations and acronyms used in the safety data sheet

Used abbreviations and acronyms can be looked up at [www.wikipedia.org](http://www.wikipedia.org).

### Regional representation

This information is given on the authorised Safety Data Sheet for your country.

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*The information contained herein is based on the present state of our knowledge. It characterises the product with regard to the appropriate safety precautions. It does not represent a guarantee of any properties of the product.*

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