

# Material Safety Data Sheet

According to 91/155EC



# GENAXXON

b i o s c i e n c e

Product number : M6364

Product name :

Cetylpyrimidinium chloride monohydrate

## 1. Identification of the substance/preparation and of the company

**Product Number:** M6364

**Product Name:** Cetylpyridinium chloride monohydrate

**Manufacturer /Supplier:**

Genaxxon bioscience GmbH, Söflinger Str. 100, 89077 Ulm/Germany.

Tel.: +49 (0)731 3608 123

**Further information available from:**

Genaxxon bioscience GmbH, Söflinger Str. 100, 89077 Ulm/Germany.

Tel.: +49 (0)731 3608 123

**Information in case of emergency:**

Poison Information Centre Mainz, Germany

Tel.: +49 (0)6131 19240 / 24 h

**MSDS-No:** cetylchl-1

**NOTE:** If this product is a kit or supplied with more than one material, please refer to the MSDS for each component for hazard information.

**Product Use:**

This products are for laboratory research use only and are not intended for human or animal diagnostics, therapeutics or other clinical uses.

## 2. Composition/information on ingredients

**Chemical characterisation**

**Description:** Mixture of substances listed below with non-hazardous additions

Product Name	CAS #	EC no	Annex I / Index Number
Cetylpyridinium chloride	6004-24-6	204-593-9	None

**Formula** C<sub>21</sub>H<sub>38</sub>ClN·H<sub>2</sub>O  
**Molecular Weight** 358.01 AMU  
**Synonyms** N-Hexadecylpyridinium chloride

## 3. Hazardous identification

**Hazard description:**

**R 25:** Toxic if swallowed

**R 26:** Very toxic by inhalation

**R 36/37/38:** Irritating to eyes, respiratory system and skin.

**R 51/53:** Toxic to aquatic organism, may cause long term adverse effects in aquatic environment.

**Classification system:** The classification is according the latest editions of the EU-lists, and extended by company and literature data.

## 4. First-aid measures

**After inhalation:**

If inhaled, remove to fresh air. If not breathing give artificial respiration. If breathing is difficult, give oxygen

**After skin contact:**

Immediately wash with water and soap and rinse thoroughly. Remove contaminated clothing and shoes. Call a physician.

**After eye contact:** Rinse opened eye for several minutes (> 10 minutes) under running water. Then consult doctor.

**After swallowing:** If swallowed, wash out mouth with water provided person is conscious. Call for doctor immediately.

## 5. Fire-fighting measures

**Suitable extinguishing agents:**

Water Spray. Carbon Dioxide. Dry chemical powder, or appropriate foam.

Responsible : CEO

Replaces version dated : 18.09.2009

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**Special risks:** Flammable, Specific Hazard(s): Emits toxic fumes under fire conditions.

**Protective equipment (For firefighters):** Wear self-contained breathing apparatus and protective clothing to prevent contact with skin and eyes.

## 6. Accidental release measures

**Personal precaution procedures to be followed in case of leak or spill:**

Evacuate area.

**Person related safety precautions:**

Wear respirator, chemical safety goggles, rubber boots, and heavy rubber gloves.

**Measures for environmental protection:**

Do not allow product to reach sewage system or any water course.

**Measures for cleaning/collecting:**

Sweep up, place in bag and hold for waste disposal. Avoid raising dust. Ventilate area and wash spill site after material pickup is complete.

## 7. Handling and storage

### Handling

**Information for safe handling:** Do not breathe dust. Avoid contact with eyes, skin, and clothing. Avoid prolonged or repeated exposure. Handle container with care. Provide appropriate exhaust ventilation at places where dust is formed.

**Information about fire – and explosion protection:** Normal measures for preventive fire protection. No special measures required.

### Storage:

**Requirements to be met by storerooms and receptacles:** No special measures required.

**Information about storage in one common storage facility:** No special measures required.

**Further information about storage conditions:** Keep tightly closed. Store at a cool place.

## 8. Exposure controls/personal protection

**Additional information about design of technical facilities:** No further data; see item 7.

**Engineering controls:** Safety shower and eye bath. Mechanical exhaust required.

**Personal protective equipment**

**General protective and hygienic measures:**

The usual precautionary measures are to be adhered to when handling chemicals.

Keep away from food, drink and animal food.

Remove spoiled clothing immediately. Wash contaminated clothing before reuse.

Wash thoroughly after handling.

Avoid contact with eyes and skin.

**Respiratory protection:** Use respirator

**Protection of hands:** Protective compatible chemical-resistant gloves.

**Materials of gloves:** The selection of suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer.

**Penetration times of gloves:** The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

**Eye protection:** Tightly sealed goggles.

## 9. Physical and chemical properties

### General Information

**Form:** crystalline powder  
**Colour:** white to faintly beige  
**Odour:** characteristic

### Change in conditions

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**Melting point/Melting range:** 83° to 86°C  
**Boiling point/Boiling range:** Undetermined

**Flash point:** Not applicable

**Self-ignition:** Product is not self-igniting

**Danger of explosion:** Product does not present an explosion hazard

**Density at 20°C:** Not applicable

**pH value at 20°C:** 5.0 – 5.4

**Solubility (water, 20°C):** 50g/L  
**Solubility (ethanol, 20°C):** 300g/L

## 10. Stability and reactivity

### Thermal composition / conditions to be avoided:

Thermal decomposition at 234°C.

### Stability

**Stability:** Stable under recommended conditions.

**Materials to avoid:** acids, acid anhydrides, acid chlorides, Strong oxidizing agents.

**Conditions to avoid:** strong heating

**Dangerous decomposition products:** Carbon monoxide, Carbon dioxide, Nitrogen oxides (NOx), Hydrogen chloride gas.

**Hazardous Polymerisation:** Will not occur.

## 11. Toxicological information

### Acute toxicity

**LD50 (oral, rat):** 200mg/kg (water free substance)

**LD50 (inhaled, rat):** 0.09mg/L / 4h (water free substance)

### Irritation and corrosion

**Skin (rabbit):** severe skin irritation

**Eyes (rabbit):** severe eye irritation

### Sensitisation

**Sensitisation test (guinea pig):** negative

### Chronic exposure

No risk on impaired fertility in animal tests.

No risk to the developing embryo in animal tests.

No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

### Signs and symptoms of exposure:

Cough, Shortness of breath, Headache, Nausea, Vomiting.

### Route of exposure:

Skin Contact: May cause severe skin irritation.

Skin Absorption: May be harmful if absorbed through the skin.

Eye Contact: May cause severe eye irritation.

Inhalation: Material may be irritating to mucous membranes and upper respiratory tract. May be fatal if inhaled.

Ingestion: Toxic if swallowed.

Target organ: Nerves

**To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.**

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## 12. Ecological Information

### Biodegradability

Biodegradable (25% / 28d (in closed bottle))

### Ecotoxicological Effects

Biological effects: Very toxic for water organisms  
Toxicity on fish: Cyprinus carpio LC50: 0.01mg/L / 96h (water free substance)  
Toxicity on bacteria: Bacteria EC5: 0.05mg/L (water free substance)  
Photobacterium phosphoreum EC50: 0.22mg/mL (water free substance)

Very toxic to aquatic organisms, may cause long-term negative effects in the aquatic environment

Water hazard class 3 (German Regulation) (Self assessment): strongly hazardous to water.

Do not allow product to reach ground water, water course or sewage system even not in small quantities or diluted.

## 13. Disposal considerations

### Product:

**Recommendation:** Must not be disposed together with household garbage. Do not allow product to reach sewage system. Contact a licensed professional waste disposal service to dispose of this material. Dissolve or mix the material with a combustible solvent and burn in a chemical incinerator equipped with an afterburner and scrubber. Observe all federal, state, and local environmental regulations.

**Uncleaned packaging:** Dispose as unused product

**Recommendation:** Disposal must be made according to official regulations.

**Recommended cleaning agents:**

## 14. Transport information

### Land transport ADR/RID (cross border)

**ADR/RID class:** 6.1 Toxic substance  
**UN-number:** 2811  
**class:** 6.1  
**Packing Group:** I  
**Proper shipping name:** Toxic solid, organic, n.o.s. (Cetylpyridinium chloride)

### Maritime transport IMDG:

**IMDG Class:** 6.1 Toxic substance  
**UN-number:** 2811  
**class:** 6.1  
**Packing Group:** I  
**Proper shipping name:** Toxic solid, organic, n.o.s. (Cetylpyridinium chloride)  
**Marine pollutant:** No  
**Severe Marine pollutant:** No

### Air transport ICAO-TI and IATA-DGR:

**ICAO/IATA Class:** 6.1 Toxic substance  
**UN-number:** 2811  
**class:** 6.1  
**Packing Group:** I  
**Proper shipping name:** Toxic solid, organic, n.o.s. (Cetylpyridinium chloride)  
**IATA passenger:** Not permitted for transport

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## 15. Regulatory information

### Labelling according to EU guidelines:

Indication of danger: T+ / N

Very Toxic / Dangerous to the environment

R-Phrases:

25-26-36/37/38-50/53

Toxic if swallowed. Very toxic by inhalation. Irritating to eyes, respiratory system and skin. Toxic to aquatic organism, may cause long term adverse effects in aquatic environment.

S-Phrases:

26-28-36/37-45-61

In case of contact with eyes, rinse immediately with plenty of water and seek medical advice. After contact with skin, wash immediately of soap and water. Wear suitable protective clothing and gloves. In case of accident of if you feel unwell, seek medical advice immediately (show label where possible).

**National Regulations:** Germany

**Waterhazard class:** Water hazard class 3 ( Self-assessment): strongly hazardous to water.

## 16. Other information

The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. The information in this document is based on the present state of our knowledge and is applicable to the product with regard to appropriate safety precautions. It does not represent any guarantee of the properties of the product. Genaxxon BioScience GmbH, shall not be held liable for any damage resulting from handling or from contact with the above product. See reverse side of invoice or packing slip for additional terms and conditions of sale.