1. PRODUCT AND COMPANY IDENTIFICATION

Product name : Hexadecylpyridinium chloride monohydrate
Product Number : 52350
Brand : Fluka
Company : Sigma-Aldrich
3050 Spruce Street
SAINT LOUIS MO 63103
USA
Telephone : +1 800-325-5832
Fax : +1 800-325-5052
Emergency Phone # : (314) 776-6555

2. COMPOSITION/INFORMATION ON INGREDIENTS

Synonyms : Cetylpyridinium chloridemonohydrate
Cetylpyridinii chloridum
Formula : C₂₁H₃₈ClN · H₂O
Molecular Weight : 358.00 g/mol

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<th>CAS-No.</th>
<th>EC-No.</th>
<th>Index-No.</th>
<th>Concentration</th>
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<tr>
<td>6004-24-6</td>
<td>204-593-9</td>
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3. HAZARDS IDENTIFICATION

Emergency Overview

OSHA Hazards
- Target Organ Effect, Highly toxic by inhalation, Toxic by ingestion, Corrosive

Target Organs
- Nerves.

HMIS Classification
- Health Hazard: 4
- Chronic Health Hazard: *
- Flammability: 0
- Physical hazards: 0

NFPA Rating
- Health Hazard: 4
- Fire: 0
- Reactivity Hazard: 0
Potential Health Effects

Inhalation May be fatal if inhaled. Material is extremely destructive to the tissue of the mucous membranes and upper respiratory tract.

Skin May be harmful if absorbed through skin. Causes skin burns. May be fatal if absorbed through skin.

Eyes Causes eye burns.

Ingestion Toxic if swallowed. Causes burns.

4. FIRST AID MEASURES

General advice
Consult a physician. Show this safety data sheet to the doctor in attendance. Move out of dangerous area.

If inhaled
If breathed in, move person into fresh air. If not breathing give artificial respiration. Consult a physician.

In case of skin contact
Wash off with soap and plenty of water. Consult a physician.

In case of eye contact
Continue rinsing eyes during transport to hospital. Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician.

If swallowed
Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

5. FIRE-FIGHTING MEASURES

Flammable properties
Flash point no data available
Ignition temperature no data available

Suitable extinguishing media
Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

Special protective equipment for fire-fighters
Wear self-contained breathing apparatus for fire fighting if necessary.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions
Wear respiratory protection. Avoid dust formation. Avoid breathing dust. Ensure adequate ventilation. Evacuate personnel to safe areas.

Environmental precautions
Prevent further leakage or spillage if safe to do so. Do not let product enter drains. Discharge into the environment must be avoided.

Methods for cleaning up
Pick up and arrange disposal without creating dust. Keep in suitable, closed containers for disposal.

7. HANDLING AND STORAGE

Handling
Avoid contact with skin and eyes. Avoid formation of dust and aerosols. Provide appropriate exhaust ventilation at places where dust is formed. Normal measures for preventive fire protection.

Storage
Keep container tightly closed in a dry and well-ventilated place.
8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Contains no substances with occupational exposure limit values.

**Personal protective equipment**

- **Respiratory protection**
  Where risk assessment shows air-purifying respirators are appropriate use a full-face particle respirator type N100 (US) or type P3 (EN 143) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator. Where risk assessment shows air-purifying respirators are appropriate use a dust mask type N95 (US) or type P1 (EN 143) respirator. Where risk assessment shows air-purifying respirators are appropriate use a full-face particle respirator type N99 (US) or type P2 (EN 143) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

- **Hand protection**
  Handle with gloves.

- **Eye protection**
  Safety glasses

- **Skin and body protection**
  Choose body protection according to the amount and concentration of the dangerous substance at the work place.

- **Hygiene measures**
  Avoid contact with skin, eyes and clothing. Wash hands before breaks and immediately after handling the product.

9. PHYSICAL AND CHEMICAL PROPERTIES

**Appearance**

- Form: flakes
- Colour: beige

**Safety data**

- pH: 5.0 - 5.4 at 20 °C (68 °F)
- Melting point: 83 - 86 °C (181 - 187 °F)
- Boiling point: no data available
- Flash point: no data available
- Ignition temperature: no data available
- Lower explosion limit: no data available
- Upper explosion limit: no data available
- Water solubility: soluble
- Partition coefficient: log Pow: 1.71
  
10. STABILITY AND REACTIVITY

**Storage stability**

Stable under recommended storage conditions.
Materials to avoid
acids, Acid anhydrides, Acid chlorides, Strong oxidizing agents

Hazardous decomposition products
Hazardous decomposition products formed under fire conditions. - Carbon oxides, nitrogen oxides (NOx), Hydrogen chloride gas

Thermal decomposition
234 °C (453 °F)

11. TOXICOLOGICAL INFORMATION

Acute toxicity
LD50 Oral - rat - 200 mg/kg

Irritation and corrosion
Skin - rabbit - Severe skin irritation
Eyes - rabbit - Severe eye irritation

Sensitisation
no data available

Chronic exposure

IARC: 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.
ACGIH: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by ACGIH.
NTP: No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.
OSHA: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.

Signs and Symptoms of Exposure
Cough, Shortness of breath, Headache, Nausea, Vomiting

Potential Health Effects

Inhalation May be fatal if inhaled. Material is extremely destructive to the tissue of the mucous membranes and upper respiratory tract.
Skin May be harmful if absorbed through skin. Causes skin burns. May be fatal if absorbed through skin.
Eyes Causes eye burns.
Ingestion Toxic if swallowed. Causes burns.
Target Organs Nerves.,

Additional Information
RTECS: UU5075000

12. ECOLOGICAL INFORMATION

Elimination information (persistence and degradability)

Biodegradability

Ecotoxicity effects
Toxicity to fish LC50 - Cyprinus carpio (Carp) - 0.01 mg/l - 96 h

Further information on ecology
An environmental hazard cannot be excluded in the event of unprofessional handling or disposal.
Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

13. DISPOSAL CONSIDERATIONS

Product
Observe all federal, state, and local environmental regulations. 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.

Contaminated packaging
Dispose of as unused product.

14. TRANSPORT INFORMATION

DOT (US)
UN-Number: 2811  Class: 6.1  Packing group: I  
Proper shipping name: Toxic solids, organic, n.o.s. (Cetylpyridinium chloride)
Marine pollutant: No
Poison Inhalation Hazard: No

IMDG
UN-Number: 2811  Class: 6.1  Packing group: I  EMS-No: F-A, S-A
Proper shipping name: TOXIC SOLID, ORGANIC, N.O.S. (Cetylpyridinium chloride)
Marine pollutant: No

IATA
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

15. REGULATORY INFORMATION

OSHA Hazards
Target Organ Effect, Highly toxic by inhalation, Toxic by ingestion, Corrosive

DSL Status
All components of this product are on the Canadian DSL list.

SARA 302 Components
SARA 302: No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.

SARA 313 Components
SARA 313: This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

SARA 311/312 Hazards
Acute Health Hazard, Chronic Health Hazard

Massachusetts Right To Know Components
No components are subject to the Massachusetts Right to Know Act.

Pennsylvania Right To Know Components

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New Jersey Right To Know Components

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Cetylpyridinium chloride

California Prop. 65 Components
This product does not contain any chemicals known to State of California to cause cancer, birth, or any other reproductive defects.

16. OTHER INFORMATION

Further information
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