

# Safety Data Sheet

acc. to OSHA HCS

Printing date 06/24/2024

Reviewed on 06/24/2024

## 1 Identification

- **Product identifier**
- **Trade name:** Cupric Chloride, Laboratory Grade Crystal
- **Article number:** 032-1562
- **CAS Number:**  
10125-13-0
- **EC number:**  
231-210-2
- **Details of the supplier of the safety data sheet**
- **Manufacturer/Supplier:**  
Aqua Solutions, Inc.  
6913 Highway 225  
DEER PARK, TX 77536  
USA  
800-256-2586
- **Information department:**  
Technical Coordinator  
Sherman Nelson [shermann@aquasolutions.org](mailto:shermann@aquasolutions.org)
- **Emergency telephone number:**  
Chemtec: 800-424-9300  
Canutec: 613-996-6666



## 2 Hazard(s) identification

- **Classification of the substance or mixture**



GHS05 Corrosion

Corrosive to Metals 1      H290 May be corrosive to metals.  
Eye Damage 1              H318 Causes serious eye damage.



GHS07

Acute Toxicity - Oral 4      H302 Harmful if swallowed.  
Acute Toxicity - Dermal 4      H312 Harmful in contact with skin.  
Skin Irritation 2              H315 Causes skin irritation.

- **Label elements**

- **GHS label elements** The substance is classified and labeled according to the Globally Harmonized System (GHS).
- **Hazard pictograms**



GHS05



GHS07

- **Signal word** *Danger*
- **Hazard statements**  
*May be corrosive to metals.*  
*Harmful if swallowed or in contact with skin.*  
*Causes skin irritation.*

(Contd. on page 2)

# Safety Data Sheet

acc. to OSHA HCS

Printing date 06/24/2024

Reviewed on 06/24/2024

**Trade name: Cupric Chloride, Laboratory Grade Crystal**

(Contd. of page 1)

*Causes serious eye damage.*

· **Precautionary statements**

*Avoid release to the environment.*

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

*If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.*

*Store in a dry place. Store in a closed container.*

*Store in a well-ventilated place.*

*Dispose of contents/container in accordance with local/regional/national/international regulations.*

· **Classification system:**

· **NFPA ratings (scale 0 - 4)**



Health = 3

Fire = 0

Reactivity = 0

· **HMIS-ratings (scale 0 - 4)**



Health = 3

Fire = 0

Reactivity = 0

· **Other hazards**

· **Results of PBT and vPvB assessment**

· **PBT:** Not applicable.

· **vPvB:** Not applicable.

### \* 3 Composition/information on ingredients

· **Chemical characterization: Substances**

· **CAS No. Description**

CAS: 10125-13-0 Copper (II) Chloride Dihydrate

(Cupric Chloride Dihydrate)

· **Identification number(s)**

· **EC number:** 231-210-2

### 4 First-aid measures

· **Description of first aid measures**

· **General information:**

*Symptoms of poisoning may even occur after several hours; therefore medical observation for at least 48 hours after the accident.*

· **After inhalation:** *In case of unconsciousness place patient stably in side position for transportation.*

· **After skin contact:** *Immediately wash with water and soap and rinse thoroughly.*

· **After eye contact:** *Rinse opened eye for several minutes under running water. Then consult a doctor.*

· **After swallowing:** *Immediately call a doctor.*

· **Information for doctor:**

· **Most important symptoms and effects, both acute and delayed** *No further relevant information available.*

· **Indication of any immediate medical attention and special treatment needed**

*No further relevant information available.*

US  
(Contd. on page 3)

# Safety Data Sheet

## acc. to OSHA HCS

Printing date 06/24/2024

Reviewed on 06/24/2024

**Trade name: Cupric Chloride, Laboratory Grade Crystal**

(Contd. of page 2)

### 5 Fire-fighting measures

- **Extinguishing media**
- **Suitable extinguishing agents:** Use fire fighting measures that suit the environment.
- **Special hazards arising from the substance or mixture** No further relevant information available.
- **Advice for firefighters**
- **Protective equipment:** No special measures required.

### 6 Accidental release measures

- **Personal precautions, protective equipment and emergency procedures**  
Wear protective equipment. Keep unprotected persons away.
- **Environmental precautions:** Do not allow to enter sewers/ surface or ground water.
- **Methods and material for containment and cleaning up:**  
Use neutralizing agent.  
Dispose contaminated material as waste according to section 13.
- **Reference to other sections**  
See Section 7 for information on safe handling.  
See Section 8 for information on personal protection equipment.  
See Section 13 for disposal information.
- **Protective Action Criteria for Chemicals**
- **PAC-1:** 8 mg/m<sup>3</sup>
- **PAC-2:** 89 mg/m<sup>3</sup>
- **PAC-3:** 530 mg/m<sup>3</sup>

### 7 Handling and storage

- **Handling:**
- **Precautions for safe handling** Thorough dusting.
- **Information about protection against explosions and fires:** No special measures required.
- **Conditions for safe storage, including any incompatibilities**
- **Storage:**
- **Requirements to be met by storerooms and receptacles:** No special requirements.
- **Information about storage in one common storage facility:** Not required.
- **Further information about storage conditions:** Keep receptacle tightly sealed.
- **Specific end use(s)** No further relevant information available.

### 8 Exposure controls/personal protection

- **Additional information about design of technical systems:** No further data; see section 7.
- **Control parameters**

· **Components with limit values that require monitoring at the workplace:**

**CAS: 10125-13-0 Copper (II) Chloride Dihydrate**  
**(Cupric Chloride Dihydrate)**

TWA Short-term value: 1 mg/m<sup>3</sup>

- **Additional information:** The lists that were valid during the creation were used as basis.

(Contd. on page 4)

# Safety Data Sheet

acc. to OSHA HCS

Printing date 06/24/2024

Reviewed on 06/24/2024

**Trade name: Cupric Chloride, Laboratory Grade Crystal**

(Contd. of page 3)

- **Exposure controls**
- **Personal protective equipment:**
- **General protective and hygienic measures:**  
 Keep away from foodstuffs, beverages and feed.  
 Immediately remove all soiled and contaminated clothing.  
 Wash hands before breaks and at the end of work.  
 Avoid contact with the skin.  
 Avoid contact with the eyes and skin.
- **Breathing equipment:** Not required.
- **Protection of hands:**



Protective gloves

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.  
 Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.

Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

- **Material of gloves**  
 The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer.
- **Penetration time of glove material**  
 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

- **Body protection:** Protective work clothing

## 9 Physical and chemical properties

- **Information on basic physical and chemical properties**

- **General Information**

- **Appearance:**

<b>Form:</b>	Crystalline
<b>Color:</b>	Blue-Green
<b>Odor:</b>	Odorless
<b>Odor threshold:</b>	Not determined.

- **pH-value:** 3-3.8

- **Change in condition**

<b>Melting point/Melting range:</b>	100 °C (212 °F)
<b>Boiling point/Boiling range:</b>	Undetermined.

- **Flash point:** Not applicable.

- **Flammability (solid, gaseous):** Product is not flammable.

- **Decomposition temperature:** Not determined.

(Contd. on page 5)

# Safety Data Sheet

acc. to OSHA HCS

Printing date 06/24/2024

Reviewed on 06/24/2024

**Trade name: Cupric Chloride, Laboratory Grade Crystal**

(Contd. of page 4)

· <b>Ignition temperature:</b>	Not determined.
· <b>Danger of explosion:</b>	Product does not present an explosion hazard.
· <b>Explosion limits:</b>	
<b>Lower:</b>	Not determined.
<b>Upper:</b>	Not determined.
· <b>Vapor pressure:</b>	Not applicable.
· <b>Density at 20 °C (68 °F):</b>	2.51 g/cm <sup>3</sup> (20.94595 lbs/gal)
· <b>Relative density</b>	Not determined.
· <b>Vapor density</b>	Not applicable.
· <b>Evaporation rate</b>	Not applicable.
· <b>Solubility in / Miscibility with Water at 20 °C (68 °F):</b>	165 g/l
· <b>Partition coefficient (n-octanol/water):</b>	Not determined.
· <b>Viscosity:</b>	
<b>Dynamic:</b>	Not applicable.
<b>Kinematic:</b>	Not applicable.
· <b>Other information</b>	No further relevant information available.

## 10 Stability and reactivity

- **Reactivity** No further relevant information available.
- **Chemical stability**
- **Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.
- **Possibility of hazardous reactions** No dangerous reactions known.
- **Conditions to avoid** No further relevant information available.
- **Incompatible materials:** No further relevant information available.
- **Hazardous decomposition products:** No dangerous decomposition products known.

## 11 Toxicological information

- **Information on toxicological effects**
- **Acute toxicity:**

· **LD/LC50 values that are relevant for classification:**

Oral	LD50	500 mg/kg (ATE)
Dermal	LD50	1,100 mg/kg (ATE)

- **Primary irritant effect:**
- **on the skin:** Irritant to skin and mucous membranes.
- **on the eye:** Strong irritant with the danger of severe eye injury.
- **Sensitization:** No sensitizing effects known.
- **Additional toxicological information:**
- **Carcinogenic categories**
- **IARC (International Agency for Research on Cancer)** Substance is not listed.
- **NTP (National Toxicology Program)** Substance is not listed.

(Contd. on page 6)

US

# Safety Data Sheet

acc. to OSHA HCS

Printing date 06/24/2024

Reviewed on 06/24/2024

**Trade name: Cupric Chloride, Laboratory Grade Crystal**

(Contd. of page 5)

· **OSHA-Ca (Occupational Safety & Health Administration)** Substance is not listed.


## 12 Ecological information

- **Toxicity**
- **Aquatic toxicity:** No further relevant information available.
- **Persistence and degradability** No further relevant information available.
- **Behavior in environmental systems:**
- **Bioaccumulative potential** No further relevant information available.
- **Mobility in soil** No further relevant information available.
- **Additional ecological information:**
- **General notes:**  
*Water hazard class 3 (Self-assessment): extremely hazardous for water  
 Do not allow product to reach ground water, water course or sewage system, even in small quantities.  
 Must not reach bodies of water or drainage ditch undiluted or unneutralized.  
 Danger to drinking water if even extremely small quantities leak into the ground.*
- **Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.
- **Other adverse effects** No further relevant information available.

## 13 Disposal considerations

- **Waste treatment methods**
- **Recommendation:**  
*Must not be disposed of together with household garbage. Do not allow product to reach sewage system.*
- **Uncleaned packagings:**
- **Recommendation:** Disposal must be made according to official regulations.

## 14 Transport information

- **UN-Number**
- **DOT, IMDG, IATA** UN2802
- **UN proper shipping name**
- **DOT** Copper chloride
- **IMDG** COPPER CHLORIDE, MARINE POLLUTANT
- **IATA** COPPER CHLORIDE
- **Transport hazard class(es)**
- **DOT**
- 
- **Class** 8 Corrosive substances

(Contd. on page 7)

# Safety Data Sheet



acc. to OSHA HCS

Printing date 06/24/2024

Reviewed on 06/24/2024

Trade name: Cupric Chloride, Laboratory Grade Crystal

(Contd. of page 6)

· <b>Label</b>	8
· <b>IMDG</b>	
	
· <b>Class</b>	8 Corrosive substances
· <b>Label</b>	8
· <b>IATA</b>	
	
· <b>Class</b>	8 Corrosive substances
· <b>Label</b>	8
· <b>Packing group</b>	III
· <b>DOT, IMDG, IATA</b>	III
· <b>Environmental hazards:</b>	Environmentally hazardous substance, solid; Marine Pollutant
· <b>Marine pollutant:</b>	No Symbol (fish and tree)
· <b>Special precautions for user</b>	Warning: Corrosive substances
· <b>Poison inhalation hazard:</b>	No
· <b>Hazard identification number (Kemler code):</b>	80
· <b>Segregation groups</b>	(SGG1) Acids
· <b>Stowage Category</b>	A
· <b>Segregation Code</b>	SG36 Stow "separated from" SGG18-alkalis. SG49 Stow "separated from" SGG6-cyanides
· <b>Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code</b>	Not applicable.
· <b>Transport/Additional information:</b>	
· <b>DOT</b>	
· <b>Quantity limitations</b>	On passenger aircraft/rail: 25 kg On cargo aircraft only: 100 kg
· <b>IMDG</b>	
· <b>Limited quantities (LQ)</b>	500 g
· <b>Excepted quantities (EQ)</b>	Code: E1 Maximum net quantity per inner packaging: 30 g Maximum net quantity per outer packaging: 1000 g
· <b>UN "Model Regulation":</b>	UN 2802 COPPER CHLORIDE, 8, III

## 15 Regulatory information

- **Safety, health and environmental regulations/legislation specific for the substance or mixture**  
No further relevant information available.
- **Sara**
- **Section 355 (extremely hazardous substances):** Substance is not listed.

(Contd. on page 8)

US

# Safety Data Sheet

acc. to OSHA HCS

Printing date 06/24/2024

Reviewed on 06/24/2024

**Trade name: Cupric Chloride, Laboratory Grade Crystal**

(Contd. of page 7)

- **Section 313 (Specific toxic chemical listings):** Substance is not listed.
- **TSCA (Toxic Substances Control Act):**
- **Hazardous Air Pollutants** Substance is not listed.
- **Proposition 65**
- **Chemicals known to cause cancer:** Substance is not listed.
- **Chemicals known to cause reproductive toxicity for females:** Substance is not listed.
- **Chemicals known to cause reproductive toxicity for males:** Substance is not listed.
- **Chemicals known to cause developmental toxicity:** Substance is not listed.
- **Carcinogenic categories**
- **EPA (Environmental Protection Agency)** Substance is not listed.
- **TLV (Threshold Limit Value)** Substance is not listed.
- **NIOSH-Ca (National Institute for Occupational Safety and Health)** Substance is not listed.
- **GHS label elements** The substance is classified and labeled according to the Globally Harmonized System (GHS).
- **Hazard pictograms**



GHS05 GHS07

- **Signal word** *Danger*
- **Hazard statements**
  - May be corrosive to metals.*
  - Harmful if swallowed or in contact with skin.*
  - Causes skin irritation.*
  - Causes serious eye damage.*
- **Precautionary statements**
  - Avoid release to the environment.*
  - Wear protective gloves/protective clothing/eye protection/face protection.*
  - If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.*
  - Store in a dry place. Store in a closed container.*
  - Store in a well-ventilated place.*
  - Dispose of contents/container in accordance with local/regional/national/international regulations.*
- **Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

## \* 16 Other information

*This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.*

- **Department issuing SDS:** Environment protection department.
- **Contact:**
- **Date of Preparation / Last Revision:**
- **Date of preparation / last revision**
  - Revision 0.1, 06/24/2024: Reviewed SDS for accuracy. MH/STN*
  - 06/24/2024 / 1.1*
- **Abbreviations and acronyms:**
  - IMDG: International Maritime Code for Dangerous Goods*
  - DOT: US Department of Transportation*
  - IATA: International Air Transport Association*
  - EINECS: European Inventory of Existing Commercial Chemical Substances*
  - CAS: Chemical Abstracts Service (division of the American Chemical Society)*
  - NFPA: National Fire Protection Association (USA)*
  - HMIS: Hazardous Materials Identification System (USA)*

(Contd. on page 9)

US



# Safety Data Sheet

acc. to OSHA HCS

Printing date 06/24/2024

Reviewed on 06/24/2024

**Trade name: Cupric Chloride, Laboratory Grade Crystal**

(Contd. of page 8)

*LC50: Lethal concentration, 50 percent**LD50: Lethal dose, 50 percent**PBT: Persistent, Bioaccumulative and Toxic**vPvB: very Persistent and very Bioaccumulative**NIOSH: National Institute for Occupational Safety**OSHA: Occupational Safety & Health**TLV: Threshold Limit Value**PEL: Permissible Exposure Limit**REL: Recommended Exposure Limit**Corrosive to Metals 1: Corrosive to metals – Category 1**Acute Toxicity - Oral 4: Acute toxicity – Category 4**Skin Irritation 2: Skin corrosion/irritation – Category 2**Eye Damage 1: Serious eye damage/eye irritation – Category 1***\* Data compared to the previous version altered.**

US