

# SAFETY DATA SHEET

**1. Identification**

**Product identifier:** Cupric Chloride, Dihydrate

**Other means of identification**

**Synonyms:** Copper (II) chloride, dihydrate  
**Product No.:** 4824, 1792

**Recommended use and restriction on use**

**Recommended use:** Not determined.  
**Restrictions on use:** Not determined.

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

	Avantor Performance Materials, LLC.
	3477 Corporate Parkway
	Center Valley, PA 18034
Telephone:	
	Customer Service: 855-282-6867
Fax:	610-573-2610
Contact Person:	Environmental Health & Safety
E-mail:	info@avantormaterials.com

**Emergency telephone number:**  
CHEMTREC: 1-800-424-9300 within US and Canada

**2. Hazard(s) identification**

**Hazard Classification**

**Health Hazards**

Acute toxicity (Oral)	Category 4
Skin Corrosion/Irritation	Category 2
Serious Eye Damage/Eye Irritation	Category 2A

**Unknown toxicity - Health**

Acute toxicity, dermal	100 %
Acute toxicity, inhalation, vapor	100 %
Acute toxicity, inhalation, dust or mist	100 %

**Environmental Hazards**

Acute hazards to the aquatic environment	Category 1
Chronic hazards to the aquatic environment	Category 1

**Unknown toxicity - Environment**

Acute hazards to the aquatic environment 0 %  
Chronic hazards to the aquatic environment 100 %

**Label Elements**

**Hazard Symbol:**



**Signal Word:** Warning

**Hazard Statement:** Harmful if swallowed.  
Causes skin irritation.  
Causes serious eye irritation.  
Very toxic to aquatic life with long lasting effects.

**Precautionary Statements**

**Prevention:** Wash hands thoroughly after handling. Do not eat, drink or smoke when using this product. Take off contaminated clothing. Avoid release to the environment.

**Response:** IF SWALLOWED: Call a POISON CENTER/doctor if you feel unwell. Rinse mouth. IF ON SKIN: Wash with plenty of water. If skin irritation occurs: Get medical advice/attention. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention. Collect spillage.

**Disposal:** Dispose of contents/container to an appropriate treatment and disposal facility in accordance with applicable laws and regulations, and product characteristics at time of disposal.

**Other hazards which do not result in GHS classification:** None.

**3. Composition/information on ingredients**

**Substances**

Chemical name	Common name and synonyms	CAS number	Content in percent (%)*
Cupric chloride, dihydrate		10125-13-0	98 - 100%

\* All concentrations are percent by weight unless ingredient is a gas. Gas concentrations are in percent by volume.

**4. First-aid measures**

**General information:** Get medical advice/attention if you feel unwell. If medical advice is needed, have product container or label at hand.

<b>Ingestion:</b>	Rinse mouth. Call a physician or poison control center immediately. Do not induce vomiting without advice from poison control center. Never give liquid to an unconscious person. If vomiting occurs, keep head low so that stomach content doesn't get into the lungs.
<b>Inhalation:</b>	Move to fresh air. Get medical attention if symptoms persist.
<b>Skin Contact:</b>	Immediately remove contaminated clothing and shoes and wash skin with soap and plenty of water. Get medical attention. Wash contaminated clothing before reuse. If skin irritation or an allergic skin reaction develops, get medical attention.
<b>Eye contact:</b>	Immediately flush with plenty of water for at least 15 minutes. If easy to do, remove contact lenses. Call a physician or poison control center immediately.

**Most important symptoms/effects, acute and delayed**

<b>Symptoms:</b>	Irritating to eyes, respiratory system and skin.
<b>Hazards:</b>	None known.

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

<b>Treatment:</b>	Treat symptomatically. Symptoms may be delayed.
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**5. Fire-fighting measures**

<b>General Fire Hazards:</b>	The product is non-combustible.
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**Suitable (and unsuitable) extinguishing media**

<b>Suitable extinguishing media:</b>	Use fire-extinguishing media appropriate for surrounding materials.
<b>Unsuitable extinguishing media:</b>	None known.

<b>Specific hazards arising from the chemical:</b>	During fire, gases hazardous to health may be formed.
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**Special protective equipment and precautions for firefighters**

<b>Special fire fighting procedures:</b>	In case of fire and/or explosion do not breathe fumes. Move containers from fire area if you can do so without risk. Use water spray to keep fire-exposed containers cool.
<b>Special protective equipment for fire-fighters:</b>	Firefighters must use standard protective equipment including flame retardant coat, helmet with face shield, gloves, rubber boots, and in enclosed spaces, SCBA.

**6. Accidental release measures**

<b>Personal precautions, protective equipment and emergency procedures:</b>	Ventilate closed spaces before entering them. See Section 8 of the SDS for Personal Protective Equipment. Keep unauthorized personnel away. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing.
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**Methods and material for containment and cleaning up:** Sweep up and place in a clearly labeled container for chemical waste. Flush area with plenty of water.

**Notification Procedures:** Inform authorities if large amounts are involved.

**Environmental Precautions:** Do not contaminate water sources or sewer. Prevent further leakage or spillage if safe to do so. Avoid release to the environment.

## 7. Handling and storage

**Precautions for safe handling:** Wash hands thoroughly after handling. Do not handle until all safety precautions have been read and understood. Obtain special instructions before use. Use personal protective equipment as required. Do not taste or swallow. Avoid contact with eyes. Avoid contact with skin.

**Conditions for safe storage, including any incompatibilities:** Keep container tightly closed. Store in a well-ventilated place. Store in a dry place.

## 8. Exposure controls/personal protection

### Control Parameters

#### Occupational Exposure Limits

None of the components have assigned exposure limits.

**Appropriate Engineering Controls** No data available.

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

**General information:** Good general ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level. An eye wash and safety shower must be available in the immediate work area.

**Eye/face protection:** Use approved safety goggles or face shield.

#### Skin Protection

**Hand Protection:** No data available.

**Other:** Wear suitable protective clothing and gloves.

**Respiratory Protection:** In case of inadequate ventilation use suitable respirator.

**Hygiene measures:** Do not eat, drink or smoke when using the product. Wash hands after handling. Do not get in eyes. Observe good industrial hygiene practices. Do not handle until all safety precautions have been read and understood. Obtain special instructions before use. Wash contaminated clothing before reuse. Avoid contact with skin. Wash hands before breaks and immediately after handling the product. Contaminated work clothing should not be allowed out of the workplace.

## 9. Physical and chemical properties

**Appearance**

<b>Physical state:</b>	Solid
<b>Form:</b>	Crystals or powder.
<b>Color:</b>	Blue-green
<b>Odor:</b>	Slight odor of hydrochloric acid
<b>Odor threshold:</b>	No data available.
<b>pH:</b>	3,0 - 3,8 (50 g/l, 20 °C)
<b>Melting point/freezing point:</b>	70 °C
<b>Initial boiling point and boiling range:</b>	993 °C (Decomposes)
<b>Flash Point:</b>	Not applicable
<b>Evaporation rate:</b>	No data available.
<b>Flammability (solid, gas):</b>	No data available.
<b>Upper/lower limit on flammability or explosive limits</b>	
<b>Flammability limit - upper (%):</b>	
<b>Flammability limit - lower (%):</b>	
<b>Explosive limit - upper (%):</b>	No data available.
<b>Explosive limit - lower (%):</b>	No data available.
<b>Vapor pressure:</b>	No data available.
<b>Vapor density:</b>	No data available.
<b>Density:</b>	2,54 g/ml (20 °C)
<b>Relative density:</b>	2,54 (20 °C)
<b>Solubility(ies)</b>	
<b>Solubility in water:</b>	760 g/l (25 °C) 427 g/l (20 °C)
<b>Solubility (other):</b>	Alcohol: 530 g/l (15 °C) methanol: 680 g/l (15 °C)
<b>Partition coefficient (n-octanol/water):</b>	No data available.
<b>Auto-ignition temperature:</b>	No data available.
<b>Decomposition temperature:</b>	No data available.
<b>Viscosity:</b>	No data available.
<b>Other information</b>	
<b>Molecular weight:</b>	170,48 g/mol 170,48 g/mol (Cl <sub>2</sub> Cu)

<b>10. Stability and reactivity</b>
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<b>Reactivity:</b>	No dangerous reaction known under conditions of normal use.
<b>Chemical Stability:</b>	Material is stable under normal conditions.
<b>Possibility of hazardous reactions:</b>	Hazardous polymerization does not occur.
<b>Conditions to avoid:</b>	Contact with incompatible materials.
<b>Incompatible Materials:</b>	Strong bases. Alkali metals. Potassium Sodium. Hydrazine. Sodium Hypobromite. Aluminum. Strong oxidizing agents. Acetylene.
<b>Hazardous Decomposition Products:</b>	Hydrogen chloride. oxides of copper Halogens.

## 11. Toxicological information

### Information on likely routes of exposure

<b>Inhalation:</b>	Harmful if inhaled.
<b>Skin Contact:</b>	Causes skin irritation.
<b>Eye contact:</b>	Causes serious eye irritation.
<b>Ingestion:</b>	Harmful if swallowed.

### Information on toxicological effects

#### Acute toxicity (list all possible routes of exposure)

##### Oral

<b>Product:</b>	LD 50 (Rat): 180 mg/kg LD 50 (Rat): 290 mg/kg
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##### Dermal

<b>Product:</b>	No data available.
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##### Inhalation

<b>Product:</b>	No data available.
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#### Repeated dose toxicity

<b>Product:</b>	No data available.
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#### Skin Corrosion/Irritation

<b>Product:</b>	Causes skin irritation.
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#### Serious Eye Damage/Eye Irritation

<b>Product:</b>	Causes serious eye irritation.
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#### Respiratory or Skin Sensitization

<b>Product:</b>	Not a skin sensitizer.
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#### Carcinogenicity

<b>Product:</b>	This substance has no evidence of carcinogenic properties.
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#### IARC Monographs on the Evaluation of Carcinogenic Risks to Humans:

No carcinogenic components identified

#### US. National Toxicology Program (NTP) Report on Carcinogens:

No carcinogenic components identified

#### ACGIH Carcinogen List:

No carcinogenic components identified

#### Germ Cell Mutagenicity

##### In vitro

<b>Product:</b>	No data available.
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##### In vivo

<b>Product:</b>	No data available.
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#### Reproductive toxicity

**Product:** No components toxic to reproduction

**Specific Target Organ Toxicity - Single Exposure**

**Product:** No data available.

**Specific Target Organ Toxicity - Repeated Exposure**

**Product:** No data available.

**Aspiration Hazard**

**Product:** No data available.

**Other effects:** No data available.

**12. Ecological information**

**Ecotoxicity:**

**Acute hazards to the aquatic environment:**

**Fish**

**Product:** No data available.

**Aquatic Invertebrates**

**Product:** No data available.

**Chronic hazards to the aquatic environment:**

**Fish**

**Product:** No data available.

**Aquatic Invertebrates**

**Product:** No data available.

**Toxicity to Aquatic Plants**

**Product:** No data available.

**Persistence and Degradability**

**Biodegradation**

**Product:** There are no data on the degradability of this product.

**BOD/COD Ratio**

**Product:** No data available.

**Bioaccumulative potential**

**Bioconcentration Factor (BCF)**

**Product:** No data available on bioaccumulation.

**Partition Coefficient n-octanol / water (log Kow)**

**Product:** No data available.

**Mobility in soil:** The product is water soluble and may spread in water systems.

**Other adverse effects:** Very toxic to aquatic life with long lasting effects.

### 13. Disposal considerations

<b>Disposal instructions:</b>	Discharge, treatment, or disposal may be subject to national, state, or local laws. Do not allow to enter drains, sewers or watercourses.
<b>Contaminated Packaging:</b>	Since emptied containers retain product residue, follow label warnings even after container is emptied.

### 14. Transport information

#### TDG

UN Number:	UN 2802
UN Proper Shipping Name:	COPPER CHLORIDE
Transport Hazard Class(es)	
Class:	8
Label(s):	8
Packing Group:	III
Marine Pollutant:	Yes
Special precautions for user:	Not determined.

#### IMDG

UN Number:	UN 2802
UN Proper Shipping Name:	COPPER CHLORIDE
Transport Hazard Class(es)	
Class:	8
Label(s):	8
EmS No.:	F-A, S-B
Packing Group:	III
Marine Pollutant:	Yes
Special precautions for user:	Not determined.

#### IATA

UN Number:	UN 2802
UN Proper Shipping Name:	Copper chloride
Transport Hazard Class(es):	
Class:	8
Label(s):	8
Packing Group:	III
Marine Pollutant:	Yes
Special precautions for user:	Not determined.
Cargo aircraft only:	Allowed.

Transport in bulk according to Annex II of MARPOL and the IBC Code: Not applicable

### 15. Regulatory information

#### Canada Federal Regulations

**List of Toxic Substances (CEPA, Schedule 1)**  
Not Regulated

**Export Control List (CEPA 1999, Schedule 3)**  
Not Regulated

#### National Pollutant Release Inventory (NPRI)

**Canada. National Pollutant Release Inventory (NPRI) (Schedule 1, Parts 1-4)**  
Not Regulated



**Greenhouse Gases**  
Not Regulated

**Controlled Drugs and Substances Act**  
Not Regulated

**Precursor Control Regulations**  
Not Regulated

**International regulations**

**Montreal protocol**  
Not applicable

**Stockholm convention**  
Not applicable

**Rotterdam convention**  
Not applicable

**Kyoto protocol**  
Not applicable

**Inventory Status:**

Australia AICS:	On or in compliance with the inventory
Canada DSL Inventory List:	On or in compliance with the inventory
Canada NDSL Inventory:	Not in compliance with the inventory.
Japan (ENCS) List:	On or in compliance with the inventory
Korea Existing Chemicals Inv. (KECI):	On or in compliance with the inventory
Philippines PICCS:	On or in compliance with the inventory
US TSCA Inventory:	On or in compliance with the inventory
EINECS, ELINCS or NLP:	On or in compliance with the inventory
China Inv. Existing Chemical Substances:	On or in compliance with the inventory
New Zealand Inventory of Chemicals:	On or in compliance with the inventory
Japan ISHL Listing:	On or in compliance with the inventory
Japan Pharmacopoeia Listing:	Not in compliance with the inventory.

**16. Other information, including date of preparation or last revision**

**Revision Date:** 21.05.2018  
**Version #:** 2.1  
**Further Information:** No data available.

**Disclaimer:**

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