

# Safety Data Sheet

## ShoreMet Cupric Chloride

### Section 1- Product and Company Identification

**Supplier**

ShoreMet LLC  
3601 Enterprise Ave  
Valparaiso, IN 46383

**Manufacturer**

ShoreMet LLC  
3601 Enterprise Ave  
Valparaiso, IN 46383

**Company Contact:** Danny Mislenkov**Telephone Number:** (219) 390-3336 x100**Emergency Contact & Phone Number:****Product Name:** ShoreMet Cupric Chloride**Synonyms:** Copper (II) Chloride**Chemical Formula:** CuCl<sub>2</sub>**Recommended Use/Restrictions on Use:** industrial chemicals**General Comments:** Emergency telephone numbers are to be used only in the event of chemical emergencies involving a spill, leak, fire, explosion, or accident involving chemicals. All non-emergency questions should be directed to customer service.**Company Contact:** Danny Mislenkov**Telephone Number:** (219) 390-3336 x100**Travis J. Lechien (219) 384-7313**

### Section 2- Hazards Identification

**Classification of the chemical in accordance with paragraph (d) of §1910.1200;****DANGER**

#### EMERGENCY OVERVIEW

Harmful if swallowed, inhaled, or in prolonged contact with skin. Causes severe skin burns and eye damage. Causes excessive salivation, nausea, vomiting, and corrosive burning of the gastrointestinal tract, including perforation. Corrosive, overexposure causes burning, irritation and destruction of the mucous membranes and upper respiratory tract.

**Hazard Statements**

HARMFUL OR FATAL IF SWALLOWED. Very toxic to aquatic life. Harmful to aquatic life with long lasting effects. Causes serious eye damage. Avoid release to the environment. Wear 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. Immediately call a POISON CENTER or doctor/physician. Collect spillage. Dispose of contents/container to an approved waste disposal plant.

**GHS Classification**

Serious eye damage-category 1, acute aquatic toxicity-category 1, chronic aquatic toxicity-category 3.

**Primary Route(s) of Entry**

Ingestion, inhalation, and skin contact

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### Section 2- Hazards Identification (Continued)

#### **Potential Health Effects: Eyes**

Exposure to this product may cause redness and pain, blurred vision, and severe tissue damage leading to temporary or permanent injury, including corneal or conjunctival ulceration. Prolonged contact may cause conjunctivitis, and corneal abnormalities.

#### **Potential Health Effects: Skin**

This product can cause irritation of the skin with pain, itching, and redness. Prolonged exposure may cause dermatitis, eczema, and skin discoloration. Dermal exposure has not been associated with systemic toxicity but copper may induce allergic responses in sensitive individuals.

#### **Potential Health Effects: Ingestion**

Harmful or fatal if swallowed. Causes excessive salivation, nausea, vomiting, and corrosive burning of the gastrointestinal tract, including perforation. Repeated and prolonged ingestion may cause liver, kidney, or spleen damage. Lesser effects include sore throat, vomiting, metallic taste, hemorrhagic gastritis, and diarrhea.

#### **Potential Health Effects: Inhalation**

Corrosive, overexposure causes burning, irritation and destruction of the mucous membranes and upper respiratory tract. Symptoms may include burning sensation, coughing, wheezing, laryngitis, sneezing, mucous production, and sinus congestion. Other indications of overexposure are headache, nausea, vomiting, low-grade fever, and shortness of breath.

#### **Medical Conditions Aggravated by Exposure:**

Persons with hereditary Wilson's disease have an abnormally high level of copper in their system; therefore individuals with this disease when exposed to this product may accumulate high levels of copper and may suffer liver pathology, which can be fatal. Episodes of intravascular hemolysis have been observed.

#### **HMIS Ratings: HEALTH: 3 FIRE: 0 REACTIVITY: 0**

Hazard Scale: 0=Minimal, 1=Slight, 2= Moderate, 3= Serious, 4=Severe \*=Chronic Hazard

### Section 3- Composition/Information on Ingredients

Component	CAS #	Percent
Cupric Chloride	7447-39-4	27-50
Hydrochloric Acid	7647-01-0	0.2-5.4
Water	7732-18-5	<Balance>

### Section 4- First Aid Measures

#### **First Aid: Eyes**

Immediately flush eyes with water for at least 15 minutes, while holding eyelids open. Contacts should be removed before or during flushing. Speed in flushing of eyes after contact is essential to prevent serious injury. Seek medical attention at once.

#### **First Aid: Skin**

For skin contact, wash immediately with soap and water. Immediately take off all contaminated clothing. Continue to wash in serious conditions until medical help arrives, even for an hour or longer. Contaminated clothing should be discarded or washed before reuse. Seek immediate medical attention.

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### Section 4- First Aid Measures (Continued)

#### **First Aid: Ingestion**

If victim is alert and not convulsing, rinse mouth with water and give large volumes of water to drink. If spontaneous vomiting occurs, have affected person lean forward with head down to avoid breathing in of vomit. Rinse mouth again and give more water to drink. Vomiting may need to be induced but should be directed by a physician or poison center. DO NOT have unqualified personnel induce vomiting. Obtain medical attention immediately.

#### **First Aid: Inhalation**

If inhaled, immediately remove the affected person to fresh air. If mist or vapor of this product is inhaled, remove person immediately to fresh air. Seek immediate medical attention Do NOT perform mouth-to-mouth resuscitation unless a pocket mask equipped with a one-way valve or other proper respiratory medical device is available.

#### **First Aid: Notes to Physician**

Provide general supportive measures and treat symptomatically. Endoscopic evaluation of the patient may be warranted.

### Section 5- Firefighting Measures

#### **Extinguishing Media**

Dry chemical, carbon dioxide, water spray, or foam.

#### **Hazardous Combustion Products**

Copper compounds.

#### **Special Firefighting Procedures**

Avoid breathing vapors and keep upwind of the fire. Move container from the area of fire if safely possible.

#### **Personal Protective Equipment**

Firefighters should wear full protective clothing including self-contained breathing apparatus.

#### **Additional Information**

Collect contaminated firefighting water separately, it must not enter the sewer system.

### Section 6- Accidental Release Measures

#### **Personal Precautions**

Wear appropriate personal protective equipment: coveralls, gloves, and eye protection. Avoid breathing vapors, mist, or gas. Ensure adequate ventilation. Evacuate personnel to safe areas.

#### **Environmental Precautions**

Do not allow to enter drains or watercourses. If the product enters drains or sewers, immediately inform the local water company. Where there is contamination of streams, rivers, or lakes contact local agency with responsibility for the environment.

#### **Methods for Clean-Up**

Contain spillages and clean-up with sand or inert solid, and place in a suitable container that can be sealed. Add suitable agent to neutralize spilled material to pH 7. Very small spills may be flushed with large quantities of water and diluted. Keep unauthorized personnel away from the area. All disposal methods must be in compliance with local and national waste regulations. Regulations may vary in different locations. When spilled, this material may be considered a hazardous waste (D002-Corrosivity). Waste characterizations and compliance with applicable laws are the responsibility solely of the waste generator.

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### Section 7- Handling and Storage

#### Handling Procedures

Do not get this material in your eyes, on your skin, or on your clothing. Avoid breathing vapor or mist by using proper respiratory protective equipment. Use this product with adequate ventilation. Avoid release to the environment. Wash thoroughly after handling. See section 8 for appropriate protective clothing, equipment, and air monitoring procedures.

#### Storage Procedures

Store in a cool, dry, well-ventilated area. Empty product containers may contain product residue. Do not reuse empty containers. Do not store this material in open or unlabeled containers. Store away from direct sunlight, any sources of intense heat, or where freezing is possible. Isolate from incompatible materials. Keep away from food, drink, and animal feed. Material should be stored in secondary containers or in a diked area, as appropriate. Floors should be sealed to prevent absorption of this material. Have appropriate extinguishing equipment in the storage area. Post warning and "NO SMOKING" signs in storage and use areas, as appropriate.

### Section 8- Exposure Controls/Personal Protection

#### EXPOSURE GUIDELINES:

##### General Product Information

Follow all applicable exposure limits.

##### Component Exposure Limits

**Copper (II) chloride:** The exposure limits given are for copper and inorganic compounds as Cu, copper fume as Cu or copper dusts and mists as Cu.

**ACGIH:** 1 mg/m<sup>3</sup> TWA (dusts and mists); 0.2 mg/m<sup>3</sup> TWA (fume)

**OSHA:** 1 mg/m<sup>3</sup> TWA (dusts and mists); 0.1 mg/m<sup>3</sup> TWA (fume)

**NIOSH:** 1 mg/m<sup>3</sup> TWA (dusts and mists); 0.1 mg/m<sup>3</sup> TWA (fume)

##### Hydrochloric Acid

**ACGIH TLV:** 5 ppm (hydrogen chloride) [ceiling limit]

**OSHA PEL:** 5 ppm (hydrogen chloride) [ceiling limit]

**OSHA PEL:** 7 mg/m<sup>3</sup> (hydrogen chloride) [ceiling limit]

##### Engineering Controls

Provide adequate local exhaust ventilation to maintain worker exposure below exposure limits.

##### PERSONAL PROTECTIVE EQUIPMENT:

##### Personal Protective Equipment: Eyes/Face

Wear safety glasses and face shield or chemical goggles.

##### Personal Protective Equipment: Skin

Use impervious gloves. Recommended nitrile gloves. Use of impervious apron or coveralls and boots are recommended.

##### Personal Protective Equipment: Respiratory

If ventilation is not sufficient to effectively prevent buildup of vapors or mists, appropriate approved NIOSH respiratory protection must be provided. The following NIOSH guidelines for copper dusts and mists (as Cu) are presented for further information:

Up to 5 mg/m<sup>3</sup>: Dust and mist respirator.

Up to 10 mg/m<sup>3</sup>: Any dust and mist respirator except single-use, and quarter mask respirators, or any SAR.

Up to 25 mg/m<sup>3</sup>: SAR operated in a continuous-flow mode, or powered air-purifying respirator with a dust and mist filter(s).

Up to 50 mg/m<sup>3</sup>: Air purifying, full facepiece respirator with high-efficiency particulate filter(s), any powered air-purifying respirator with tight-fitting facepiece and high-efficiency particulate filter(s), or full facepiece SCBA, or full facepiece SAR.

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## ShoreMet Cupric Chloride

### Section 8- Exposure Controls/Personal Protection (Continued)

Up to 100 mg/m<sup>3</sup>: Positive pressure, full facepiece SAR.

#### Personal Protective Equipment: General

Eyewash fountains and emergency showers are required.

### Section 9- Physical and Chemical Properties

**Appearance:** Clear, dark green liquid

**Physical State:** Liquid

**pH:** ≤1

**Vapor Pressure:** N/A

**Boiling Point:** >100°C

**Solubility (H<sub>2</sub>O):** Miscible

**Freezing Point:** Not available

**Flash Point:** Not available

**Auto-ignition Temperature:** Not available

**Octanol/H<sub>2</sub>O Coeff.:** Not Available

**Odor:** Slight hydrochloric acid odor

**Odor Threshold:** N/A

**Viscosity:** N/A

**Vapor Density:** N/A

**Melting Point:** Not available

**Specific Gravity:** 1.29-1.50 @ 20°C (68°F)

**Evaporation Rate (n-BuAc=1):** N/A

**Flammability Limits in Air:** N/A

**Decomposition Temperature:** Not available

**Percent Volatile by Volume:** 0

### Section 10- Chemical Stability and Reactivity Information

#### Reactivity

No data available.

#### Chemical Stability

This is a stable material in liquid form at normal conditions.

#### Chemical Stability: Conditions to Avoid

Avoid extreme heat and contact with incompatible materials.

#### Incompatibility

This product reacts violently with potassium; avoid contact with oxidizing agents and sulfides.

#### Hazardous Decomposition

Decomposition products include copper fumes, copper compounds, hydrogen chloride, or chlorine when heated to decomposition.

#### Hazardous Polymerization

Will not occur.

### Section 11- Toxicological Information

#### Acute and Chronic Toxicity

**Routes of Entry:** Inhalation, skin or eye contact

**Symptoms (Acute):** Significant potential for corrosive burns to the entire eye, blindness may result. Redness and burning of the skin may result from acute exposure. Skin rashes, pain, and discoloration of the skin as well as allergic contact dermatitis may also occur, however more likely with chronic exposure. Ingestion of large amounts of copper salts may be toxic. Corrosive, overexposure causes burning, irritation, and destruction of the mucous membranes and upper respiratory tract. Symptoms may include burning sensation, coughing, wheezing, laryngitis, sneezing, mucous production, and sinus congestion. Other indications of overexposure are headache, nausea, vomiting, and shortness of breath.

**Delayed Effects:** No data available

**Component Analysis-LD50/LC50: Copper (II) Chloride (CAS Number: 7447-39-4)**

**Oral LD50 Rat:** 140 mg/kg

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### Section 11- Toxicological Information (Continued)

#### Component Analysis-LD50/LC50: Hydrochloric Acid (CAS Number: 7647-01-0)

Oral LD50 Rabbit: 900 mg/kg

#### Carcinogenicity

Not listed in NTP, IARC, or OSHA as a known carcinogen.

#### Chronic Effects

**Mutagenicity:** No evidence of a mutagenic effect.

**Teratogenicity:** No evidence of a teratogenic effect (birth defect).

**Sensitization:** No evidence of a sensitization effect.

**Reproductive:** No evidence of negative reproductive effects.

#### Other Toxicological Information

Target organs for cupric chloride include eyes, skin, respiratory system, liver, and kidneys. Target organs for hydrochloric acid include eyes, skin, and respiratory system. Individuals with Wilson's disease are unable to metabolize copper. Thus, persons with pre-existing Wilson's disease may be more susceptible to the effects of overexposure to this product. Persons with pre-existing skin disorders, impaired liver, kidney, or pulmonary function may also be more susceptible to the effects of this product.

### Section 12- Ecological Information

#### Ecotoxicity

##### General Product Information

This product is a severe ecological hazard. This product may be toxic to plants and/or wildlife. Highly/very toxic to fish and other water organisms. Keep out of waterways.

##### Mobility in Soil

No data available.

##### Bioaccumulative Potential

Copper compounds are accumulated by plants and animals, but do not appear to biomagnify from plants to animals.

##### Persistence

In soil, acidic conditions promote solubility of copper compounds and increase the concentration of ionic copper and so change the microorganism and other animal populations, depending on their various tolerance levels for copper. In the aquatic environment, some copper compounds may be metabolized, however, there is no evidence that biotransformation processes have a significant bearing on the aquatic fate of these compounds. In water, as in soil, copper compounds will also bind to carbonates, clays, humic materials, and hydrous oxides of iron and manganese. In the atmosphere, copper compounds (as aerosols) are estimated to have a residence time of two to ten days in an unpolluted atmosphere and 0.1 to less than four days in polluted, urban areas.

##### Degradability

No data available.

### Section 13- Disposal Considerations

#### US EPA Waste Number & Descriptions

##### General Product Information

As shipped, this product is not considered a hazardous waste.

##### Component Waste Numbers

No EPA Waste Numbers are applicable for this product's components.

##### Disposal Instructions

All wastes must be handled in accordance with local, state, and federal regulations. This product, if unaltered by use, may be disposed of by treatment at a permitted facility or as advised by your local hazardous waste regulatory authority.

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## ShoreMet Cupric Chloride

### Section 14- Transportation Information

#### US DOT Information

**Shipping Name:** Corrosive Liquid, acidic, inorganic, n.o.s. (hydrochloric acid, copper chloride solution)

**Hazard Class:** 8

**UN/NA #:** UN3264

**Packing Group:** II

**Required Label(s):** Class 8 (Corrosive)

**Additional Shipping Paper Description:** RQ (Cupric chloride=10 pounds, hydrochloric acid 5,000 pounds)

#### International Air Transport Association (IATA)

**Shipping Name:** Environmentally hazardous substance, liquid, n.o.s. (copper chloride solution)

**Hazard Class:** 8

**UN/NA #:** UN3264

**Packing Group:** II

### Section 15- Regulatory Information

#### US Federal Regulations

##### General Product Information

As a copper compound, copper chloride (CAS # 7447-39-4) is listed as a priority and toxic pollutant under the Clean Water Act.

##### Component Analysis

This material contains one or more of the following chemicals required to be identified under SARA Section 302 (40 CFR 355 Appendix A), SARA Section 313 (40 CFR 372.65) and/or CERCLA (40 CFR 302.4).

##### Copper Compounds (7440-50-8)

**SARA 313:** final RQ = 5000 pounds (2270 kg) Note: No reporting of releases of this substance is required if the diameter of the pieces of the solid metal released is equal to or greater than 0.004 inches.

##### Copper (II) chloride (7447-39-4)

**SARA 313:** 27-50% cupric chloride, 0.2-5.4% hydrochloric acid

**SARA 311/312: Acute Health:** YES, **Chronic Health:** NO, **Fire:** NO, **Pressure:** NO, **Reactive:** YES

#### State Regulations

##### General Product Information

Other state regulations may apply. Check individual state requirements.

##### Component Analysis-State

The following states contain copper chloride or one of its components on their state hazardous substances list: MA, NJ, and PA.

##### Additional Regulatory Information (TSCA Status)

All components are on the US EPA TSCA Inventory List. All components are on the Canadian Domestic Substances or Non-Domestic Substances Inventory Lists.

### Section 16- Other Information

#### Other Information

Disclaimer: Supplier gives no warranty of merchantability or of fitness for a particular purpose. Any product purchased is sold on the assumption the purchaser will make his own tests to determine the quality and suitability of the product. Supplier expressly disclaims any and all liability for incidental and/or consequential property damage arising out of the use of this product. No information provided shall be deemed to be a recommendation to use any product in conflict with any existing patent rights. Read the Safety Data Sheet before handling product.

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## ShoreMet Cupric Chloride

### Section 16- Other Information (Continued)

#### Reference Documentation

Information based on Safety Data Sheets for similar materials and SDSs for individual components on file at ShoreMet LLC.

#### Preparer Information

**SDS Preparer:** Travis J. Lechien

**SDS Preparer Telephone Number:** (219) 390-3336 x103

#### Revision Log:

Revision	Date	Initiator	Description of Changes
1	5/11/15	Travis J. Lechien	Original

This is the end of SDS ShoreMet Cupric Chloride