

SAFETY DATA SHEET

Preparation Date: 6/23/2014

Revision Date: 6/23/2014

Revision Number: G1

1. IDENTIFICATION

Product identifier

Product code: C1385
Product Name: CUPRIC CHLORIDE, DIHYDRATE, CRYSTAL, REAGENT, ACS

Other means of identification

Synonyms: Copper (2+) chloride dihydrate;
Copper Chloride dihydrate;
Copper chloride (CuCl₂), dihydrate
Copper (II) chloride dihydrate

CAS #: 10125-13-0
RTECS # GL7030000
CI#: Not available

Recommended use of the chemical and restrictions on use

Recommended use: Catalyst.
Uses advised against No information available

Supplier: Spectrum Chemicals and Laboratory Products, Inc.
14422 South San Pedro St.
Gardena, CA 90248
(310) 516-8000

Order Online At: <https://www.spectrumchemical.com>

Emergency telephone number Chemtrec 1-800-424-9300
Contact Person: Martin LaBenz (West Coast)
Contact Person: Regina Wachenheim (East Coast)

2. HAZARDS IDENTIFICATION

Classification

This chemical is considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200)

Acute toxicity - Oral	Category 3
Skin corrosion/irritation	Category 1 Sub-category C
Serious eye damage/eye irritation	Category 1

Label elements

Danger

Hazard statements

Toxic if swallowed

Causes severe skin burns and eye damage



Hazards not otherwise classified (HNOC)

Not Applicable

Other hazards

Not available

Precautionary Statements - Prevention

Wash face, hands and any exposed skin thoroughly after handling

Do not eat, drink or smoke when using this product

Do not breathe dust/fume/gas/mist/vapors/spray

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

Precautionary Statements - Response

Specific treatment (see .? on this label)

Immediately call a POISON CENTER or doctor/physician

Specific treatment (see .? on this label)

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.

IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower

Wash contaminated clothing before reuse

IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Immediately call a POISON CENTER or doctor/physician.

IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician

Rinse mouth

Do NOT induce vomiting

Precautionary Statements - Storage

Store locked up

Precautionary Statements - Disposal

Dispose of contents/container to an approved waste disposal plant

3. COMPOSITION/INFORMATION ON INGREDIENTS

Product code: C1385

Product name: CUPRIC CHLORIDE,
DIHYDRATE, CRYSTAL, REAGENT,
ACS

2 / 11

4. FIRST AID MEASURES

First aid measures

General Advice:

Poison information centres in each State capital city can provide additional assistance for scheduled poisons (13 1126). Ensure that medical personnel are aware of the material(s) involved and take precautions to protect themselves. First aider needs to protect himself.

Skin Contact:

Wash off immediately with soap and plenty of water. Continue flushing with plenty of water for at least 15 minutes. Remove all contaminated clothes and shoes. Immediate medical attention is required. Call a physician immediately.

Eye Contact:

Flush eye with water for 15 minutes. Immediate medical attention is required. Call a physician immediately.

Inhalation:

Move to fresh air. If breathing is difficult, give oxygen. If not breathing, give artificial respiration. **WARNING!** It may be hazardous to the person providing aid to give mouth-to-mouth resuscitation when the inhaled or ingested material is toxic, infectious or corrosive. Do not use mouth-to-mouth resuscitation if victim ingested or inhaled the substance; induce artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device. Immediate medical attention is required. Call a physician immediately.

Ingestion:

Do not induce vomiting without medical advice. Never give anything by mouth to an unconscious person. Immediate medical attention is required. Call a physician or Poison Control Centre immediately.

Most important symptoms and effects, both acute and delayed

Symptoms

Severe skin and eye irritation or burns. Causes digestive (gastrointestinal) tract irritation. May cause gastrointestinal (digestive) tract burns. May cause abdominal pain, nausea, vomiting, diarrhea.

Indication of any immediate medical attention and special treatment needed

Notes to Physician:

Treat symptomatically

Protection of first-aiders

First-Aid Providers: Avoid exposure to blood or body fluids. Wear gloves and other necessary protective clothing. Dispose of contaminated clothing and equipment as bio-hazardous waste

5. FIRE-FIGHTING MEASURES

Extinguishing Media

Suitable Extinguishing Media:

The product is not flammable. If it is involved in a fire, extinguish the fire using an agent suitable for the type of surrounding fire.

Unsuitable Extinguishing Media:

No information available.

Specific hazards arising from the chemical

Hazardous Combustion Products:

Hydrogen chloride gas, copper oxides

Specific hazards:

Contact with metals may evolve flammable hydrogen gas. Containers may explode when heated. When mixed with potassium or sodium, it produces a strong explosion on impact.

Special Protective Actions for Firefighters

Specific Methods:

No information available.

Product code: C1385

Product name: CUPRIC CHLORIDE,
DIHYDRATE, CRYSTAL, REAGENT,
ACS

3 / 11

Special Protective Equipment for Firefighters:

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear

6. ACCIDENTAL RELEASE MEASURES**Personal precautions, protective equipment and emergency procedures****Personal Precautions:**

Keep people away from and upwind of spill/leak. Ensure adequate ventilation. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Use personal protective equipment. Avoid contact with skin, eyes and clothing.

Environmental precautions

Prevent further leakage or spillage if safe to do so. Should not be released into the environment. Do not let product enter drains. Prevent entry into waterways, sewers, basements or confined areas.

Methods and material for containment and cleaning up**Methods for containment**

Stop leak if you can do it without risk. Cover with plastic sheet to prevent spreading.

Methods for cleaning up

Use appropriate tools to put the spilled solid in a suitable waste disposal container. Clean contaminated surface thoroughly.

7. HANDLING AND STORAGE**Precautions for safe handling****Technical Measures/Precautions:**

Use only in area provided with appropriate exhaust ventilation. Keep away from incompatible materials.

Safe Handling Advice:

Wear personal protective equipment. Avoid contact with skin, eyes and clothing. Do not ingest. Do not breathe vapours/dust. Handle in accordance with good industrial hygiene and safety practice.

Conditions for safe storage, including any incompatibilities**Technical Measures/Storage Conditions:**

Deliquescent. Protect from moisture. Keep container tightly closed in a dry and well-ventilated place. Store at room temperature in the original container. Store away from incompatible materials.

Incompatible Materials:

Oxidizing agents. Acids. Metals. Sodium. Potassium. Hydrazine. Acetylene. Sodium hypobromite. Nitromethane.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION**Control parameters****National occupational exposure limits**

United States

Canada

Australia and Mexico

Appropriate engineering controls

Engineering measures to reduce exposure:

Ensure adequate ventilation. Use process enclosures, local exhaust ventilation, or other engineering controls to keep airborne levels below recommended exposure limits. If user operations generate dust, fume or mist, use ventilation to keep exposure to airborne contaminants below the exposure limit.

Individual protection measures, such as personal protective equipment**Personal Protective Equipment**

Eye protection: Face-shield.

Skin and body protection: Chemical resistant protective suit. Gloves. boots.

Respiratory protection: Wear respirator with dust filter..

Hygiene measures: Avoid contact with skin, eyes and clothing. When using, do not eat, drink or smoke. Wash hands before breaks and immediately after handling the product.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical state:
Solid.

Appearance:
Crystals.

Color:
Blue. Blue green.

Odor:
Odorless.

Taste
No information available

Formula:
CUCI2.2H2O

Molecular/Formula weight:
170.48

Flash point (°C):
No data available

Flashpoint (°C/°F):
No information available.

Flash Point Tested according to:
Not available

Lower Explosion Limit (%):
No information available

Upper Explosion Limit (%):
No information available

Autoignition Temperature (°C/°F):
No information available

pH:
No information available

Melting point/range(°C/°F):
No information available

Boiling point/range(°C/°F):
No information available

Decomposition temperature(°C/°F):
No information available

Specific gravity:
No information available

Density (g/cm3):
2.54

Bulk density:
No information available

Vapor pressure @ 20°C (kPa):
No information available

Evaporation rate:
No information available

Vapor density:
No information available

VOC content (g/L):
No information available

Odor threshold (ppm):
No information available

Partition coefficient (n-octanol/water):
No information available

Viscosity:
No information available

Miscibility:
No information available

Solubility:
Freely soluble in water
Freely soluble in Methanol
Freely soluble in Ethyl alcohol
Soluble in Acetone
Soluble in ethyl acetate
Slightly soluble in Ether
Solubility in Water: 76 parts in 100 parts water @ 25 deg. C

10. STABILITY AND REACTIVITY

Reactivity

Evolves flammable hydrogen gas on contact with metals
Contact with acids or acid fumes may evolve highly toxic hydrogen chloride fumes
Water loss from 70-200 deg. C

Chemical stability

Stability: Stable at normal conditions

Possibility of Hazardous Reactions: Hazardous polymerization does not occur

Conditions to avoid: Exposure to moisture. Exposure to moist air. Deliquescent in moist air. Efflorescent in dry air. Incompatible materials.

Incompatible Materials: Oxidizing agents. Acids. Metals. Sodium. Potassium. Hydrazine. Acetylene. Sodium hypobromite. Nitromethane.

Hazardous decomposition products: Copper oxides. Hydrogen chloride gas.

Other Information

Corrosivity: No information available

Special Remarks on Corrosivity: No information available

11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure

Principal Routes of Exposure:

Skin. Inhalation. Ingestion.

Acute Toxicity

Component Information

Product Information

LD50/oral/rat =

VALUE- Acute Tox Oral = No information available

LD50/oral/mouse =

Value - Acute Tox Oral = 110mg/kg

LD50/dermal/rabbit

VALUE-Acute Tox Dermal = No information available

LD50/dermal/rat

VALUE -Acute Tox Dermal = No information available

LC50/inhalation/rat

VALUE-Vapor = No information available

VALUE-Gas = No information available

VALUE-Dust/Mist = No information available

Product code: C1385

Product name: CUPRIC CHLORIDE,
DIHYDRATE, CRYSTAL, REAGENT,
ACS

6 / 11

LC50/Inhalation/mouse

VALUE-Vapor = No information available

VALUE - Gas = No information available

VALUE - Dust/Mist = No information available

Symptoms

Skin Contact:	Causes severe skin irritation and burns with itching, erythema, burning pain.
Eye Contact:	Severe eye irritation. Causes eye burns. May cause corneal damage. Symptoms can include redness, pain, blurred vision, discoloration, loss of vision, eye damage such as permanent corneal opacification, chemical conjunctivitis, ulceration.
Inhalation	Causes respiratory tract (nose, throat, lungs), and mucous membrane irritation causing coughing, sore throat, wheezing, and shortness of breath. It may cause ulceration and perforation of the nasal septum. It may produce delayed pulmonary edema. When heated this compound may give off copper fume, which can cause "fume metal fever" with symptoms similar to the common cold, including chills and stiffness of the head.
Ingestion	Toxic if swallowed. Ingestion of sufficient concentrations may result in metallic taste, salivation, headache, nausea, vomiting, burning in the mouth, epigastric (esophagus and stomach), diaphoresis, abdominal/gastric pain, gastrointestinal bleeding, and bloody diarrhea. The vomitus is characteristically greenish-blue. Other systemic effects may occur including hemolysis, anemia, and anuria, oliguria, hematuria, acute kidney tubular necrosis, jaundice, hepatomegaly (i.e. liver and kidney damage) (secondary to hemolysis). May affect behavior/central nervous system (somnolence, convulsions). Rarely methemoglobinemia has been reported..
Aspiration hazard	No information available

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Chronic Toxicity	Repeated exposure may cause thickening of the skin and greenish color to the skin and hair. Repeated exposure by inhalation may cause ulceration of the nasal septum and shrinking of the inner lining of the nose. Repeated skin contact may cause dermatitis. Repeated or prolonged ingestion may cause liver and kidney damage due to accumulation of copper in these organs. Chronic copper poisoning is rare. It has been mainly observed in individuals with Wilson disease or Indian childhood cirrhosis, in which progressive copper toxicity results from a hereditary metabolic disorder involving deficiency in the copper-binding and transport protein ceruloplasmin. Severe liver disease involving massive accumulation of copper in the liver has been reported in a few cases not meeting the diagnostic criteria for either Wilson disease or Indian childhood cirrhosis. Moreover, this so-called Indian childhood cirrhosis is becoming increasingly recognized in non-Indian children, and hepatic copper levels should be determined in all cases of childhood liver failure of unknown origin (aka idiopathic copper toxicosis). Generally, the effects of copper excess are reversible. Repeated or prolonged inhalation may affect the blood (changes in white blood cell count), metabolism (metabolic acidosis)..
Sensitization:	No information available
Mutagenic Effects:	No information available
Carcinogenic effects:	Not considered carcinogenic

Reproductive toxicity No data is available

Reproductive Effects: No information available
Developmental Effects: No information available
Teratogenic Effects: No information available

Specific Target Organ Toxicity

STOT - single exposure No information available
STOT - repeated exposure No information available
Target Organs: Skin. Respiratory system. Lungs. Liver. Kidneys.

12. ECOLOGICAL INFORMATION

Ecotoxicity

Ecotoxicity effects: No data available.

Persistence and degradability: No information available
Bioaccumulative potential: No information available
Mobility: No information available

13. DISPOSAL CONSIDERATIONS

Disposal Methods

Waste from residues / unused products:
Waste must be disposed of in accordance with Federal, State and Local regulation.

Contaminated packaging:
Empty containers should be taken for local recycling, recovery or waste disposal

14. TRANSPORT INFORMATION

DOT

UN-No: UN2802
Proper Shipping Name: Copper chloride
Hazard Class: 8
Subsidiary Risk: Not applicable
Packing Group: III
Marine Pollutant Marine Pollutant
ERG No: 154
DOT RQ (lbs): No information available
Symbol(s): PP, R2

TDG (Canada)

UN-No: UN2802
Proper Shipping Name: Copper chloride

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DIHYDRATE, CRYSTAL, REAGENT,
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14. TRANSPORT INFORMATION

Hazard Class: 8
Subsidiary Risk: No information available
Packing Group: III
Description: No information available

ADR

UN-No: UN2802
Proper Shipping Name: Copper chloride
Hazard Class: 8
Packing Group: III
Subsidiary Risk: No information available
Classification Code: No information available
Description: No information available
CEFIC Tremcard No: No information available

IMO / IMDG

UN-No: UN2802
Proper Shipping Name: Copper chloride
Hazard Class: 8
Subsidiary Risk: P
Packing Group: III
Description: No information available
IMDG Page: No information available
Marine Pollutant: Marine Pollutant
EMS: F-A
MFAG: No information available
Maximum Quantity: No information available

RID

UN-No: UN2802
Proper Shipping Name: Copper chloride
Hazard Class: 8
Subsidiary Risk: 8
Packing Group: III
Classification Code: No information available
Description: No information available

ICAO

UN-No: UN2802
Proper Shipping Name: Copper chloride
Hazard Class: 8
Subsidiary Risk: No information available
Packing Group: III
Description: No information available

IATA

UN-No: UN2802
Proper Shipping Name: Copper chloride
Hazard Class: 8
Subsidiary Risk: No information available
Packing Group: III
ERG Code: 8L
Description: No information available

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DIHYDRATE, CRYSTAL, REAGENT,
ACS

9 / 11

15. REGULATORY INFORMATION

International Inventories

U.S. Regulations

California Prop. 65: Safe Drinking Water and Toxic Enforcement Act of 1986.

Chemicals Known to the State of California to Cause Cancer:

This product does not contain a chemical requiring a warning under California Prop. 65. (See table below)

Chemicals Known to the State of California to Cause Reproductive Toxicity:

This product does not contain a chemical requiring a warning under California Prop. 65. (See table below)

CERCLA/SARA

U.S. TSCA

Canada

WHMIS hazard class:

D1B Toxic materials

E Corrosive material

Canada Controlled Products Regulation:

This product has been classified according to the hazard criteria of the CPR (Controlled Products Regulation) and the MSDS contains all of the information required by the CPR.

Inventory

EU Classification

R-phrase(s)

R34 - Causes burns.

R22 - Harmful if swallowed.

R50/53 - Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

S -phrase(s)

S45 - In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).

S60 - This material and its container must be disposed of as hazardous waste.

S61 - Avoid release to the environment. Refer to special instructions/safety data sheets.

The product is classified in accordance with Annex VI to Directive 67/548/EEC

Indication of danger:

Xn - Harmful.

N - Dangerous for the environment.

Product code: C1385

Product name: CUPRIC CHLORIDE,
DIHYDRATE, CRYSTAL, REAGENT,
ACS

10 / 11



16. OTHER INFORMATION

NFPA	HMIS	Personal Protective Equipment
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Health Hazard	3
Fire Hazard	0
Reactivity	0



See Section 8.

Preparation Date: 6/23/2014
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Prepared by: Sonia Owen

Disclaimer:

All chemicals may pose unknown hazards and should be used with caution. This Safety Data Sheet (SDS) applies only to the material as packaged. If this product is combined with other materials, deteriorates, or becomes contaminated, it may pose hazards not mentioned in this SDS. The physical properties reported in this SDS are obtained from the literature and do not constitute product specifications. Information contained herein does not constitute a warranty, whether expressed or implied, as to the safety, merchantability or fitness of the goods for a particular purpose. Spectrum Chemicals & Laboratory Products, Inc. assumes no responsibility for results obtained or for incidental or consequential damages, including lost profits, arising from the use of these data. No warranty against infringement of any patent, copyright or trademark is made or implied. It shall be the user's responsibility to develop proper methods of handling and personal protection based on the actual conditions of use. While this SDS is based on technical data judged to be reliable, Spectrum assumes no responsibility for the completeness or accuracy of the information contained herein.

End of Material Safety Data Sheet