

Material Safety Data Sheet

Material Name: Cupric Carbonate

ID: C1178

Section 1 Chemical Product and Company Identification

Chemical Name: Cupric Carbonate, Light or Dense Powder

Product Use: For Commercial Use

Synonyms: Basic Copper Carbonate, Copper (II) Carbonate, Copper (II) Carbonate Hydroxide

Manufacturer Information

Chem One Corporation (Importer of record)

8017 Pinemont Drive, Suite 100

Houston, Texas 770406519

Phone #: (713) 8969966

Fax #: (713) 8967540

Emergency #: 18004249300

General Comments

NOTE: Emergency telephone numbers are to be used only in the event of chemical emergencies involving a spill, leak, fire, exposure, or accident involving chemicals. All non-emergency questions should be directed to customer service.

Section 2 Composition/Information on Ingredients

CAS#	Component	Percent
12069691	Copper (II) carbonate hydroxide	70

Component Related Regulatory Information

This product may be regulated, have exposure limits or other information identified as the following: Copper (7440508).

Component Information/Information on Non-Hazardous Components

This product is considered hazardous under 29 CFR 1910.1200 (Hazard Communication).

Section 3 Hazards Identification

Emergency Overview

Product is a green solid existing as a fine powder. Use method suitable for surrounding fire. Avoid breathing dusts. May cause irritation to the nose, throat, and upper respiratory tract. This product is irritating to the eyes and skin. Harmful if swallowed. Firefighters should wear full protective equipment and clothing when fighting a fire involving this material. High concentration of airborne dust may pose an explosion hazard.

fatal

Hazard Statements

WARNING! Irritating to the eyes and respiratory system. May be harmful if inhaled or swallowed. Avoid breathing dusts and fumes. Avoid contact with eyes. Keep container closed. Use with adequate ventilation. Wash thoroughly after handling.

Potential Health Effects: Eyes

This product is irritating to the eyes. Exposure may result in irritation, pain, swelling, tearing, or photophobia. Copper may produce conjunctivitis or even ulceration and clouding of the cornea.

salts

Potential Health Effects: Skin

Copper salts are irritating to the skin, and may produce itching, redness, and rash. This product may cause skin discoloration.

n.

Potential Health Effects: Ingestion

High level acute ingestion of copper salts may produce nausea, vomiting and epigastric burning pain, followed by hemolysis, anemia, and liver and kidney damage secondary to hemolysis. Vomitus is characteristically greenish blue. Mucosal erosion, a metallic taste in the mouth, and bloody diarrhea may occur. Hypotension, lethargy, and coma are potential CNS effects that may result from ingestion of large quantities of this product.

Potential Health Effects: Inhalation

Inhalation of dust and mists of copper salts can result in irritation of nasal mucous membranes, sometimes of the pharynx and, on occasion, ulceration with perforation of the nasal septum. Inhalation of fumes or fine dust may cause metal fume fever with resulting flu-like symptoms involving fever, chills, sweats, muscle aches and pains, cough, and general malaise.

HMIS Ratings: Health: 2 Fire: 1 Reactivity: 1 Pers. Prot.: impervious gloves, chemical goggles

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

Section 4 First Aid Measures

First Aid: Eyes

Immediately flush eyes with large amounts of room temperature water, occasionally lifting the lower and upper lids, for at least 15 minutes. If symptoms persist after 15 minutes of irrigation, seek medical attention.

First Aid: Skin

For skin contact, wash immediately with soap and water. Get medical attention if irritation or pain persists.

First Aid: Ingestion

If the material is swallowed, get immediate medical attention or advice. Do not induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to a victim who is unconscious or having convulsions. Emesis is generally rapid and spontaneous in individuals who have ingested copper salts.

First Aid: Inhalation

If symptoms are experienced, remove source of contamination or move victim to fresh air. If not breathing, give artificial respiration. Seek medical attention if symptoms persist.

First Aid: Note to Physician

Provide general supportive measures and treat symptomatically. Consult nearest Poison Control Center for all exposures except minor instances of inhalation or skin contact.

***** Section 5 Fire Fighting Measures *****

Flash Point: Not applicable.

Upper Flammable Limit (UFL): Not available.

Auto Ignition: Not available.

Rate of Burning: Not available.

General Fire Hazards

High concentration of air-borne dust may pose an explosion hazard. Prevent human exposure to fire, smoke, fumes, or products of combustion.

Hazardous Combustion Products

When heated to decomposition, this product emits acrid smoke and fumes, including copper oxide fumes.

Extinguishing Media

Use methods for the surrounding fire. Dry chemical, foam, carbon dioxide, or water spray are recommended.

Fire Fighting Equipment/Instructions

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

NFPA Ratings: Health: 2 Fire: 1 Reactivity: 1 Other: 0

Hazard Scale: 0=Minimal 1=Slight 2=Moderate 3=Serious 4=Severe

***** Section 6 Accidental Release Measures *******Containment Procedures**

Stop or reduce leak if safe to do so.

Clean Up Procedures

Prevent material from entering sewers and waterways. Wear protective clothing and respiratory protection from dust. Put material in suitable, covered, labeled containers.

Evacuation Procedures

Keep unnecessary personnel away. Close off area.

Special Procedures

Wear adequate personal protective equipment. Avoid inhalation of dusts. Ventilate the area.

***** Section 7 Handling and Storage *******Handling Procedures**

High concentration of air-borne dust may pose an explosion hazard. Avoid inhalation of fumes produced by heating this product and dusts generated from this product. Avoid contact with eyes and prolonged skin contact. Use in designated areas with adequate ventilation. Wash thoroughly after handling. Keep containers closed and dry.

Storage Procedures

Store in a cool, dry, well-ventilated area. Store in a suitable labeled container. Do not store near feed, food, or within the reach of children.

he

*****Section 8 Exposure Controls/Personal Protection*******Exposure Guidelines****A: General Product Information**

The ACGIH 1997 Notice of Intended Changes lists, as Cu: fume and respirable particulate: (0.05) mg/m³ TWA; inhalable particulate dusts and mists (1) mg/m³ TWA.

B: Component Exposure Limits**Copper (II) carbonate hydroxide (12069691)**

ACGIH: fume: (0.2) mg/m³ TWA; dusts and mists, as Cu: (1) mg/m³ TWA (related to Copper)

OSHA: fume, as Cu: 0.1 mg/m³ TWA (related to Copper)

NIOSH: as Cu: 1 mg/m³ TWA (dusts and mists); 0.1 mg/m³ TWA (fume) (related to Copper)

Engineering Controls

Ventilation must be sufficient to effectively remove and prevent buildup of dust or fumes that may be generated during handling or thermal processing. Local exhaust is suggested for use, where possible, in enclosed or confined spaces.

PERSONAL PROTECTIVE EQUIPMENT**Personal Protective Equipment: Eyes/Face**

Wear safety glasses with side shields or chemical goggles.

Personal Protective Equipment: Skin

Use impervious gloves.

Personal Protective Equipment: Respiratory

If ventilation is not sufficient to effectively remove and prevent buildup of dust or fumes that may be generated during handling or thermal processing, use NIOSH approved respiratory protection.

Personal Protective Equipment: General

A safety shower and eyewash fountain should be readily available where this product is handled. Use good hygiene practices when handling this material, including changing and laundering work clothing after use.

*****Section 9 Physical & Chemical Properties*****

Appearance: Fine green powder.
Physical State: Solid.
Vapor Pressure: Not applicable.
Boiling Point: Not applicable.
Solubility (H₂O): Insoluble.
Freezing Point: Not applicable.
Softening Point: Not available.
Viscosity: Not applicable.
Percent Volatile: Not available.

Odor: None.
pH: 7-10 (10% solution)
Vapor Density: Not applicable.
Melting Point: Not available.
Specific Gravity: Not available.
Particle Size: Not available.
Evaporation Rate: Not applicable.
Bulk Density: 100-135 lbs/ft³
Molecular Weight: 221.11

Physical Properties: Additional Information

The data provided in this section is to be used for product safety handling purposes. Please refer to Product Data Sheets, Certificates of Conformity or Certificates of Analysis for chemical and physical data for determinations of quality and for formulation purposes.

*****Section 10 Chemical Stability & Reactivity Information*******Chemical Stability**

Stable.

Chemical Stability: Conditions to Avoid

Ignition sources, incompatible materials, alkalis, reducing agents, and strong oxidants.

Incompatibility

Copper forms potentially explosive reactions with acetylenic compounds, ammonium nitrate, 3-bromopropyne, ethylene oxide, sodium azide, and lead azide. A combination of finely divided copper with finely divided bromates (also chlorates or iodates) of barium, calcium, magnesium, potassium, sodium, or zinc will explode with heat, percussion and sometimes light friction. Reducing agents react vigorously with copper salts.

Hazardous Decomposition

When heated to decomposition, this product emits acrid smoke and fumes, including copper oxide fumes.

Hazardous Polymerization

Will not occur.

*****Section 11 Toxicological Information*******Acute Toxicity****A: General Product Information**

Target organs include the respiratory system, skin, eyes, liver, and kidney. Product causes eye and skin irritation. Systemic effects can occur from high level acute ingestion of copper salts, which can be absorbed from the stomach and produce nausea, vomiting and epigastric burning pain, followed by hemolysis, anemia, and liver and kidney damage secondary to hemolysis. If copper salts from inhalation in sufficient concentration reach the GI tract, they act as irritants producing salivation, nausea, vomiting, gastric pain, hemorrhagic gastritis, and diarrhea. Repeated exposure to copper fume and fine dust is known to cause metal fume fever, a flu-like condition involving fever, chills, sweats, muscle aches and pains, cough, and general malaise. Symptoms begin within a few hours after exposure and subside within 24 to 48 hours, leaving no permanent effects. Metal fume fever has been reported in workers exposed to an extremely fine copper dust at concentrations of 0.075 to 0.12 mg/m³. Exposure may depress mental status, resulting in lethargy and coma. No chronic lung damage has been attributed solely to copper. Chronic exposure to low levels of copper has been reported to induce anemia, probably from hemolytic effects. Allergic contact dermatitis has been reported, but is extremely rare.

B: Component Analysis LD50/LC50

Copper (II) carbonate hydroxide (12069691)

Oral LD50 Rat: 1350 mg/kg

Carcinogenicity**A: General Product Information**

Neither copper nor its inorganic salts are regarded as human carcinogens.

B: Component Carcinogenicity

None of this product's components are listed by ACGIH, IARC, OSHA, NIOSH, or NTP.

Epidemiology

No information available.

Neurotoxicity

Lethargy and coma have been reported in patients with severe copper sulfate intoxication, and might develop after ingestion of other copper salts.

Mutagenicity

Copper derivatives were not mutagenic in the Ames Salmonella assay, however, copper was found to be mutagenic in other assays.

Teratogenicity

Copper was not teratogenic in hamsters. The results of teratogenicity studies in rats have been conflicting. Copper may have been toxic to the sperm and embryos of rats when inhaled, and to mice when given orally.

Other Toxicological Information

Individuals with Wilson's Disease (a hereditary disease associated with the inability to remove copper from the blood) may be at greater risk when exposed to this product.

*****Section 12 Ecological Information*******Ecotoxicity**

Product may be toxic to fish and marine organisms. Do not contaminate water by cleaning of equipment or disposal of wastes. Copper compounds are considered a toxic pollutant under the U.S. Clean Water Act. Copper carbonate is used in insecticides and fungicides.

Environmental Fate

Not biodegradable. Water insoluble.

*****Section 13 Disposal Considerations*******USEPA Waste Number & Descriptions****A: General Product Information**

As shipped, this product is not considered a hazardous waste under 40 CFR 261 (RCRA).

B: Component Waste Numbers

Material Safety Data Sheet

Material Name: Cupric Carbonate

ID: C1178

No EPA Waste Numbers are applicable for this product.

Disposal Instructions

Review federal, provincial, and local government requirements prior to disposal. Do not allow this material to drain into sewers/water supplies. Disposal by secure land fill may be acceptable.

*** Section 14 Transportation Information ***

USDOT Information

Shipping Name: Nonregulated.

Hazard Class: Not applicable.

UN/NA#: Not applicable.

Packing Group: Not applicable.

Additional Info.: No additional DOT regulatory information applicable.

International Transportation Regulations

I.M.O.: Not regulated as dangerous goods. NOTE: The data in this section (Section 14) is meant as a guide to the overall classification of the product. However, transportation classifications may be subject to change with changes in package size. Consult shipper requirements under I.M.O., I.C.A.O. (I.A.T.A.) and 49 CFR to assure regulatory compliance.

*** Section 15 Regulatory Information ***

US Federal Regulations

A: General Product Information

"Copper compounds" as a category is listed under the Clean Water Act as a Toxic Pollutant.

B: 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 (II) carbonate hydroxide (12069691)

SARA 313: form R reporting required for 1.0% de minimus concentration (related to Copper)

CERCLA: final RQ = 5000 pounds (2270 kg) (no reporting of releases of this hazardous substance is required if the diameter of the pieces of the solid metal released is equal to or exceeds 0.004 inches) (related to Copper)

State Regulations

A: General Product Information

No additional information.

B: Component Analysis State

The following components appear on one or more of the following state hazardous substance lists:

Component	CAS#	CA	FL	MA	MN	NJ	PA
Copper (II) carbonate hydroxide	12069691	Yes	Yes	Yes	Yes	Yes	Yes

Other Regulations

A: General Product Information

Not applicable.

B: Component Analysis Inventory

Component	CAS#	TSCA	DSL	EINECS
Copper (II) carbonate hydroxide	12069691	Yes	Yes	Yes

C: Component Analysis WHMIS IDL

The following components are identified under the Canadian Hazardous Products Act Ingredient Disclosure List:

Component	CAS#	Minimum Concentration
Copper (II) carbonate hydroxide	12069691	1% item 428 (985)

*****Section 16 Other Information*******Other Information**

ChemOne Corp. ("ChemOne") shall not be responsible for the use of any information, product, method, or apparatus herein presented ("Information"), and you must make your own determination as to its suitability and completeness for your own use, for the protection of the environment, and for health and safety purposes. You assume the entire risk of relying on this Information. In no event shall ChemOne be responsible for damages of any nature whatsoever resulting from the use of this product or products, or reliance upon this Information. By providing this Information, ChemOne neither can nor intend to control the method or manner by which you use, handle, store, or transport ChemOne products. If any materials are mentioned that are not ChemOne products, appropriate industrial hygiene and other safety precautions recommended by their manufacturers should be observed. ChemOne makes no representations or warranties, either express or implied of merchantability, fitness for a particular purpose or of any other nature regarding this information, and nothing herein waives any of ChemOne's conditions of sale. This information could include technical inaccuracies or typographical errors. ChemOne may make improvements and/or changes in the product(s) and/or the program(s) described in this information at any time. If you have any questions, please contact us at Tel. 713 896 9966 or Email us at Safety@chemone.com. Revision information: Revised 01/23/98

Key/Legend

EPA=Environmental Protection Agency; TSCA=Toxic Substance Control Act; ACGIH=American Conference of Governmental Industrial Hygienists; IARC=International Agency for Research on Cancer; NIOSH=National Institute for Occupational Safety and Health; NTP=National Toxicology Program; OSHA=Occupational Safety and Health Administration; NA=Not available or not applicable; g=grams; kg=kilograms; M=molar; C=Celsius; DOT=Dept. of Transportation

Contact: Clare L. Welker

Contact Phone: (713) 896 9966

This is the end of MSDS # C1178