

Material Safety Data Sheet

Material Name: Copper Oxychloride

ID: C1-118A

*** Section 1 - Chemical Product and Company Identification ***

Chemical Name: Copper Oxychloride

Product Use: For Commercial Use

Synonyms: COC Technical, Copper Oxychloride Technical, Copper (II) Chloride Dihydroxide (1,3)

Supplier Information

Chem One Ltd.

Phone: (713) 896-9966

14140 Westfair East Drive

Fax: (713) 896-7540

Houston, Texas 77041-1104

Emergency # (800) 424-9300 or (703) 527-3887

General Comments: FOR COMMERCIAL USE ONLY; NOT TO BE USED AS A PESTICIDE.

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
1332-65-6	Copper Oxychloride	> 98

Component Related Regulatory Information

This product may be regulated, have exposure limits or other information identified as the following: Copper (7440-50-8) and inorganic compounds, as Cu, Copper Compounds, n.o.s., Copper dusts and mists, as Cu and Copper fume, Cu.

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

Copper Oxychloride is a pale, green, corrosive, fine powder. Harmful or fatal if swallowed. Irritating or corrosive to skin, eyes, nose, throat and respiratory tract. Can cause permanent damage to eyes. Fire may produce irritating, corrosive and/or toxic vapors. Firefighters should use full protective equipment and clothing.

Hazard Statements

HARMFUL OR FATAL IF SWALLOWED. Can cause irritation of eyes, skin, and respiratory tract. Avoid contact with eyes and skin. Avoid breathing dusts. Wash thoroughly after handling. Keep container closed. Use with adequate ventilation. Keep from contact with clothing and other combustible materials. Solutions of this material may be flammable.

Potential Health Effects: Eyes

Exposure to particulates or solution of this product may cause redness and pain. 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. May cause gastrointestinal irritation with symptoms such as nausea, vomiting, and diarrhea. Copper Oxychloride is less toxic than more soluble copper salts, such as copper sulfates. Except for occasional acute incidents of copper poisoning, few effects are noted in normal human populations. Effects of single exposure following suicidal or accidental oral exposure have been reported as metallic taste, epigastric pain, headache, nausea, dizziness, vomiting and diarrhea, tachycardia, respiratory difficulty, hemolytic anemia, hematuria, massive gastrointestinal bleeding, liver and kidney failure, and death. In cases of fatal ingestion, death is preceded by gastric hemorrhage, tachycardia, hypotension, hemolytic crisis, convulsions and paralysis.

Potential Health Effects: Inhalation

May irritate the nose, throat and respiratory tract. Symptoms can include sore throat, coughing and shortness of breath. In severe cases, ulceration and perforation of the nasal septum can occur. If this material is heated, inhalation of fumes may lead to development of metal fume fever. This is a flu-like illness with symptoms of metallic taste, fever and chills, aches, chest tightness and cough. Repeated inhalation exposure can cause shrinking of the lining of the inner nose.

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*** Section 3 - Hazards Identification (Continued) ***

Potential Health Effects: Other Health Effects

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

HMIS Ratings: Health Hazard: 2* Fire Hazard: 0 Physical Hazard: 1

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

*** Section 4 - First Aid Measures ***

First Aid: Eyes

In case of contact with eyes, rinse immediately with plenty of water for at least 20 minutes. Seek immediate medical attention.

First Aid: Skin

Remove all contaminated clothing. For skin contact, wash thoroughly with soap and water for at least 20 minutes. Seek immediate medical attention if irritation develops or persists.

First Aid: Ingestion

DO NOT INDUCE VOMITING. Have victim rinse mouth thoroughly with water, if conscious. Never give anything by mouth to a victim who is unconscious or having convulsions. Contact a physician or poison control center immediately.

First Aid: Inhalation

Remove source of contamination or move victim to fresh air. Apply artificial respiration if victim is not breathing. Do not use mouth-to-mouth method 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. Administer oxygen if breathing is difficult. Get immediate medical attention.

First Aid: Notes to Physician

Provide general supportive measures and treat symptomatically. Basic Treatment: Establish a patent airway. Suction if necessary. Watch for signs of respiratory insufficiency and assist ventilations if necessary. Administer oxygen by non-rebreather mask at 10 to 15 L/minutes. Monitor for shock and treat if necessary. For eye contamination, flush eyes immediately with water. Irrigate each eye continuously with normal saline during transport. Do not use emetics. For ingestion, rinse mouth and administer 5 mL/kg up to 200 mL of water for dilution if the patient can swallow, has a strong gag reflex, and does not drool. Administer activated charcoal. Advanced Treatment: Consider orotracheal or nasotracheal intubation for airway control in the patient who is unconscious. Start an IV with lactated Ringer's SRP: "To keep open", minimal flow rate. Watch for signs of fluid overload. For hypotension with signs of hypovolemia, administer fluid cautiously. Consider vasopressors if hypotensive with a normal fluid volume. Watch for signs of fluid overload. Use proparacaine, hydrochloride to assist eye irrigation.

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

Flash Point: Not flammable

Upper Flammable Limit (UEL): Not applicable

Auto Ignition: Not applicable

Rate of Burning: Not applicable

General Fire Hazards

Copper Oxychloride is not combustible, however may be corrosive and could present an inhalation and contact hazard to firefighters. Concentrated solutions of Copper Oxychloride may be flammable When involved in a fire, this material may decompose and produce corrosive and/or toxic gases.

Hazardous Combustion Products

Hydrogen Chloride, chlorine, and copper fumes.

Extinguishing Media

Use methods for surrounding fire.

Fire Fighting Equipment/Instructions

Firefighters should wear full protective clothing including self-contained breathing apparatus. Runoff from fire control or dilution water may be corrosive and/or toxic and cause pollution.

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

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

Method Used: Not applicable

Lower Flammable Limit (LEL): Not applicable

Flammability Classification: Not applicable

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*** Section 6 - Accidental Release Measures ***

Containment Procedures

Stop the flow of material, if this can be done without risk. Contain the discharged material. If sweeping of a contaminated area is necessary use a dust suppressant agent, which does not react with product (see Section 10 for incompatibility information).

Clean-Up Procedures

Wear appropriate protective equipment and clothing during clean-up. Shovel the material into waste container. Thoroughly wash the area after a spill or leak clean-up. Prevent spill rinsate from contamination of storm drains, sewers, soil or groundwater.

Evacuation Procedures

Evacuate the area promptly and keep upwind of the spilled material. Isolate the spill area to prevent people from entering. Keep materials which burn away from spilled material. In case of large spills, follow all facility emergency response procedures.

Special Procedures

Remove soiled clothing and laundry before reuse. Avoid all skin contact with the spilled material. Have emergency equipment readily available.

*** Section 7 - Handling and Storage ***

Handling Procedures

Do not breathe dust. Avoid all contact with skin and eyes. Use this product only with adequate ventilation. Wash thoroughly after handling.

Storage Procedures

Keep container tightly closed when not in use. Store containers in a cool, dry location, away from direct sunlight, sources of intense heat, or where freezing is possible. Material should be stored in secondary containers or in a diked area, as appropriate. Store containers away from incompatible chemicals (see Section 10, Stability and Reactivity). Storage areas should be made of fire-resistant materials. Post warning and "NO SMOKING" signs in storage and use areas, as appropriate. Use corrosion-resistant structural materials, lighting, and ventilation systems in the storage area. Floors should be sealed to prevent absorption of this material. Have appropriate extinguishing equipment in the storage area (i.e., sprinkler system, portable fire extinguishers).

Empty containers may contain residual particulates; therefore, empty containers should be handled with care. Do not cut, grind, weld, or drill near this container. Never store food, feed, or drinking water in containers that held this product. Keep this material away from food, drink and animal feed. Inspect all incoming containers before storage, to ensure containers are properly labeled and not damaged. Do not store this material in open or unlabeled containers. Limit quantity of material stored. Store in suitable containers that are corrosion-resistant.

*** Section 8 - Exposure Controls / Personal Protection ***

Exposure Guidelines

A: General Product Information

Follow the applicable exposure limits.

B: Component Exposure Limits

The exposure limits given are for Copper & inorganic Compounds, as Cu (7440-50-8), Copper fume as Cu or Copper dusts and mists, as Cu.

ACGIH: 1 mg/m³ TWA (dusts & mists)

0.2 mg/m³ TWA (fume)

OSHA: 1 mg/m³ TWA (dusts & mists)

0.1 mg/m³ TWA (fume)

NIOSH: 1 mg/m³ TWA (dusts & mists)

0.1 mg/m³ TWA (fume)

DFG MAKs 1 mg/m³ TWA Peak, 30 minutes, average value (dusts & mists)

0.1 mg/m³ TWA Peak, 30 minutes, average value (fume)

Engineering Controls

Use mechanical ventilation such as dilution and local exhaust. Use a corrosion-resistant ventilation system and exhaust directly to the outside. Supply ample air replacement. Provide dust collectors with explosion vents.

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

PERSONAL PROTECTIVE EQUIPMENT

The following information on appropriate Personal Protective Equipment is provided to assist employers in complying with OSHA regulations found in 29 CFR Subpart I (beginning at 1910.132). Please reference applicable regulations and standards for relevant details.

Personal Protective Equipment: Eyes/Face

Wear safety glasses with side shields (or goggles) and a face shield, if this material is made into solution. If necessary, refer to U.S. OSHA 29 CFR 1910.133.

Personal Protective Equipment: Skin

Wear impervious gloves, boots and coveralls to avoid skin contact. If necessary, refer to U.S. OSHA 29 CFR 1910.138.

Personal Protective Equipment: Respiratory

If respiratory protection is needed, use only protection authorized in the U.S. Federal OSHA Standard (29 CFR 1910.134), applicable U.S. State regulations. Oxygen levels below 19.5% are considered IDLH by OSHA. In such atmospheres, use of a full-facepiece pressure/demand SCBA or a full facepiece, supplied air respirator with auxiliary self-contained air supply is required under OSHA's Respiratory Protection Standard (1910.134-1998). If airborne concentrations are above the applicable exposure limits, use NIOSH-approved respiratory protection. If airborne concentrations are above the applicable exposure limits, use NIOSH-approved respiratory protection. The following NIOSH Guidelines for Copper dust and mists (as Cu) are presented for further information.

Up to 5 mg/m³: Dust and mist respirator.

Up to 10 mg/m³: Any dust and mist respirator except single-use and quarter mask respirators or any SAR.

Up to 25 mg/m³: SAR operated in a continuous-flow mode or powered air-purifying respirator with a dust and mist filter(s).

Up to 50 mg/m³: 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.

Up to 100 mg/m³: Positive pressure, full-facepiece SAR.

Emergency or Planned Entry into Unknown Concentrations or IDLH Conditions: Positive pressure, full-facepiece SCBA, or positive pressure, full-facepiece SAR with an auxiliary positive pressure SCBA.

Escape: Full-facepiece respirator with high-efficiency particulate filter(s), or escape-type SCBA.

NOTE: The IDLH concentration for Copper dusts and mists (as Cu) is 100 mg/m³.

Personal Protective Equipment: General

Have an eyewash fountain and safety shower available in the work area

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

Physical Properties: Additional Information

The data provided in this section are 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.

Appearance:	Pale green powder	Odor:	Odorless
Physical State:	Solid	pH:	Not available
Vapor Pressure:	Practically zero	Vapor Density:	Not applicable
Boiling Point:	Decomposes	Freezing/Melting Point:	140 deg C (at 760 mm Hg)
Solubility (H₂O):	Insoluble	Specific Gravity:	3.76-3.78 (H ₂ O = 1)
Softening Point:	Not available	Particle Size:	Not available
Molecular Weight:	427.16	Bulk Density:	45 lb/ft ³
		Chemical Formula:	3Cu(OH) ₂ •CuCl ₂

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

Chemical Stability

Copper Oxychloride is stable.

Chemical Stability: Conditions to Avoid

Excessive moisture or heat cause decomposition. Avoid high temperatures, exposure to air and incompatible materials.

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*** Section 10 - Chemical Stability & Reactivity Information (Continued) ***

Incompatibility

Incompatible with strong acids, sodium or potassium metals and ammonia vapors. Copper Oxychloride forms explosive materials in the presence of nitromethane. In the presence of moisture, or in solution, Copper Oxychloride can corrode metals. Many copper salts form dangerous acetylides. The copper acetylides formed in ammoniacal or caustic solutions with cupric salts and acetylene are more explosive than those derived from cuprous salts. Solutions of sodium hypobromite are decomposed by powerful catalytic action of cupric ions, even as impurities.

Hazardous Decomposition

Hydrogen Chloride, chloride and copper oxides.

Hazardous Polymerization

Will not occur.

*** Section 11 - Toxicological Information ***

Acute and Chronic Toxicity

A: General Product Information

Acute toxicity is largely due to its caustic properties. Harmful or fatal if swallowed. Product is an eye and skin irritant, and can cause burns. Product is a respiratory tract irritant, and inhalation may cause nose irritation, sore throat, coughing, and chest tightness and possibly, ulceration and perforation of the nasal septum. Acute oral toxicity of Copper Oxychloride in male gallus domesticus was studied. The median lethal dose was determined to be 1263 mg/kg body weight. Severe diarrhea and delayed mortality (3 to 6 days) was characteristic of Copper Oxychloride. Liver weight were nearly doubled and marked dose dependent testicular atrophy was noted.

Chronic: Long term skin overexposure to this product may lead to dermatitis and eczema and may result in discoloration of skin. Prolonged or repeated eye contact may cause conjunctivitis and possibly corneal abnormalities. Chronic overexposure to this product may cause liver and kidney damage, anemia and other blood cell abnormalities.

B: Component Analysis - LD50/LC50

Copper Oxychloride (1332-65-6)

LD₅₀ (Oral-Rat) 812 mg/kg; LD₅₀ (Oral-Mouse) 470 mg/kg; LD₅₀ (Oral-Chicken) 1263 mg/kg

B: Component Analysis - TDLo/LDLo

Copper Oxychloride (1332-65-6)

No data available.

Carcinogenicity

A: General Product Information

No information available.

B: Component Carcinogenicity

Copper dusts and mists, as Cu (7440-50-8)

EPA: EPA-D (Not Classifiable as to Human Carcinogenicity - inadequate human and animal evidence of carcinogenicity or no data available).

Epidemiology

No information available.

Neurotoxicity

Has not been identified.

Mutagenicity

No data available.

Teratogenicity

No data available.

Other Toxicological Information

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.

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*** Section 12 - Ecological Information ***

Ecotoxicity

A: General Product Information

Harmful to aquatic life in very low concentrations. Copper Oxychloride is toxic to fish and marine organisms when applied to streams, rivers, ponds or lakes.

B: Ecotoxicity

Copper Oxychloride (1332-65-64)

No specific data available. Copper Oxychloride is designated as a marine pollutant.

Environmental Fate

Copper Oxychloride:

Terrestrial Fate: Factors affecting the balance between copper in the parent rock and in the derivative soil include the degree of weathering, the nature and intensity of the soil formation, drainage, pH, oxidation-reduction potential, & the amount of organic matter in the soil. Since copper in rocks is likely to be more mobile under acidic than alkaline conditions, the relation of pH to copper in the environ has been of great concern to agriculturalists & biologists. Alkaline conditions in the soil and & the surface water favor precipitation of copper. Acid conditions promote solubility of copper, increase the concentration of ionic copper, and thereby change the microorganism and other aquatic animal populations, depending on tolerance for various levels of copper in solution. The reports of acid rain in various parts of the world are of serious concern. Due to the variety of conditions which influence the metal's availability, the total copper content of the soils is not an accurate indication of deficiencies or excess of copper in soil rooted plants.

Aquatic Fate: During bio-transformation, some copper complexes may be metabolized, however, there is no evidence that bio-transformation processes have a significant bearing on the aquatic fate of copper.

*** Section 13 - Disposal Considerations ***

Disposal Instructions

All wastes must be handled in accordance with local, state and federal regulations. Material can be converted to a less hazardous material by weak reducing agents followed by neutralization.

US EPA Waste Number & Descriptions

A: General Product Information

Not applicable.

B: Component Waste Numbers

No EPA Waste Numbers are applicable for this compound.

*** Section 14 - Transportation Information ***

NOTE: The shipping classification information 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.

US DOT Information

Shipping Name: Non-regulated.

Hazard Class: Not Applicable

UN/NA #: Not Applicable

Packing Group: Not Applicable

Required Label(s): None

Additional Info.: None.

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*** Section 14 - Transportation Information (Continued) ***

International Air Transport Association (IATA)

For Shipments by Air transport: We classify this product as hazardous (Class 9) when shipped by air because 49 CFR 173.140 (a). "For the purposes of this subchapter, miscellaneous hazardous material (Class 9) means a material which presents a hazard during transportation, but which does not meet the definition of any other hazard class. This class includes: (a) Any material which has an anesthetic, noxious, or other similar property which could cause extreme annoyance or discomfort to a flight crew member so as to prevent the correct performance of assigned duties."

UN: UN 3077

Proper Shipping Name: Environmentally hazardous substance, solid, n.o.s. (cupric oxychloride)

Hazard Class: 9

Packing Group: III

Passenger & Cargo Aircraft Packing Instruction: 911

Passenger & Cargo Aircraft Maximum Net Quantity: 400 kg

Limited Quantity Packing Instruction (Passenger & Cargo Aircraft): Y911

Limited Quantity Maximum Net Quantity (Passenger & Cargo Aircraft): 30 kg

Special Provisions: A97 A149

ERG Code: 9L

International Maritime Organization (I.M.O.) Classification

Copper Oxychloride is not regulated under I.M.O.

*** Section 15 - Regulatory Information ***

US Federal Regulations

A: General Product Information

As a "Copper Compound", Copper Oxychloride (CAS # 1332-65-6) is listed as a Priority and Toxic Pollutant under the Clean Water Act.

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 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.

C: Sara 311/312 Tier II Hazard Ratings:

Component	CAS #	Fire Hazard	Reactivity Hazard	Pressure Hazard	Immediate Health Hazard	Chronic Health Hazard
Copper Oxychloride	1332-65-6	No	No	No	Yes	Yes

State Regulations

A: General Product Information

California Proposition 65: Copper Oxychloride is not on the California Proposition 65 chemical lists.

State Regulations (continued)

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	7440-50-8	Yes	No	Yes	No	Yes	Yes
Copper, fume, dust and mists	N/A	No	Yes	No	Yes	No	Yes
Copper Oxychloride	1332-65-6	No	No	No	No	Yes	No

Other Regulations

A: General Product Information

No other information available.

B: Component Analysis - Inventory

Component	CAS #	TSCA	DSL	EINECS
Copper Oxychloride	1332-65-6	Yes	Yes	Yes

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*** Section 15 – Regulatory Information (Continued) ***

Other Regulations (continued)

C: Component Analysis - WHMIS IDL

Component	CAS #	Minimum Concentration
Copper Compounds, n.o.s.	Not applicable	1% disclosure requirement (item 431 [577])
Copper Oxychloride	1332-65-6	No disclosure limit

ANSI LABELING (Z129.1): WARNING! CAUSES SKIN, EYE AND RESPIRATORY TRACT IRRITATION OR BURNS. HARMFUL IF SWALLOWED, ABSORBED THROUGH SKIN (SOLUTIONS), OR INHALED. EFFECTS MAY BE DELAYED. MAY CAUSE SKIN SENSITIZATION IN SUSCEPTIBLE INDIVIDUALS. Do not taste or swallow. Do not get on skin or in eyes. Avoid breathing dusts or particulates. Keep container closed. Use only with adequate ventilation. Wash thoroughly after handling. Wear gloves, goggles, faceshields, suitable body protection, and NIOSH-approved respiratory protection, as appropriate. **FIRST-AID:** In case of contact, immediately flush skin or eyes with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. If inhaled, remove to fresh air. If ingested, do not induce vomiting. Get medical attention. **IN CASE OF FIRE:** Use water fog, dry chemical, CO₂, or "alcohol" foam. **IN CASE OF SPILL:** Absorb spill with inert material or neutralizing agent for acids. Place residue in suitable container. Consult Material Safety Data Sheet for additional information.

*** Section 16 - Other Information ***

Other Information

Chem One Ltd. ("Chem One") 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 Chem One 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, Chem One neither can nor intends to control the method or manner by which you use, handle, store, or transport Chem One products. If any materials are mentioned that are not Chem One products, appropriate industrial hygiene and other safety precautions recommended by their manufacturers should be observed. Chem One 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 Chem One's conditions of sale. This information could include technical inaccuracies or typographical errors. Chem One 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 E-mail us at Safety@chemone.com.

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

Contact: Sue Palmer-Koleman, PhD

Contact Phone: (713) 896-9966

Revision log:

08/04/00 2:30 PM SEP Changed company name, Sect 1 and 16, from Corporation to Ltd.
06/19/01 9:31 AM HDF Checked exposure limits; added info on hazards to Section 3, made changes to Sect 9; overall review, add SARA 311/312 Haz Ratings.
07/24/01 4:37 PM CLJ Add Shipments by Air information to Section 14, Changed contact to Sue, non-800 Chemtrec Num.
08/04/03 7:38 PM HDF Overall review of MSDS. Up-date of HMIS categories. Up-date of exposure limits for copper compounds. Up-date of incompatibility information. Up-date of Section 8 and Section 14.
06/22/05 2:20 PM SEP Update IATA Section 14
10/17/07 4:08 PM SEP Update IATA Section 14
10/10/08 3:45 PM DLY Changed Chem One Physical Address, Section 1

This is the end of MSDS # C1-118A