

MATERIAL SAFETY DATA SHEET

24 HR. EMERGENCY PHONE # CHEM-TREC 1-800-424-9300

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SECTION 1 Product Identification

CHEMICAL NAME: Copper (II) sulfate pentahydrate

CAS #: 7758-99-8

FORMULA: CuSO₄.5H₂O

SYNONYM: Cupric sulfate pentahydrate, Sulfuric acid, copper(2+)salt

SECTION 2 Composition and Information on Ingredients

INGREDIENT:	CAS #	%	ACGIH (TWA)	OSHA (PEL)
Title Compound	7758-99-8	100	no data	no data

SECTION 3 Hazards Identification

EMERGENCY OVERVIEW: Irritating to the skin, eyes and respiratory tract. Harmful if swallowed.

PRIMARY ROUTES OF EXPOSURE: Ingestion, inhalation

EYE CONTACT: Causes slight to mild irritation of the eyes

SKIN CONTACT: Causes slight to mild irritation of the skin.

INHALATION: Irritating to the nose, mucous membranes and respiratory tract.

INGESTION: Harmful if swallowed. Ingestion of copper compounds may lead to vomiting, exhaustion, anemia, convulsions and coma.

CHRONIC HEALTH EFFECTS: The dust of copper compounds may cause metal fume fever, hemolysis of the red blood cells and injury to the liver, lungs, kidneys and pancreas.

ACUTE HEALTH EFFECTS: Irritating to skin, eyes and respiratory tract. Harmful if swallowed. Ingestion of large amounts of copper compounds may lead to vomiting, exhaustion, anemia, convulsions and coma.

SECTION 4 First Aid Measures

EYE EXPOSURE: Immediately flush the eyes with copious amounts of water for at least 15 minutes. Assure flushing under eyelids. A victim may need assistance in keeping their eyelids open. Get immediate competent medical attention.

SKIN EXPOSURE: Wash affected area with water. Remove contaminated clothes if necessary. Seek medical assistance if irritation persists.

INHALATION: Remove the victim to fresh air. Closely monitor the victim for signs of respiratory problems, such as difficulty in breathing, coughing, wheezing, or pain. In such cases seek immediate medical assistance.

INGESTION: Seek medical assistance immediately. Keep the victim calm. Give the victim water (only if conscious). Induce vomiting only if directed by medical personnel.

SECTION 5 Firefighting Measures

FLASH POINT: not applicable

AUTO IGNITION TEMPERATURE: none

EXPLOSION LIMITS: none

EXTINGUISHING MEDIUM: none required

SPECIAL FIREFIGHTING PROCEDURES: If involved in a fire, fire fighters should be equipped with a NIOSH approved positive pressure self-contained breathing apparatus and full protective clothing.

HAZARDOUS COMBUSTION AND DECOMPOSITION PRODUCTS: If involved in a fire this material may emit toxic fumes of sulfur oxides.

UNUSUAL FIRE OR EXPLOSION HAZARDS: No unusual fire or explosion hazards.

SECTION 6 Accidental Release Measures

SPILL AND LEAK PROCEDURES: Small spills can be mixed with powdered sodium carbonate or ground limestone and swept up.

SECTION 7 Handling and Storage

HANDLING AND STORAGE: Store material in a tightly sealed container away from moisture.

SECTION 8 Exposure Controls and Personal Protection

EYE PROTECTION: Always wear approved safety glasses w/side shields, or safety goggles, face shield when handling a chemicals substance in the laboratory.

SKIN PROTECTION: Chemical-resistant.

VENTILATION: If possible, handle the material in an efficient fume hood.

RESPIRATOR: If in form of fine dust and ventilation is not available a respirator should be worn. The use of respirators requires a Respirator Protection Program to be in compliance with 29 CFR 19-10.134.

SECTION 9 Physical and Chemical Properties

COLOR AND FORM: blue xtl.

MOLECULAR WEIGHT: 159.60 (249.68)

MELTING POINT (DEG. C.): none

BOILING POINT: no data

VAPOR PRESSURE: not applicable

SPECIFIC GRAVITY: 2.284

SOLUBILITY IN WATER: 31.6g/100cc (0°C)

SECTION 10 Stability and Reactivity

STABILITY: air and moisture stable

HAZARDOUS POLYMERIZATION: no hazardous polymerization

CONDITIONS TO AVOID: none

INCOMPATIBILITY: Active metals
DECOMPOSITION PRODUCTS: none

SECTION 11 Toxicological Information

RTECS DATA: Oral (Human); TDLo: 272 mg/kg. Oral (Human); LDLo: 1088 mg/kg. Unreported (Human-man); LDLo: 221 mg/kg. Oral (rat); LD50: 300 mg/kg. Intraperitoneal (rat); LD50: 18700 ug/kg. Intraperitoneal (mouse); LD50: 33 mg/kg. Oral (dog); LDLo: 60 mg/kg. Subcutaneous (guinea pig); LDLo: 62 mg/kg. Oral (Mammal-domestic); LDLo: 5 mg/kg. Intraperitoneal (Mammal-species unspecified); LD50: 7500 ug/kg. Oral (rat); TDLo: 24 gm/kg/13W-C. Oral (mouse); TDLo: 3390 mg/kg/2W-C. Human Lymphocyte; DN, inhibition: 76 umol/L.

MUTAGENIC EFFECTS: no data

TETRATOGENIC EFFECTS: no data

CARCINOGENIC EFFECTS: no data

To the best of our knowledge the toxicological effects of this compound have not been fully investigated.

SECTION 12 Ecological Information

ECOLOGICAL INFORMATION: No information available

SECTION 13 Disposal Considerations

DISPOSAL: Dispose of in according to local state and federal regulations.

SECTION 14 Transportation Information

Non-hazardous

Non-hazardous

SECTION 15 Regulatory Information

TSCA: Not listed in the TSCA inventory

SARA (TITLE 313): Title compound : See category N100 for reporting.

SECTION 16 Other Information

DISCLAIMER: The information herein is believed to be accurate and reliable as of the date compiled. However, ProChem, Inc. makes no representation, warranty, or guarantee of any kind with respect to the information in this document or any use of the product based on the information.

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