

IMPORTANT
MATERIAL SAFETY DATA SHEET

READ CAREFULLY BEFORE USING CHEMICAL
OSHA requires that this form be kept on file.
Product No. SB 14929 M

Product Name **CUPRIC SULFATE, PENTAHYDRATE CRYSTALS**

Health Hazard	2
Flammability	0
Reactivity	0

Formula **Cu SO₄·5H₂O**
C.A.S. No. **7758-99-8**

SECTION I **IDENTIFICATION**
Principal Hazardous Component(s) **PEL**
Cupric Sulfate, Pentahydrate (7758-99-8)
Copper 25.2%* **TLV Units** 1.48 mg/L air

Melting Point (°F)	-4 H ₂ O at 110°C	Specific Gravity (H ₂ O=1)	2.284
Boiling Point (°F)	-5 H ₂ O at 150°C	Percent Volatile by Volume (%)	Not determined.
Vapor Pressure (mm Hg)	7.3 mg at 25°C	Evaporation Rate (-1)	Not determined.
Vapor Density (Air=1)	Not determined		
Solubility in Water	22.37% at 0°C 117.95 at 100°C		
Appearance & Odor	Blue Crystals or powder, no odor.		

* chemical subject to the reporting requirements of SARA Title III
SECTION IV **PHYSICAL AND CHEMICAL DATA**
Flash Point (Method Used) **N/A**
Flammable Limits in Air
Lower **N/A** Upper **N/A**
Extinguisher Media **Copper sulfate does not burn, nor will it support combustion. If stored with other combustible products, use water, CO₂ or dry chemical.**

Special Firefighting Procedures
If dry heated above 600°C, SO₂ is evolved. If water is used, it will solubilize the CuSO₄·5H₂O, and care should be used to keep such water out of streams or other water bodies.

Unusual Fire and Explosion Hazards
None

DEC 07 1995

D.O.T. **Not Regulated**

1.48 mg/liter air

9931

Effects of Overexposure:
Ingestion: Copper sulfate may induce severe gastroenteric distress (vomiting, gastroenteric pain, and local corrosion and hemorrhages). Prostration, anuria, hematuria, anemia, increase in white blood cells, coma, respiratory difficulties and circulatory failure. Eye: Corrosive to eye tissue. Chronic overexposure. Copper sulfate is reported to have a systemic effect in humans which effects the metabolic and excretion function of the liver and kidney.

Emergency and First Aid Procedures
Eyes: Irrigate eyes with large amounts of water for at least 15 minutes. Hold eyelids apart during irrigation. Send patient to a physician immediately. Skin: Wash or shower thoroughly with water. Remove and w/ contaminated clothes before reuse. Inhalation: Remove worker from exposure and seek medical aid. Ingestion: If swallowed, call a physician or Poison Control Center. Drink 1 or 2 glasses of water and induce vomiting by touching back of throat with finger, or if available by administering syrup of ipecac. Do not induce vomiting or give anything by mouth to an unconscious person.

SECTION VI **REACTIVITY DATA**
Stability Stable Unstable
Conditions to Avoid **NONE KNOWN.**

Incompatibility (Materials to Avoid)
None known when product remains dry. Product readily dissolves in water. Solutions are corrosive and stain. Store solutions in plastic, rubber, SS, 316, or 310 stainless steel.

Hazardous Decomposition Products
None at normal process temperatures and pressures. If dry heated above 1100°F (600°C) sulfur dioxide (SO₂) may be released.

Hazardous Polymerization
May Occur Will Not Occur
Conditions to Avoid **NONE KNOWN.**

SECTION VII **SPLIT OR LEAK PROCEDURES**
Steps to be Taken in Case Material is Released or Spilled
Contact appropriate, local, State, or Federal pollution control officials if warranted and especially if spill into public waters. If spill is confined to the use site, neutralize with lime or soda ash and use absorbent remove to approved landfill.

Waste Disposal Method
Discharge, treatment, or disposal may be subject to Federal, State or Local laws. These disposal guidelines are intended for the disposal of catalytic size quantities of product and should be used in conjunction with applicable local, State, and Federal laws. Sweep up crystal or powdered product and dispose in an approved landfill. If product is in confined solution, introduce lime or soda ash insoluble copper salts and then dispose in an approved landfill. Reportable Quantity of a spill is 101b24.54 kg.

SECTION VIII **SPECIAL PROTECTION INFORMATION**
Respiration Protection **NIOSH approve dust mask.**

Ventilation	Local Exhaust	Special
Protective Gloves	Mechanical (General)	Other
Other Protective Equipment	Rubber	

SECTION IX **SPECIAL PRECAUTIONS**
Long sleeve protective clothing and lab apron

Precautions to be Taken in Handling & Storing
Store product in a dry place.

Other Precautions:
Read label on container before using. Do not wear contact lenses when working with chemical. Under some use conditions copper sulfate dust may be irritating to the skin of some individuals. Problem use conditions seem to be aggravated by high humidity and sweating when copper sulfate is applied undiluted and dust contact occurs.

Approved by **Steven C. Quandt** Effective Date **06/27/95**
For laboratory use only. Not for household use. Keep out of reach of children.