

IMPORTANT MATERIAL SAFETY DATA SHEET

READ CAREFULLY BEFORE USING CHEMICAL
OSHA requires that this form be kept on file.

Product No. SB 14933 M

Product Name **CUPRIC SULFATE,**

PENTAHYDRATE CRYSTALS

SECTION II HAZARDOUS INFORMATION

Principal Hazardous Component(s)

Cupric Sulfate, Pentahydrate (7758-99-8)

Copper 25.2%*

% P.E.L. TLV Units
99 1 mg(Cu)/m³ 1.48 mg/Lair

A chemical subject to the reporting requirements of SARA Title III.

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.		

SECTION IV FIRE AND EXPLOSION HAZARD DATA

Flash Point (Method Used)	N/A	Flammable Limits in Air % by Volume	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, CO ₂ 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

D.O.T. Not Regulated

Health Hazard	2
Flammability	0
Reactivity	0

SECTION I NAME

Chemical Synonyms Blue Stone, Blue Vitrol

Formula CuSO₄·5H₂O

C.A.S. No. 7758-99-8

1.48 mg/liter air

9935

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 excretor 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 v 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	Conditions to Avoid
Stable ☒ Unstable ☐	None known.
Incompatibility (Materials to Avoid)	None known when product remains dry. Product readily dissolves in water. Solutions are corrosive to mild steel. Store solutions in plastic, rubber, 304, 347, or 316 stainless steel.
Hazardous Decomposition Products	None at normal process temperatures and pressures. If dry heated above 1100°F (600°C) sulfur dioxide (SO ₂) may be released.
Hazardous Polymerization	Conditions to Avoid
May Occur ☐ Will Not Occur ☒	None known.

SECTION VII SPILL 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. 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 10 lbs/4.54 kg.

SECTION VIII SPECIAL PROTECTION INFORMATION

Respiratory Protection (Specification)	NIOSH approve dust mask.
Ventilation	Local Exhaust ☒ Mechanical (Captured) ☒ Special ☐ Other ☐
Protective Gloves	Rubber
Other Protective Equipment	Long sleeve protective clothing and lab apron
Eye Protection	Chemical Goggles

SECTION IX SPECIAL PRECAUTIONS

Precautions to be Taken in Handling & Storing

Keep container tightly closed when not in use.

Store product in a dry place.

Other Precautions

Read label on container before using. Do not wear contact lenses when working with chemicals.

Under some use conditions copper sulfate dust may be irritating to the skin of some individuals. Problems 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 01/13/95 For laboratory use only. Not for household use. Keep out of reach of children.

The information contained herein is furnished without warranty of any kind. Employees should use this information only as a guide and not as a substitute for their own judgment.

DEC 07 1995