



Material Safety Data Sheet Copper (cupric) sulfate solutions

Section 1 - Chemical Product and Company Identification

MSDS Name:

Copper (cupric) sulfate solutions

Catalog Numbers:

LC13410, LC13420, LC13440, LC13442, LC13443, LC13445, LC14200

Synonyms:**Company Identification:**

LabChem, Inc.
200 William Pitt Way
Pittsburgh, PA 15238

Company Phone Number:

(412) 826-5230

Emergency Phone Number:

(800) 424-9300

CHEMTREC Phone Number:

(800) 424-9300

Section 2 - Composition, Information on Ingredients

CAS#	Chemical Name:	Percent
7732-18-5	Water	balance
7758-99-8	Cupric sulfate, pentahydrate	0.2-30

Section 3 - Hazards Identification

Emergency Overview

Appearance: Blue liquid.

Caution! May cause eye and skin irritation. May cause sensitization by inhalation and
By skin contact.

Target Organs: None known.**Potential Health Effects****Eye:**

May cause conjunctivitis.

Skin:

Itching and sensitization dermatitis can occur from contact.

Ingestion:

Ingestion may result in salivation with metallic taste, nausea, vomiting, gastric pain, hemorrhagic gastritis, and bloody diarrhea.

Inhalation:

Inhalation irritates mucous membranes, may damage capillaries, liver, kidneys, and cause central nervous system excitation followed by depression.



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Chronic:

Chronic inhalation may cause nasal septum ulceration and perforation. Individuals with Wilson's disease are unable to metabolize copper. Thus, copper accumulates in various tissues and may result in liver, kidney, and brain damage. Copper salts may also cause extensive damage to the kidneys, liver, and capillaries with CNS depression, hemolytic anemia, joint pain, gastric hemorrhage and joint pain indicating intoxication.

Section 4 - First Aid Measures

Eyes:

Flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower lids until no evidence of chemical remains. Get medical aid at once.

Skin:

Get medical aid. Immediately flush skin with plenty of soap and water for at least 15 minutes while removing contaminated clothing and shoes. Remove contaminated clothing and shoes.

Ingestion:

Give conscious non-convulsive victim large quantities of water or milk and remove by gastric lavage unless victim is already vomiting.

Inhalation:

Give artificial respiration if necessary. Get medical aid. Keep victim warm, at rest. Move victim to fresh air.

Notes to Physician:

Treat symptomatically and supportively.

Antidote:

The use of d-Penicillamine should be determined by qualified medical personnel.

Section 5 - Fire Fighting Measures

General Information:

Negligible fire and explosion hazard when exposed to heat or flame. Move container if possible, avoid breathing vapors or dust.

Extinguishing Media:

For small fires, use dry chemical, carbon dioxide, water spray or alcohol-resistant foam.

Autoignition Temperature:

No information found.

Flash Point:

No information found.

NFPA Rating:

CAS# 7732-18-5: Not published.

CAS# 7758-99-8: Not published.

Explosion Limits:

Lower: Upper:

Section 6 - Accidental Release Measures

General Information:

Use proper personal protective equipment as indicated in Section 8.



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Spills/Leaks:

Absorb spills with absorbent (vermiculite, sand, fuller's earth) and place in plastic bags for later disposal. Material may be neutralized to pH 7 with citric acid or other suitable neutralizing agent.

Section 7 - Handling and Storage

Handling:

Wash thoroughly after handling. Avoid breathing dust, vapor, mist, or gas.

Storage:

Store capped at room temperature. Protect from heat and incompatibles.

Section 8 - Exposure Controls, Personal Protection

Engineering Controls:

Provide local exhaust or general dilution ventilation.

Exposure Limits:

Chemical Name:	ACGIH	NIOSH	OSHA
Water	None of the components are on this list.	None of the components are on this list.	None of the components are on this list.
Cupric sulfate, pentahydrate	None of the components are on this list.	None of the components are on this list.	None of the components are on this list.

OSHA Vacated PELs:

Personal Protective Equipment

Eyes:

Do not wear contact lenses when working with chemicals. An eye wash fountain should be available in the immediate work area. Wear splash-proof safety goggles.

Skin:

Wear appropriate protective gloves to prevent skin exposure.

Clothing:

Wear appropriate protective clothing to prevent skin exposure.

Respirators:

Firefighting-- any self-contained breathing apparatus with full facepiece operated in pressure-demand mode.

50mg/M3 HiEPF/SAF/SCBAF.

200mg/M3 SAF:PD,PP,CF.

Firefighting- SCBAF:PD.PP.

Section 9 - Physical and Chemical Properties

Physical State: Clear liquid

Color: Blue

Odor: Odorless



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pH: 3-5
Vapor Pressure: 14mm Hg @20°C
Vapor Density: 0.7 (H₂O)
Evaporation Rate: < ether
Viscosity: No information found.
Boiling Point: > 212°F (> 100.00°C)
Freezing/Melting Point: < 32°F (< 0.00°C)
Decomposition Temperature: No information found.
Solubility in water: Soluble.
Specific Gravity/Density: 1.0
Molecular Formula: No information found.
Molecular Weight: No information found.

Section 10 - Stability and Reactivity

Chemical Stability:

Stable under normal temperatures and pressures.

Conditions to Avoid:

Incompatible materials.

Incompatibilities with Other Materials:

Hydroxylamine, magnesium, acetylene.

Hazardous Decomposition Products:

Oxides of sulfur and copper.

Hazardous Polymerization:

Has not been reported.

Section 11 - Toxicological Information

RTECS:

CAS# 7732-18-5: ZC0110000.

CAS# 7758-99-8: unlisted.

LD50/LC50:

CAS# 7732-18-5:

Oral, rat: LD50 = >90 mL/kg.

CAS# 7758-99-8: No information found.

Carcinogenicity:

CAS# 7732-18-5: Not listed as a carcinogen by ACGIH, IARC, NIOSH, NTP, OSHA, or CA Prop 65.

CAS# 7758-99-8: Not listed as a carcinogen by ACGIH, IARC, NIOSH, NTP, OSHA, or CA Prop 65.

Epidemiology:

Copper sulfate solutions may irritate eyes, skin, respiratory, and mucous membranes. Poisoning may affect the central nervous system, liver, kidneys, and capillaries.

Teratogenicity:

Reproductive:

Mutagenicity:

Neurotoxicity:



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Section 12 - Ecological Information

No information found.

Section 13 - Disposal Considerations

Dispose of in accordance with Federal, State, and local regulations.

Section 14 - Transport Information

US DOT

Copper Sulfate <1% W/W

Shipping Name: Not regulated.

Hazard Class:

UN Number:

Packing Group:

Copper Sulfate >=1% W/W

Not regulated, except when shipping by vessel
(9 UN3082 PG III)

Section 15 - Regulatory Information

US Federal

TSCA:

CAS# 7732-18-5 is listed on the TSCA Inventory.

CAS# 7758-99-8 is not listed on the TSCA Inventory. It is a hydrate. The anhydrous form is on the TSCA inventory.

SARA Reportable Quantities (RQ):

CAS# None of the components are on this list.

CERCLA/SARA Section 313:

None of the components are on this list.

OSHA - Highly Hazardous:

None of the components are on this list.

US State

State Right to Know:

California Regulations:

European/International Regulations

Canadian DSL/NDSL:

CAS# 7732-18-5 is listed on Canada's DSL List.

Canada Ingredient Disclosure List:

CAS# 7732-18-5 is not listed on Canada's Ingredient Disclosure List.

CAS# 7758-99-8 is not listed on Canada's Ingredient Disclosure List.



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Section 16 - Other Information

MSDS Creation Date: February 16, 1998

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