



ALDON CORPORATION

MATERIAL SAFETY DATA SHEET

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MSDS No. CC 553
Effective Date February 18, 1999

SECTION I NAME 24 HOUR EMERGENCY ASSISTANCE

Product	COPPER SULFATE 0.1 - 1.0 MOLAR	 <p>CHEMTREC 800-424-9300 Day 716-226-6177</p> <p>NFPA HAZARD RATING</p> <table border="1"> <tr> <td>LEAST</td> <td>SLIGHT</td> <td>MODERATE</td> <td>HIGH</td> <td>EXTREME</td> </tr> <tr> <td>0</td> <td>1</td> <td>2</td> <td>3</td> <td>4</td> </tr> </table> <p>HMIS *</p> <table border="1"> <tr> <td>Health</td> <td>2</td> </tr> <tr> <td>Fire</td> <td>0</td> </tr> <tr> <td>Reactivity</td> <td>0</td> </tr> </table>	LEAST	SLIGHT	MODERATE	HIGH	EXTREME	0	1	2	3	4	Health	2	Fire	0	Reactivity	0
LEAST	SLIGHT		MODERATE	HIGH	EXTREME													
0	1		2	3	4													
Health	2																	
Fire	0																	
Reactivity	0																	
Chemical Synonyms	Cupric Sulfate, Water Solution																	
Formula	Mixture. See Section II.																	
Unit Size	up to 4 Lt.																	
C.A.S. No.	Mixture. See Section II.																	

SECTION II INGREDIENTS OF MIXTURES

Principal Component(s)	%	TLV Units
Copper Sulfate: (CAS No. 7758-98-7)	1.59 -15.96%	See Section V.
Water: (CAS No. 7732-18-5)	84.04 - 98.41%	None established.
WARNING! IRRITANT TO SKIN, EYES AND MUCOUS MEMBRANES. HARMFUL IF SWALLOWED.		

SECTION III PHYSICAL DATA

Melting Point (°F)	Freezes approx. 0°C (32°F)	Specific Gravity (H ₂ O = 1)	Approx. 1.0
Boiling Point (°F)	Approx. 100°C (212°F)	Percent Volatile by Volume (%)	84.04 - 98.41%
Vapor Pressure (mm Hg)	14 (water).	Evaporation Rate (Water = 1)	Slightly less than 1.
Vapor Density (Air=1)	0.7 (water).		
Solubility in Water	Complete.		
Appearance & Odor	Clear, water white, water like liquid; no odor.		

SECTION IV FIRE AND EXPLOSION HAZARD DATA

Flash Point (Method Used)	Non-flammable.	Flammable Limits in Air % by Volume	NA	Lower	Upper
Extinguisher Media	Use any media suitable for extinguishing supporting fire.				

SPECIAL FIREFIGHTING PROCEDURES

If involved in fire situation, wear a NIOSH/MSHA-approved self-contained breathing apparatus. Use flooding amounts of water in early stages of fire.

UNUSUAL FIRE AND EXPLOSION HAZARDS

In fire conditions resulting in the evaporation of the water of solution hazardous decomposition products may be produced as dust or fume.

D.O.T. **NON-REGULATED.**

Approved by U.S. Department of Labor "essentially similar" to form OSHA-20

SECTION V HEALTH HAZARD DATA

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Threshold Limited Value None established for this mixture.

Effects of Overexposure **INGESTION:** May cause irritation, nausea, vomiting, abdominal pain, hemorrhagic gastritis and diarrhea. **EYES:** Contact may produce conjunctivitis, corneal ulceration and turbidity and palpebral edema. **SKIN:** May cause allergic skin reaction. **INHALATION AS MIST:** Causes upper respiratory irritation and congestion of the nasal and mucous membranes.

Emergency and First Aid Procedures **INGESTION:** If swallowed, if conscious, give one or two glasses of water to drink, induce vomiting and call a physician. Never give anything by mouth to an unconscious person. **SKIN:** Flush with water, then wash with mild soap and water. **EYES:** Flush thoroughly with water, lifting upper and lower eyelids occasionally. If irritation develops or persists, get medical attention. **INHALATION AS MIST:** Remove to fresh air. If discomfort or illness develops, get medical attention.

SECTION VI REACTIVITY DATA

Stability	Unstable		Conditions to Avoid Excessive temperature to cause evaporation.
	Stable	X	

Incompatibility (Materials to Avoid) Nitric acid, corrosive to mild steel.

Hazardous Decomposition Products Thermal decomposition, temperature above 1100°F (600°C) sulfur dioxide (SO₂) may be released and copper oxide dust.

Hazardous Polymerization	Conditions to Avoid	
	May Occur	Will Not Occur
		X

Not applicable.

SECTION VII SPILL OR LEAK PROCEDURES

Steps to be taken in case material is released or spilled Absorb spill in vermiculite, sand, earth, paper towel and place in a suitable container. Wash spill area with soap and water.

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 catalog-size quantities only. Dispose of in an approved chemical landfill or contract with a licensed waste disposal service.

SECTION VIII SPECIAL PROTECTION INFORMATION

Respiration Protection (Specify Type) None needed in normal laboratory handling. If misty conditions prevail, work in ventilation hood or wear a NIOSH/MSHA-approved respirator.

Ventilation	Local Exhaust	Not required.	Special	No.
	Mechanical (General)	Not required.	Other	No.

Protective Gloves	Rubber.	Eye Protection	Chemical safety glasses.
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Other Protective Equipment Lab coat, apron, eye wash station, proper gloves.

SECTION IX SPECIAL PRECAUTIONS

Precautions to be Taken in Handling & Storing Store in a cool place. Wash thoroughly after handling. Keep container tightly closed when not in use.

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

Avoid contact with skin, eyes and mucous membranes. Remove and wash contaminated clothing.

For laboratory use only. Not for drug, food or household use. Keep out of reach of children.

Revision No. 3	Date 2/18/99	Approved Michael Raszeja	Chemical Safety Coordinator MR
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