



ALDON CORPORATION

MATERIAL SAFETY DATA SHEET

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MSDS No. FF 40
Effective Date March 16, 1998

SECTION V HEALTH HAZARD DATA

FF 40

Threshold Limited Value (AIR) As Copper metal: 1.0 mg/m³ for 8 hr. working day. Copper (fume) TLV: 0.2 mg/m³.

Effects of Overexposure **INGESTION:** Although a strong emetic, can cause copper poisoning and/or death. Symptoms: Nausea, vomiting, diarrhea, gastric pain. **EYES:** Corrosive, causes conjunctivitis. **SKIN:** May cause allergic reaction. **INHALATION:** Causes upper respiratory irritation and congestion of the nasal 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 physician. Never give anything by mouth to an unconscious person. **EYES:** Flush thoroughly with water for at least 15 minutes, lifting lower and upper eyelids occasionally. Get medical attention. **SKIN:** Flush with water, then wash with mild soap and water. **INHALATION:** Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention.

SECTION VI REACTIVITY DATA

Stability	Unstable		Conditions to Avoid	Excessive temperature and heat.
	Stable	X		

Incompatibility (Materials to Avoid) Solution is corrosive to mild steel.

Hazardous Decomposition Products If dry heated above 1100°F (600°C) sulfur dioxide (SO₂) may be released.

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 Sprinkle lime or soda ash on spill to form insoluble copper salts. Sweep up and place in a suitable container for disposal. Avoid contaminating public 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 chemical waste disposal agency.

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	None required.	Special	No.
	Mechanical (General)	None required.	Other	No.

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

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.

Do not take internally. Avoid contact with eyes or prolonged contact with skin. Remove and wash contaminated clothing.

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

Revision No. 5	Date 3/16/98	Approved Michael Raszeja	Chemical Safety Coordinator MR
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The information contained herein is furnished without warranty of any kind. Employers should use this information only as a supplement to other information gathered by them and must make independent determinations of suitability and completeness of information from all sources to assure proper use of these materials and the safety and health of employees. * Hazardous Materials Industrial Standards. Printed on recycled paper.

SECTION I NAME 24 HOUR EMERGENCY ASSISTANCE

Product	FEHLING'S SOLUTION (A)	 CHEMTREC 800-424-9300 Day 716-226-6177 NFPA HAZARD RATING LEAST SLIGHT MODERATE HIGH EXTREME 0 1 2 3 4 HMIS *
Chemical Synonyms	Fehling's Copper Solution	
Formula	CuSO ₄ /Water Solution	
Unit Size	up to 4 Lt.	
C.A.S. No.	None assigned.	

SECTION II INGREDIENTS OF MIXTURES

Principal Component(s)	%	TLV Units
Copper Sulfate (Cupric Sulfate): (CAS No. 7758-98-7)	7%	See Section V.
Water: (CAS No. 7732-18-5)	93%	None established.

CAUTION! IRRITANT. MAY BE HARMFUL IF SWALLOWED.

MAY CAUSE SKIN REACTION.

SECTION III PHYSICAL DATA

Melting Point (°F)	Freezes Approx. -5°C (23°F)	Specific Gravity (H₂O = 1)	Approx. 1.1
Boiling Point (°F)	Approx. 105°C (221°F)	Percent Volatile by Volume (%)	93%
Vapor Pressure (mm Hg)	14 (water)	Evaporation Rate (Ether = 1)	Greater than 1.
Vapor Density (Air=1)	0.7 (water)		
Solubility in Water	Complete.		
Appearance & Odor	Clear, blue colored, liquid; no odor.		

SECTION IV FIRE AND EXPLOSION HAZARD DATA

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

SPECIAL FIREFIGHTING PROCEDURES

Wear a NIOSH/MSHA-approved, self-contained breathing apparatus. Copper Sulfate does not burn, nor will it support combustion. If water is used to extinguish fire, care should be used to keep such water out of streams or other water bodies.

UNUSUAL FIRE AND EXPLOSION HAZARDS

If dry heated above 600°C, Sulfur Dioxide (SO₂) is evolved.

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

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