



Material Safety Data Sheet
 May be used to comply with
 OSHA's Hazard Communication Standard,
 29 CFR 1910.1200. Standard must be
 consulted for specific requirements.

U.S. Department of Labor
 Occupational Safety and Health Administration
 (Non-Mandatory Form)
 Form approved
 OMB No. 1218-0072

IDENTITY (As Used on Label and List)
 Acid Copper Plating Solution

Note: Blank spaces are not permitted. If any item is not applicable, or no information is available, the space must be marked to indicate that.

Section I

Manufacturer's Name	Emergency Telephone Number 1-800-255-3924
Address (Number, Street, City, State, and ZIP Code)	Telephone Number for Information
	Date Prepared REVISED DECEMBER 18, 1998
	Signature of Preparer (optional)

Section II — Hazardous Ingredients/Identity Information

Hazardous Components (Specific Chemical Identity; Common Name(s))	OSHA PEL	ACGIH TLV	Other Limits Recommended	% (optional)
Sulfuric Acid	Cas# 7664-93-9	1 mg/m ³		
Copper Sulfate	Cas# 7758-99-8	1 mg/m ³ as Cu mist 0.2 mg/m ³ as Cu fume		

Section III — Physical/Chemical Characteristics

Boiling Point	212°F	Specify Gravity (H ₂ O = 1)	1.05
Vapor Pressure (mm Hg.)	N.A.	Melting Point	N.A.
Vapor Density (AIR = 1)	N.A.	Evaporation Rate (Butyl Acetate = 1)	N.A.
Solubility in Water	Complete		
Appearance and Odor	Transparent blue liquid. Odorless.		

Section IV — Fire and Explosion Hazard Data

Flash Point (Method Used)	N.A.	Flammable Limits	N.A.	LEL	N.A.	UEL	N.A.
Extinguishing Media	CO ₂ , dry chemical preferred.						
Special Fire Fighting Procedures	Wear self-contained breathing apparatus & full protective clothing. Avoid flushing to sewer or stream; Cu toxic to aquatic organisms. Neutralize run off with lime, soda ash, etc. to prevent corrosion of metal & prevent formation of hydrogen gas.						
UNUSUAL FIRE & EXPLOSION HAZARDS	Hydrogen gas may be generated. See above statement.						

Section V — Reactivity Data

Stability	Unstable		Conditions to Avoid
	Stable	X	N.A.

Incompatibility (Materials to Avoid) Alkalies.

Hazardous Decomposition or Byproducts Hydrogen gas and copper fume (above 560°C).

Hazardous Polymerization	May Occur		Conditions to Avoid
	Will Not Occur	X	N.A.

Section VI — Health Hazard Data

Route(s) of Entry: Inhalation? Yes Skin? Yes Ingestion? Yes

Health Hazards (Acute and Chronic) ACUTE: corrosive to eyes. CHRONIC: irritates mucous membranes, eyes, skin, gastro-intestinal tract.

Signs and Symptoms of Exposure Irritation of mucous membranes, eyes, skin, gastro-intestinal tract.

Emergency and First Aid Procedures Call physician for serious eye contact, inhalation, ingestion.

Wash eyes (under lids) copiously with water for 15 minutes immediately after contact. If swallowed give two glasses milk of magnesia, milk, or water. Do not induce vomiting. Call physician; gastric lavage may be indicated. See physician for dermatitis.

Section VII — Precautions for Safe Handling and Use

Steps to Be Taken in Case Material is Released or Spilled Wash down with water. Neutralize washings with lime or soda ash. Wash site with soda ash solution.

Waste Disposal Method Follow local regulations. Contains copper.

Precautions to Be Taken in Handling and Storing Normal for liquids in plastic containers, store at moderate temperatures in closed containers.

Other Precautions None

Section VIII — Control Measures

Respiratory Protection (Specify, Type) None

Ventilation	Local Exhaust	Yes	Special	N.A.
	Mechanical (General)	Yes	Other	N.A.

Protective Gloves Rubber gloves Eye Protection Face shield and goggles

Other Protective Clothing or Equipment Chemical apron

Work/Hygienic Practices Wash thoroughly with soap and water after use.