



**ALDON CORPORATION**

# MATERIAL SAFETY DATA SHEET

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MSDS No. CC 515  
Effective Date February 17, 1999

## SECTION I NAME 24 HOUR EMERGENCY ASSISTANCE

<b>Product</b>	CUPRIC NITRATE, TRIHYDRATE	 CHEMTREC <b>800-424-9300</b> Day 716-226-6177 NFPA HAZARD RATING LEAST SLIGHT MODERATE HIGH EXTREME 0 1 2 3 4 HMIS * 0 1 2 3 4
<b>Chemical Synonyms</b>	Copper (II) Nitrate, Trihydrate	
<b>Formula</b>	Cu(NO <sub>3</sub> ) <sub>2</sub> •3H <sub>2</sub> O	
<b>Unit Size</b>	up to 2.5 Kg.	
<b>C.A.S. No.</b>	10031-43-3	

## SECTION II INGREDIENTS OF MIXTURES

Principal Component(s)	%	TLV Units
Cupric Nitrate, Trihydrate	100%	See Section V.

**WARNING! STRONG OXIDIZER! HARMFUL IF SWALLOWED OR INHALED. IRRITANT TO SKIN, EYES AND MUCOUS MEMBRANES.**

## SECTION III PHYSICAL DATA

Melting Point (°F)	114.5°C (238°F)	Specific Gravity (H <sub>2</sub> O = 1)	2.32
Boiling Point (°F)	Decomposes at 170°C (338°F)	Percent Volatile by Volume (%)	Negligible as solid.
Vapor Pressure (mm Hg)	Negligible as solid.	Evaporation Rate (=1)	N/A
Vapor Density (Air=1)	8.05		
Solubility in Water	Freely soluble.		
Appearance & Odor	Small blue, deliquescent crystals; slight Nitric acid odor.		

## SECTION IV FIRE AND EXPLOSION HAZARD DATA

<b>Flash Point (Method Used)</b>	Not applicable.	Flammable Limits in Air % by Volume	NA	Lower	Upper
<b>Extinguisher Media</b>	Flooding amounts of water in early stages.				

### SPECIAL FIREFIGHTING PROCEDURES

In fire conditions, wear a NIOSH/MSHA-approved self-contained breathing apparatus and full protective clothing. Watch for scattering of molten material, which can spread fire.

(1996 EMERGENCY RESPONSE GUIDEBOOK, DOT P 5800.7, GUIDE PAGE NO. 140)

### UNUSUAL FIRE AND EXPLOSION HAZARDS

See Section VI. Cupric Nitrate is a strong oxidizing material. In contact with readily oxidizable materials, it may react rapidly enough to cause ignition, violent combustion or explosion. Increases flammability of any combustible substance. Fire or excessive heat may produce hazardous decomposition products.

D.O.T. **Nitrates, inorganic, n.o.s., (Cupric nitrate), 5.1, UN 1477, PG II**

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** (Air) As copper metal: 1.0 mg/m<sup>3</sup> for 8 hr. working day. Copper (fume) TLV 0.2 mg/m<sup>3</sup>. RTECS No. GL7875000 Toxicity data: orl-rat LD50: 940 mg/kg.

**Effects of Overexposure** **TARGET ORGANS AFFECTED:** Respiratory and digestive systems, liver, kidneys. **INGESTION:** Can cause copper poisoning and/or death. May cause burns of the mouth, throat and stomach. Nausea, vomiting, diarrhea, and gastric pain. **EYES:** Corrosive; causes conjunctivitis. **SKIN:** May cause allergic skin reaction. **INHALATION:** 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, induce vomiting and call a physician. Never give anything by mouth to an unconscious person. **EYES:** Immediately flush thoroughly with water for 15 minutes, lifting lower and upper eyelids occasionally. Get immediate 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		<b>Conditions to Avoid</b>	Temperatures of or above 338°F, which causes decomposition.
Stable	X		

**Incompatibility (Materials to Avoid)** Strong oxidizing agents. Aluminum cyanides, Esters, Sodium Hypophosphite, Stannous Chloride, and Thiocyanates.

**Hazardous Decomposition Products** Oxides of Nitrogen (NO<sub>x</sub>), copper oxides, and copper dust.

**Hazardous Polymerization**  

<b>May Occur</b>	<b>Will Not Occur</b>	<b>Conditions to Avoid</b>	Not applicable.
	X		

## 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 salt. Sweep up and place in a suitable container for proper disposal. Wash 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 contact a licensed chemical waste disposal agency.

## SECTION VIII SPECIAL PROTECTION INFORMATION

**Respiration Protection (Specify Type)** None should be needed in normal laboratory use. If dusty conditions prevail, work in ventilation hood or use a NIOSH/MSHA-approved dust mask.

**Ventilation**  

Local Exhaust	Recommended.	Special	No.
Mechanical (General)	Recommended.	Other	No.

**Protective Gloves** Rubber. **Eye Protection** Chemical safety goggles.

**Other Protective Equipment** Safety glasses, smock, apron, proper gloves, eye wash station, and ventilation hood.

## SECTION IX SPECIAL PRECAUTIONS

**Precautions to be Taken in Handling & Storing** Store in a cool, dry place, away from oxidizable and flammable materials. 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. Use with adequate ventilation. 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 2/17/99 | Approved Michael Raszeja | Chemical Safety Coordinator MR

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