

## Section 1 Chemical Product and Company Information

Page E1 of E2



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**CHEMTREC 24 Hour Emergency**  
**Phone Number (800) 424-9300**  
For laboratory use only.  
Not for drug, food or household use.

**Product** COPPER(II) NITRATE, TRIHYDRATE

**Synonyms** Cupric Nitrate, Trihydrate

## Section 2 Hazards Identification

**Signal word:** DANGER

**Pictograms:** GHS03 / GHS07 / GHS09

**Target organs:** Liver

**GHS Classification:**

Oxidizing solid (Category 2)  
Acute toxicity, oral (Category 4)  
Skin irritation (Category 2)  
Eye irritation (Category 2A)  
Aquatic acute (Category 1)  
Aquatic chronic (Category 1)

**GHS Label information: Hazard statement:**

H272: May intensify fire; oxidizer.  
H302: Harmful if swallowed.  
H315: Causes skin irritation.  
H319: Causes serious eye irritation.  
H410: Very toxic to aquatic life with long lasting effects.

**Precautionary statement:**

P210: Keep away from heat/sparks/open flames/hot surfaces. No smoking.  
P220: Keep away from clothing/incompatible/combustible materials.  
P221: Take any precaution to avoid mixing with combustibles and reducing agents.  
P264: Wash hands thoroughly after handling.  
P270: Do not eat, drink or smoke when using this product.  
P273: Avoid release to the environment.  
P280: Wear protective gloves/protective clothing/eye protection/face protection.  
P301+P330+P312: IF SWALLOWED: Rinse mouth. Call a POISON CENTER or doctor if you feel unwell.  
P305+P351+P338: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.  
P337+P313: If eye irritation persists: Get medical attention.  
P302+P352: IF ON SKIN: Wash with plenty of water and soap.  
P332+P313: If skin irritation occurs: Get medical attention.  
P362+P364: Take off contaminated clothing and wash it before reuse.  
P370+P378: In case of fire: Use water to extinguish.  
P391: Collect spillage.  
P501: Dispose of contents/container to a licensed chemical disposal agency in accordance with local/regional/national regulations.

Ca Prop 65 - This product does not contain any chemicals known to the State of California to cause cancer, birth defects, or any other reproductive harm.

## Section 3 Composition / Information on Ingredients

Chemical Name	CAS #	%	EINECS
Cupric nitrate	10031-43-3	100%	221-838-5 [anhydrous]

## Section 4 First Aid Measures

**INGESTION:** HARMFUL IF SWALLOWED. Call physician or Poison Control Center immediately. Induce vomiting only if advised by appropriate medical personnel. Never give anything by mouth to an unconscious person.

**INHALATION:** HARMFUL IF INHALED. CAUSES RESPIRATORY TRACT IRRITATION. Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention.

**EYE CONTACT:** CAUSES SERIOUS EYE IRRITATION. Check for and remove contact lenses. Flush thoroughly with water for at least 15 minutes, lifting upper and lower eyelids occasionally. Get immediate medical attention.

**SKIN ABSORPTION:** CAUSES SKIN IRRITATION. Remove contaminated clothing. Flush thoroughly with mild soap and water. If irritation occurs, get medical attention.

## Section 5 Fire Fighting Measures

**Suitable Extinguishing Media:** Use water. Do not use dry chemicals or foams. CO<sub>2</sub> or Halon® may provide limited control.

**Protective Actions for Fire-fighters:** In fire conditions, wear a NIOSH/MSHA-approved self-contained breathing apparatus and full protective gear. Use water spray to keep fire-exposed containers cool.

**Specific Hazards:** During a fire, irritating and highly toxic gases may be generated by thermal decomposition or combustion. Substance is a strong oxidizer which releases oxygen on heating. The oxygen will intensify any fire in the immediate surrounding. Contact with easily oxidizable, combustible substance or powdered metals may cause fire or explosion upon ignition from any source. Strong oxidizers may explode when shocked, or if exposed to heat, flame, or friction. Also may act as initiation source for dust or vapor explosions.

## Section 6 Accidental Release Measures

**Personal Precautions:** Evacuate personnel to safe area. Use proper personal protective equipment as indicated in Section 8. Provide adequate ventilation.

**Environmental Precautions:** Avoid runoff into storm sewers and ditches which lead to waterways.

**Containment and Cleanup:** Recover for reuse if not contaminated. Remove all sources of ignition. Sweep or vacuum up and place in a suitable container for proper disposal. Wash spill area with soap and water.

**Precautions for Safe Handling:** Read label on container before using. Do not wear contact lenses when working with chemicals. Keep out of reach of children. Avoid contact with eyes, skin and clothing. Do not inhale dusts. Use with adequate ventilation. Avoid ingestion. Wash thoroughly after handling. Remove and wash clothing before reuse.

**Conditions for Safe Storage:** Store in a cool, dry, well-ventilated area away from incompatible substances. Keep away from ignition sources.

## Section 8 Exposure Controls / Personal Protection

Exposure Limits:	Chemical Name	ACGIH (TLV)	OSHA (PEL)	NIOSH (REL)
	Copper, dusts & mists, as Cu	TWA: 1 mg/m <sup>3</sup>	TWA: 1 mg/m <sup>3</sup>	TWA: 1 mg/m <sup>3</sup>

**Engineering controls:** Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower and fire extinguishing material. Personnel should wear safety glasses, goggles, or faceshield, lab coat or apron, appropriate protective gloves. Use adequate ventilation to keep airborne concentrations low.

**Respiratory protection:** None should be needed in normal laboratory handling at room temperatures. If dusty conditions prevail, work in fume hood or wear a NIOSH/MSHA-approved respirator.

## Section 9 Physical &amp; Chemical Properties

<b>Appearance:</b> Solid. Blue, deliquescent crystals	<b>Evaporation rate ( = 1):</b> Data not available	<b>Partition coefficient:</b> Data not available
<b>Odor:</b> Slight nitric acid odor.	<b>Flammability (solid/gas):</b> Data not available.	<b>Auto-ignition temperature:</b> Data not available
<b>Odor threshold:</b> Data not available.	<b>Explosion limits: Lower / Upper:</b> Data not available	<b>Decomposition temperature:</b> Data not available.
<b>pH:</b> Data not available.	<b>Vapor pressure (mm Hg):</b> Negligible	<b>Viscosity:</b> Data not available.
<b>Melting / Freezing point:</b> 114.5°C (238°F)	<b>Vapor density (Air = 1):</b> 8.05	<b>Molecular formula:</b> Cu(NO <sub>3</sub> ) <sub>2</sub> •3H <sub>2</sub> O
<b>Boiling point:</b> Data not available	<b>Relative density (Specific gravity):</b> 2.32	<b>Molecular weight:</b> 241.60
<b>Flash point:</b> Non flammable	<b>Solubility(ies):</b> Soluble in water.	

## Section 10 Stability &amp; Reactivity

**Chemical stability:** Stable **Hazardous polymerization:** Will not occur.  
**Conditions to avoid:** Avoid temperatures in excess of 338°F, which cause decomposition.  
**Incompatible materials:** Strong oxidizing agents, aluminum cyanides, esters, sodium hypophosphite, stannous chloride and thiocyanates.  
**Hazardous decomposition products:** Nitrogen oxides, copper oxides and copper dust.

## Section 11 Toxicological Information

**Acute toxicity:** Oral-rat LD50: 940 mg/kg  
**Skin corrosion/irritation:** Data not available  
**Serious eye damage/irritation:** Data not available  
**Respiratory or skin sensitization:** Data not available  
**Germ cell mutagenicity:** Data not available  
**Carcinogenicity:** Data not available  
 NTP: No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.  
 IARC: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.  
 OSHA: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.  
**Reproductive toxicity:** Data not available  
**STOT-single exposure:** Data not available  
**STOT-repeated exposure:** Data not available  
**Aspiration hazard:** Data not available  
**Potential health effects:**  
 Inhalation: Harmful if inhaled.  
 Ingestion: Harmful if swallowed.  
 Skin: Contact with skin causes irritation and/or burns.  
 Eyes: Contact with eyes causes irritation and/or burns.  
**Signs and symptoms of exposure:** Material is extremely destructive to tissue of the mucous membranes and upper respiratory tract, eyes, and skin. Exercise appropriate procedures to minimize potential hazards.  
**Additional information:** RTECS #: GL7875000

## Section 12 Ecological Information

**Toxicity to fish:** No data available  
**Toxicity to daphnia and other aquatic invertebrates:** No data available  
**Toxicity to algae:** No data available  
**Persistence and degradability:** No data available **Bioaccumulative potential:** No data available  
**Mobility in soil:** No data available **PBT and vPvB assessment:** No data available  
**Other adverse effects:** An environmental hazard cannot be excluded in the event of unprofessional handling or disposal.

## Section 13 Disposal Considerations

These disposal guidelines are intended for the disposal of catalog-size quantities only. Federal regulations may apply to empty container. State and/or local regulations may be different. Dispose of in accordance with all local, state and federal regulations or contract with a licensed chemical disposal agency.

## Section 14 Transport Information (US DOT / CANADA TDG)

**UN/NA number:** UN1477 **Shipping name:** Nitrates, inorganic, n.o.s., (Cupric nitrate)  
**Hazard class:** 5.1 **Packing group:** III **Reportable Quantity:** 100 lbs (45.4 kg) **Marine pollutant:** No  
**Exceptions:** Limited quantity equal to or less than 5 Kg **2012 ERG Guide #** 140

## Section 15 Regulatory Information

A chemical is considered to be listed if the CAS number for the anhydrous form is on the Inventory list.

Component	TSCA	CERCLA (RQ)	RCRA code	DSL	NDSL	WHMIS Classification
Cupric nitrate	Listed	100 lbs (45.4 kg)	Not listed	Listed	Not listed	C ; D2B

## Section 16 Additional Information

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. NTP: National Toxicology Program, IARC: International Agency for Research on Cancer, OSHA: Occupational Safety and Health Administration, STOT: Specific Target Organ Toxicity, SE: Single Exposure, RE: Repeated Exposure, ERG: Emergency Response Guidebook.