

## Material Safety Data Sheet



# Copper (II) Nitrate, Trihydrate

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**Carolina Biological Supply Company**

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**CAROLINA**  
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### Section 1 - Product Description

**Product Name:** Copper (II) Nitrate, Trihydrate  
**Product Code(s):** 85-6468, 85-6470, 85-6478, 85-6480  
**Size:** 25 g, 100 g, 125 g, 500 g  
**Chemical Name:** Copper (II) Nitrate, Trihydrate  
**CAS Number:** 10031-43-3  
**Formula:**  $\text{Cu}(\text{NO}_3)_2 \cdot 3\text{H}_2\text{O}$   
**Synonyms:** Cupric Nitrate, Trihydrate  
**Distributor:** Carolina Biological Supply Company, 2700 York Road, Burlington, NC 27215  
**Chemical Information:** 800-227-1150 (8am-5pm (ET) M-F) **Chemtrec** 800-424-9300 (Transportation Spill Response 24 hours)

### Section 2 - Hazard Identification

**Emergency Overview:** **WARNING** - Harmful by inhalation and if swallowed. Irritating to eyes, respiratory system and skin. Heat, shock, or contact with other materials may cause fire or explosion Product is a strong oxidizer.

**Potential Health Effects:**

**Eyes:** May cause irritation.

**Skin:** May cause irritation to skin.

**Ingestion:** May cause gastrointestinal discomfort.

**Inhalation:** May cause irritation to respiratory tract.

### Section 3 - Composition / Information on Ingredients

**Principal Hazardous Components:** Cupric Nitrate (100%)  
**TLV units:** ACGIH-TLV: 0.05 mg(Cu)/m<sup>3</sup> (TWA)  
**PEL units:** OSHA-PEL: 0.1 mg(Cu)/m<sup>3</sup> (TWA)

### Section 4 - First Aid Measures

**Emergency and First Aid Procedures:**

**Eyes** - In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.

**Skin** - After contact with skin, wash immediately with plenty of water.

**Ingestion** - If swallowed, do not induce vomiting; seek medical advice immediately and show this container or label. If swallowed, rinse mouth with water (only if the person is conscious).

**Inhalation** - In case of accident by inhalation: remove casualty to fresh air and keep at rest.

### Section 5 - Firefighting Procedures

**Flash Point (Method Used):** N/A

**NFPA Rating:**

**Health:** 1

**Fire:** 0

**Reactivity:** 3

**Extinguisher Media:** Use media suitable to extinguish surrounding fire.

**Flammable Limits in Air % by Volume:** N/A

**Autoignition Temperature:** N/A

**Special Firefighting Procedures:** Firefighters should wear full protective equipment and NIOSH approved self-contained breathing apparatus.

**Unusual Fire and Explosion Hazards:** N/A

## Section 6 - Spill or Leak Procedures

**Steps to Take in Case Material Is Released or Spilled:** Ventilate area of spill. Clean-up personnel should wear proper protective equipment. Avoid creating dust. Sweep or scoop up and containerize for disposal.

## Section 7 - Special Precautions

**Precautions to Take in Handling or Storing:** Avoid contact with skin and eyes.

Avoid contact with clothing.

Do not breathe dust.

Contact with combustible material may cause fire.

Store separately and away from flammable and combustible materials.

Keep container dry. Keep container tightly closed in a cool, well-ventilated place.

Store in a secure area suitable for oxidizing agents. Store away from flammable materials, organic solvents and combustible materials.

## Section 8 - Protection Information

**Respiratory Protection (Specify Type):** None needed under normal conditions of use with adequate ventilation. A NIOSH/MSHA chemical cartridge respirator should be worn if PEL or TLV is exceeded.

**Ventilation:**

**Local Exhaust:** Yes

**Mechanical(General):** Yes

**Special:** No

**Other:** No

**Protective Gloves:** Natural rubber, Neoprene, PVC or equivalent.

**Eye Protection:** Splash proof chemical safety goggles should be worn.

**Other Protective Clothing or Equipment:** Lab coat, apron, eye wash, safety shower.

## Section 9 - Physical Data

**Molecular Weight:** 187.56

**Boiling Point:** N/A

**Vapor Density(Air=1):** N/A

**Percent Volatile by Volume:** N/A

**Solubility in Water:** Soluble

**Melting Point:** 255 - 256 °C

**Vapor Pressure:** N/A

**Specific Gravity (H<sub>2</sub>O=1):** 2.32

**Evaporation Rate (BuAc=1):** N/A

**Appearance and Odor:** Blue deliquescent crystals

## Section 10 - Reactivity Data

**Stability:** Stable

**Conditions to Avoid:** Keep away from combustible material.

**Incompatibility (Materials to Avoid):** Organics, Metal Salts, Nitromethane, Acetic Anhydride, Ether, Acetylene, Reducing agents,

**Hazardous Decomposition Products:** NO<sub>x</sub>,

**Hazardous Polymerization:** Will not occur

## Section 11 - Toxicity Data

**Toxicity Data:** orl-rat LD50 940 mg/kg

**Effects of Overexposure:**

**Acute:** See Section 2

**Chronic:** Not listed as a carcinogen by IARC, NTP or OSHA.

**Conditions Aggravated by Overexposure:** Hepatolenticular Degeneration (Wilson's Disease) Liver disorders,

**Target Organs:** Liver, Kidneys,

**Primary Route(s) of Entry:** Inhalation, Ingestion, and Skin contact.

## Section 12 - Ecological Data

**EPA Waste Numbers:** D002

## Section 13 - Disposal Information

**Waste Disposal Methods:** Dispose in accordance with all applicable Federal, State and Local regulations. Always contact a permitted waste disposer (TSD) to assure compliance.

## Section 14 - Transport Information

**DOT Proper Shipping Name:** UN1477

NITRATES, INORGANIC N.O.S (Cupric Nitrate, n-hydrate)

Division 5.1

P.G. II

## Section 15 - Regulatory Information

**EPA TSCA Status:** On TSCA Inventory

**Hazard Category for SARA Section 311/312 Reporting:** Acute

**Name List:**

Cupric Nitrate - No

**Chemical Category:**

Cupric Nitrate - No

**CERCLA Section 103 RQ(lb.):** Cupric Nitrate - 100 lbs (45.4 kg)

**RCRA Section 261.33:** Cupric Nitrate - No

## Section 16 - Additional Information

The information provided in this Material Safety Data Sheet represents a compilation of data drawn directly from various sources available to us. Carolina Biological Supply makes no representation or guarantee as to the suitability of this information to a particular application of the substance covered in the Material Safety Data Sheet. Any employer must carefully assess the applicability of any information contained herein in regards to the particular use to which the employer puts the material.

Glossary

ACGIH American Conference of Governmental Industrial Hygienists

CAS Number Chemical Services Abstract Number

CERCLA Comprehensive Environmental Response, Compensation, and Liability Act

DOT U.S. Department of Transportation

IARC International Agency of Research on Cancer

N/A Not Available

NTP National Toxicology Program

OSHA Occupational Safety and Health Administration

PEL Permissible Exposure Limit

ppm	Parts per million
RCRA	Resource Conservation and Recovery Act
SARA	Superfund Amendments and Reauthorization Act
TLV	Threshold Limit Value
TSCA	Toxic Substances Control Act