



# SAFETY DATA SHEET

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## SECTION 1 PRODUCT AND COMPANY INFORMATION

PRODUCT NAME: **Copper (II) Nitrate Hemipentahydrate**

PRODUCT NUMBER: 1570

CAS NUMBER: 19004-19-4

SYNONYMS: Cupric Nitrate Hemipentahydrate; Copper Dinitrate Hemipentahydrate; Nitric acid Copper Salt Hemipentahydrate

### MANUFACTURER:

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## SECTION 2 HAZARDS IDENTIFICATION

### CLASSIFICATION OF SUBSTANCE OR MIXTURE

Pictogram



Signal Word

**Danger**

### Hazard Statements

H272	May intensify fire, oxidizer.
H302	Harmful if swallowed.
H314	Causes severe skin burns and eye damage.
H410	Very toxic to aquatic life with long lasting effects.

### Precautionary Phrases

P210	Keep away from heat.
P220	Keep/store away from clothing/combustible materials.
P221	Take any precaution to avoid mixing with combustibles.
P264	Wash skin thoroughly after handling.
P270	Do not eat, drink, or smoke when using this product.
P273	Avoid release into the environment.
P280	Wear protective gloves/protective clothing/eye protection/face protection.
P301+P312	IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell.
P302+P352	IF ON SKIN: Wash with plenty of soap and water.
P305+P351+P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do. Continue rinsing.
P362	Take off contaminated clothing and wash before reuse.
P370+P378	In case of fire: Use dry sand, dry chemical, or alcohol-resistant foam for extinction.

## SECTION 2 HAZARDS IDENTIFICATION (Cont.)

### HMIS CLASSIFICATION:

Health: 2 Chronic: \* Fire: 0 Reactivity Hazard: 2

### NFPA RATING:

Health: 2 Flammability: 0 Reactivity Hazard: 2 Specific Hazard: OX

**EYE CONTACT:** Contact with eyes may cause severe irritation, and possible eye burns. Contact may cause ulceration of the conjunctiva and cornea. May cause conjunctivitis. May cause permanent corneal opacification.

**SKIN CONTACT:** May cause severe irritation and possible burns. May cause dermatitis. May cause skin discoloration.

**INHALATION:** May cause methemoglobinemia, cyanosis, convulsions, tachycardia, dyspnea, and death. May cause ulceration and perforation of the nasal spectrum if inhaled in excessive quantities. May cause severe irritation of the upper respiratory tract with pain, burns, and inflammation. May cause acute pulmonary edema, asphyxia, chemical pneumonitis, and upper airway obstruction cause by edema.

**INGESTION:** May cause severe gastrointestinal tract irritation with nausea, vomiting, and possible burns. May cause liver and kidney damage. May cause hemorrhaging of the digestive tract. Methemoglobinemia is characterized by dizziness, drowsiness, headache, breath shortness, cyanosis with bluish skin, rapid heart rate, and chocolate-brown colored blood.

## SECTION 3 COMPOSITION / INFORMATION ON INGREDIENTS

Formula:  $\text{Cu}(\text{NO}_3)_2 \cdot 2.5\text{H}_2\text{O}$

Molecular Weight: 232.59

CHEMICAL NAME	CAS#	%
Copper (II) Nitrate, Hemipentahydrate	19004-19-4	>98

## SECTION 4 FIRST AID MEASURES

**EYE EXPOSURE:** Immediately flush the eyes with plenty of water for at least 15 minutes. A victim may need assistance in lifting eyelids to rinse. Seek medical attention.

**SKIN EXPOSURE:** Immediately wash with plenty of water and wash soap for at least 15 minutes while removing contaminated clothing. Seek medical attention.

**INHALATION:** Remove to fresh air and keep at rest. If breathing is difficult, give oxygen. If not breathing, give artificial respiration. Seek medical attention.

**INGESTION:** Do NOT induce vomiting. Never give anything by mouth to an unconscious person. If conscious, wash out mouth with water. Seek medical attention.

## SECTION 5 FIREFIGHTING MEASURES

**FLASH POINT:** Not available

**AUTO IGNITION TEMPERATURE:** Not available

**EXPLOSION LIMITS:** Not available

**EXTINGUISHING MEDIUM:** Carbon dioxide, extinguishing powder, or water spray. Fight large fires with water spray or alcohol resistant foam. Do not use halocarbon extinguisher.

**SPECIAL FIRE FIGHTING PROCEDURES:** Wear self-contained, approved breathing apparatus and full protective clothing, including eye protection and boots. Contact with combustible material may cause fire. The substance is an oxidizer and its heat of reaction with reducing agents or combustibles may cause ignition.

**HAZARDOUS COMBUSTION AND DECOMPOSITION PRODUCTS:** Nitrogen oxides and copper oxide

## SECTION 6 ACCIDENTAL RELEASE MEASURES

**PERSONAL PRECAUTIONS:** Wear all appropriate equipment when using this material. Ensure adequate ventilation. Avoid dust formation.

**ENVIRONMENTAL PRECAUTIONS:** Prevent spillage from entering drains or allowing to be released into the environment.

**METHODS AND MATERIALS FOR CONTAINMENT AND CLEANING UP:** Sweep up and place into a suitable container for proper disposal. Avoid generating dust conditions. Remove all sources of ignition.

## SECTION 7 HANDLING AND STORAGE

**PRECAUTIONS FOR SAFE HANDLING:** Wear appropriate personal protective equipment. Ensure adequate ventilation. Reduce dust formation. Do not get on skin or in eyes. Avoid ingestion or inhalation.

**CONDITIONS FOR SAFE STORAGE:** Store in cool, dry well ventilated area. Keep away from heat, sparks, and flame. Do not store near combustible materials. Store away from flammable substances, reducing agents, water, moisture, and oxidizing agents.

## SECTION 8 EXPOSURE CONTROLS AND PERSONAL PROTECTION

### EXPOSURE CONTROLS:

Component	Exposure Limits	Basis	Entity
Copper (II) Nitrate, Hemipentahydrate	1 mg/m <sup>3</sup>	TWA	NIOSH

TWA: Time Weighted Average over 8 hours of work

**EYE PROTECTION:** Wear chemical safety glasses or goggles and face shield.

**SKIN PROTECTION:** Wear nitrile or rubber gloves, and a complete suit protecting against chemicals.

**VENTILATION:** Provide local exhaust, preferably mechanical.

**RESPIRATOR:** Use an approved respirator.

**ADDITIONAL PROTECTION:** Provide eyewash stations, quick-drench showers and washing facilities accessible to areas of use and handling.

## SECTION 9 PHYSICAL AND CHEMICAL PROPERTIES

**COLOR AND FORM:** Blue solid

**ODOR:** None

**MOLECULAR WEIGHT:** 232.59

**BOILING POINT:** 170° C (dec.)

**MELTING POINT:** 114° C

**SPECIFIC GRAVITY:** 2.32 gm/ml

**VAPOR DENSITY:** No data available

**SOLUBILITY:** Soluble

## SECTION 10 STABILITY AND REACTIVITY

**STABILITY:** Stable

**HAZARDOUS POLYMERIZATION:** Will not occur

**CONDITIONS TO AVOID:** Heat, moisture, ignition sources, dust generation, and combustible materials.

**INCOMPATIBILITY:** Reducing agents, water, moisture, oxidizing agents, flammable substances, organic materials, and metal powders.

**DECOMPOSITION PRODUCTS:** Nitrogen oxides and copper oxide

## SECTION 11 TOXICOLOGICAL DATA

**ACUTE TOXICITY:** LD50 Oral – rat – 794mg/kg. Caused skin irritation and severe eye irritation on a rabbit. Swallowing will lead to a strong corrosive effect on mouth and throat and to the danger of perforation of esophagus and stomach.

**CARCINOGENIC EFFECTS:** No components of this product present at levels greater than or equal to 0.1% is identified a carcinogen.

**MUTAGENIC EFFECTS:** Not available

**TETRATOGENIC EFFECTS:** Not available

**RTECS:** QU7400000

To the best of our knowledge the toxicological effects of this compound have not been fully investigated.

## SECTION 12 ECOLOGICAL DATA

**TOXICITY TO FISH:** LC50 – other fish – 0.29mg/l – 96.0h

## **SECTION 13 DISPOSAL CONSIDERATIONS**

Dispose of in according to local, state, and federal regulations.

## **SECTION 14 TRANSPORTATION DATA**

UN1477

Nitrates, inorganic, n.o.s.

(Copper (II) Nitrate)

CLASS 5.1

PG II

Marine Pollutant: No

## **SECTION 15 REGULATORY INFORMATION**

**TSCA:** Not listed in the TSCA inventory

**SARA 302/304:** Not Listed

**SARA 311/312:** Reactivity Hazard, Acute Health Hazard, Chronic Health Hazard

**SARA (TITLE 313):** Copper (II) nitrate hemipentahydrate

**CALIFORNIA PROP. 65:** Not Listed

**MASSACHUSETTS RIGHT TO KNOW COMPONENTS:** Copper (II) nitrate hemipentahydrate

**NEW JERSEY RIGHT TO KNOW COMPONENTS:** Copper (II) nitrate hemipentahydrate

**PENNSYLVANIA RIGHT TO KNOW COMPONENTS:** Copper (II) nitrate hemipentahydrate

## **SECTION 16 OTHER INFORMATION**

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**DATE PREPARED:** 05/15

**SDS DEPT.**