Mallinckrodt
Material Safety Data
Emergency Phone Number: 314-982-5000

CUPRIC NITRATE
PRODUCT IDENTIFICATION:
Synonyms: Cupric nitrate hemipentahydrate; nitric acid, copper (2+) salt, hydrate (2.5)
Formula CAS No.: 19004-19-4 (Hydrated)
TSCA CAS No.: 3251-23-8 (Anhydrous)
Molecular Weight: 241.60
Chemical Formula: Cu(NO3)2.5/2H2O
Hazardous Ingredients: Not applicable.

PRECAUTIONARY MEASURES
VANGER! STRONG OXIDIZER. CONTACT WITH OTHER MATERIAL MAY CAUSE FIRE.
HARMFUL IF SWALLOWED OR INHALED. CAUSES IRRITATION.
void breathing dust.
keep container closed.
use with adequate ventilation.
wash thoroughly after handling.
void contact with eyes, skin and clothing.
keep with clothing and other combustible materials.
store in a tightly closed container.
remove and wash contaminated clothing promptly.

EMERGENCY/FIRST AID
swallowed, induce vomiting immediately by giving two glasses of water, or milk if available and sticking fingers down throat. Never give anything by mouth to an unconscious person. If inhaled, move to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. In case of contact, immediately flush skin or eyes with plenty of water for at least 15 minutes. In all cases call a physician.

SECTION 1 Physical Data
Appearance: Blue crystals.
Odor: Odorless.
Solubility: 138g/100ml water @ 138°C (280°F).
Boiling Point: Decomposes @ 170°C (338°F).
Melting Point: 115°C (239°F).
Specific Gravity: 3.22
Vapor Density (Air=1): No information found.
Vapor Pressure (mm Hg): No information found.
Evaporation Rate: No information found.

SECTION 2 Fire and Explosion Information
Fire:
Not combustible, but substance is a strong oxidizer and its heat of reaction with reducing agents or combustibles may cause ignition. Increases flammability of any combustible material.

Explosion:
Contact with oxidizable substances may cause extremely violent combustion.

Fire Extinguishing Media:
Water or water spray in early stages of fire. Foam or dry chemical may also be used.

Special Information:
In the event of a fire, wear full protective clothing and NIOSH-approved self-contained breathing apparatus with full facepiece operated in the pressure demand or other positive pressure mode.

SECTION 3 Reactivity Data
Stability:
Stable under ordinary conditions of use and storage.

Hazardous Decomposition Products:
Emits nitrogen oxides when heated to decomposition.

Hazardous Polymerization:
This substance does not polymerize.

Incompatibilities:
Paper, potassium ferrocyanide, tin, acetylene, hydrazine, and nitromethane.

SECTION 4 Leak/Spill Disposal Information
Ventilate area of leak or spill. Clean-up personnel require protective clothing and respiratory protection from dust. Spills: Pick up and place in a suitable container for reclamation or disposal in a method that does not generate dust. Disposal: Whatever cannot be saved for reclamation may be disposed in a RCRA approved hazardous waste facility. Do not flush to sewer. Toxic to fish.

Reportable Quantity (RQ)(CWA/CERCLA): 100 lbs.

Ensure compliance with local, state and federal regulations.

Effective Date: 08-28-85
NFPRA Ratings:
Health: 1
Flammability: 0
Reactivity: 0
Other: Oxidizer

CUPRIC NITRATE
SECTION 5 Health Hazard Information

A. EXPOSURE / HEALTH EFFECTS

Inhalation:
May cause irritation to the upper respiratory tract, symptoms may include coughing, sore throat, and shortness of breath. May also cause symptoms similar to the common cold, including chills and stuffiness of the head.

Ingestion:
May cause burning pain in the mouth, esophagus, and stomach. Hemorrhagic gastritis, nausea, vomiting, abdominal pain, metallic taste, and diarrhea may occur. If vomiting does not occur immediately, systemic copper poisoning may occur. Symptoms may include capillary damage, headache, cold sweat, weak pulse, kidney and liver damage, central nervous excitation followed by depression, jaundice, convulsions, paralysis and coma. Death may occur from shock or renal failure.

Skin Contact:
May cause irritation, redness, and pain.

Eye Contact:
May cause irritation, redness, pain, discoloration, and damage.

Chronic Exposure:
Prolonged or repeated skin exposure may cause dermatitis. Prolonged or repeated exposure to dusts of copper salts may cause discoloration of the skin or hair, ulceration and perforation of the nasal septum, runny nose, metallic taste, and atrophic changes and irritation of the mucous membranes.

Aggravation of Pre-existing Conditions:
Persons with pre-existing skin disorders or impaired liver, kidney, and pulmonary function or pre-existing Wilson’s disease may be more susceptible to the effects of this material.

B. FIRST AID

Inhalation:
Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Call a physician.

Ingestion:
If swallowed, induce vomiting immediately by giving two glasses of water, or milk if available and sticking finger down throat. Call a physician immediately. Never give anything by mouth to an unconscious person.

Skin Exposure:
Remove any contaminated clothing. Wipe off excess from skin. Wash skin with soap and water for at least 15 minutes. Get medical attention if irritation develops or persists.

Eye Exposure:
Wash eyes with plenty of water for at least 15 minutes, lifting lower and upper eyelids occasionally. Get medical attention immediately.

C. TOXICITY DATA (RTECS, 1982)


SECTION 6 Occupational Control Measures

Airborne Exposure Limits:
-OSHA Permissible Exposure Limit (PEL): 1 mg(Cu)/m³ (TWA)
-ACGIH Threshold Limit Value (TLV): 1 mg(Cu)/m³ (TWA) 2 mg(Cu)/m³ (STEL)

VENTILATION SYSTEM:
A system of local and/or general exhaust is recommended to keep employee exposures below the Airborne Exposure Limits. Local exhaust ventilation is generally preferred because it can control the emissions of the contaminant at its source, preventing dispersion of it into the general work area. Please refer to the ACGIH document, "Industrial Ventilation, A Manual of Recommended Practices", most recent edition, for details.

PERSONAL RESPIRATORS: (NIOSH Approved)
If the TLV is exceeded, a dust/mist respirator with chemical goggle may be worn, in general, up to ten times the TLV. Consult respirator supplier for limitations. Alternatively, a supplied air full facepiece respirator or airlined hood may be worn.

SKIN PROTECTION:
Wear protective gloves and clean body-covering clothing.

EYE PROTECTION:
Use chemical safety goggles and/or full face shield where dusting or splashing of solutions is possible. Contact lenses should not be worn when working with this material. Maintain eye wash fountain and quick-drench facilities in work area.

SECTION 7 Storage and Special Information

Keep in a tightly closed container, stored in a cool, dry, ventilated area. Protect against physical damage. Separate from combustible, organic or any other readily oxidizable material. Do not store on wooden floors.