

MATERIAL SAFETY DATA SHEET

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Section 1. PRODUCT IDENTIFICATION

PRODUCT NAME - ACIDIFIED COPPER SULFATE

CHEMICAL FAMILY - ACIDIFIERS

DOT CLASS - Environmentally Hazardous substance, Solid, N.O.S. (Cupric Sulfate)

Section 11. COMPOSITION

HAZARDOUS INGREDIENTS: Cupric Sulfate

Identification Number: UN3077

Citric Acid: Not Regulated

Section 111. PHYSICAL DATA

Melting Point - 150C
VAPOR PRESSURE: Not Found
SOLUBILITY: 25.9
APPEARANCE AND ODOR: Odorless blue and white crystals
Specific Gravity: (Water = 1) = 2.2
Volatiles (% by weight): N/A

Section IV. FIRE AND EXPLOSION HAZARD DATA

FLASH POINT - Not Applicable. FLAMMABLE LIMITS - Not Applicable

Extinguishing Media: Any suitable means to extinguish surrounding fire. Carbon Dioxide Dry Chemical Preferred.

Special Fire Fighting Procedures: Use special breathing equipment and protective clothing appropriate to the surrounding fire.

Section V. REACTIVITY DATA

THERMAL STABILITY - Stable under normal conditions of use and storage.

INCOMPATIBILITY - Alkalies

CONDITIONS TO AVOID: Excessive heat, humidity, and exposure to incompatibles.

HAZARDOUS DECOMPOSITION PRODUCTS: Copper Fume at temperatures exceeding 560°C, Sulfuric Acid at temperatures exceeding 950°F. Sulfur Dioxide may be released at temperatures exceeding 100°F.

Section VI. HEALTH HAZARD DATA

EFFECTS OF OVEREXPOSURE:

SYMPTOMS OF INGESTION: TOXIC! 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.

INHALATION: May cause Irrigation of 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 Stiffness of the Head.

SYMPTOMS OF SKIN CONTACT: May cause Irritation, Redness, and Pain.

SYMPTOMS OF EYE CONTACT: Dust may cause irritation. Contact may cause Conjunctivitis, Ulceration, or Clouding of the Cornea.

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.

TOXICITY DATA:

Oral Toxicity : LD50: 960mg/kg (RAT)

Mutagenicity: RTECS, 1982

SECTION VII. EMERGENCY AND FIRST AID PROCEDURES

EYE CONTACT: Immediately, Flush with large amounts of water for at least 15 minutes while holding eyelids apart. Washing within one minute is essential to achieve maximum effectiveness. Get immediate medical attention after flushing.

SKIN CONTACT: Wash affected area thoroughly with soap and water.

Remove contaminated clothing and launder before reuse. If irritation should develop, get medical attention.

INHALATION: Remove to Fresh Air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Consult a physician.

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

NOTES TO PHYSICIAN: None

SECTION IIX. INDUSTRIAL HYGIENE AND OCCUPATIONAL CONTROL PROCEDURES

VENTILATION: A system of local exhaust is recommended to keep employee exposure below the airborne exposure limits. Local exhaust is usually preferred because it controls the emission at its source, preventing "Dispersion of it into the general work area. Refer to the acgih document :Industrial Ventilation, a manual of recommended practices" for details.

RESPIRATORY PROTECTION: NIOSH/MSHA Approved respirator exposure may, or does exceed occupational exposure limits. Generally, a Dust/Mist respirator may be worn in areas where the TLV is exceeded up to ten times. Alternatively, a supplied air full facepiece respirator or airlined hood may be worn.

EYE PROTECTION: Chemical splash goggles or face shield. Contact lenses should not be worn working with this material.

SKIN PROTECTION: Use rubber or plastic impervious gloves and body covering clothing.

PERSONAL HYGIENE: Wash thoroughly after handling.

**** An eye wash fountain and quick-drench facilities should be maintained in the work area.**

SECTION IX. SAFE HANDLING, STORAGE, AND USE PRECAUTIONS

PRECAUTIONARY MEASURES: Avoid contact with skin, eyes, and clothing. Wear protective clothing, gloves, and splash goggles or shield. Wash thoroughly after using. Avoid breathing dust or mist. Use with adequate ventilation.

Store in a cool, dry, well ventilated area. Isolate from incompatible materials.

Protect from Physical Damage.

SECTION X. ENVIROMENTAL AND DISPOSAL PROCEDURES.

SPILL/LEAK CLEAN-UP PROCEDURES: Sweep, Scoop, or Pick-Up Spilled Material.

Avoid Dusting. Package for Reclamation or Recovery. Whatever cannot be saved may be disposed of in an approved landfill.

DISPOSAL METHOD: Dispose of in an approved Chemical Waste Landfill in accordance with applicable federal, system, and local regulations.

SUPERFUND REPORTABLE QUANTITY (RQ): 10# / 4.54 KG (CUSO4)

HAZARDOUS WASTE NO: NOT REGULATED

SARA TITLE III: This product is a copper compound which is subject to reporting.

CANADIAN (WHMIS) LIST: This product is subject to reporting. (Copper Compounds).

NEW JERSEY LIST: Employers who produce, use, or store this material are required to fill an annual survey due on March 1 of each year. (Copper Compounds, Hazardous Substances, N.O.S.)

SECTION XI. ADDITIONAL WARNINGS AND INFORMATION.

“WARNING” This product may contain a chemical known to the state of California to cause cancer, or birth defects, and/or other reproductive harm”.

“It is reasonable to assume that all copper compounds contain” Arsenic, Cadmium, Chromium, and Lead in concentrations ranging from a few parts per billion to several hundred parts per million.

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