

# MATERIAL SAFETY DATA SHEET #3022

 15885 Sprague Road, Strongsville, OH 44136-1799
 DATE ISSUED: 12/07/00

 Emergency Phone: LESCO: (800) 321-5325
 SUPERSEDES: 05/30/00

CHEMTREC: (800) 424-9300

PRODUCT IDENTIFICATION

Product: LESCO Mancozeb DG Chemical Family: Ethylene bisdithiocarbamate

Chemical Name/Synonyms: Mancozeb, Manzeb

II. PRODUCT INFORMATION: INGREDIENTS

Chemical NameTLV/TWA%(by wt.)CAS#Mancozeb1 mg/M³ Rohm and Haas76-808018-01-7Sodium lignosulfonate20-258061-51-6Related reaction productsNoneAnionic surfactant blendUndisclosed

III. PHYSICAL AND CHEMICAL CHARACTERISTICS

Boiling Point: NA Specific Gravity (water=1):NA

Melting Point: $192\text{-}204^{\circ}\text{C}$ Bulk Density (lbs./cu. ft.):40-45 lbs/cu.ft.Vapor Pressure (mm Hg):NegligibleEvaporation Rate:NAVapor Density (air = 1):NAPercent Volatile:NA

Solubility in Water: Dispersible Appearance and Odor: solid brown granules with pH: NA a slight sulfurous odor

IV. FIRE AND EXPLOSION HAZARD DATA

Flash Point (method Used): 146° C Auto Ignition Temperature: ND Lower Explosion Limits: ND Upper Explosion Limits: ND

NFPA/HMIS RATING: HEALTH 1 FIRE 1 REACTIVITY 0

Extinguishing Media: [] Foam [] Alcohol Foam [X] Dry Chemical [X] Water Spray [] Other [X] CO<sub>2</sub>

**Special Fire-Fighting Procedures:** Wear self-contained breathing apparatus and full protective gear. Use water spray. Cool tank/container with water spray. Keep personnel removed and upwind. If area is heavily exposed to fire and if conditions permit, let fire burn itself out since water may increase the contamination hazard. May be ignited by heat or open flame.

**Unusual Fire and Explosion Hazards:** Hazardous gases/vapors produced in fire are hydrogen sulfide, carbon disulfide and oxides of carbon, nitrogen and sulfur. Elevated temperature of free water promotes decomposition which may cause spontaneous combustion. Like most organic powders or crystals, under severe dusting conditions, this material may form explosive mixtures in air.

## V. HEALTH HAZARDS

Primary Route(s) of Entry: Skin, eyes, inhalation.

#### Signs & Symptoms of Exposure

**Acute:** May irritate eyes, nose, throat and skin. May be harmful if inhaled or swallowed. Very low toxicity by ingestion. Not a primary skin irritant in test on rabbits. Produced mild to severe corneal opacity in rabbit eye tests. Eyes were normal within 7 days.

Chronic: Based on animal studies, long-term exposure to high levels of Mancozeb may cause abnormal thyroid function. Individuals with pre-existing diseases of the thyroid may have increased susceptibility to the toxicity of excessive exposures.

## **Emergency First-Aid Procedures**

Eyes: In case of contact, immediately flush eyes with plenty of water for 15 minutes. Call a physician.

**Skin:** Flush skin with water after contact. Wash contaminated clothing before reuse.

**Inhalation:** If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. **Ingestion:** Call a physician. No specific intervention is indicated as compound is not likely to be hazardous by ingestion. Consult physician if necessary.

### Notes to Physician:

**Inhalation:** The effects in animals from repeated high doses of mancozeb (dust) equivalent to 150-250 times the AEL include reduced body weight, inflammation of the lungs, and abnormal thyroid function.

**Ingestion:** Toxic effects in animals from repeated ingestion of high doses include reduced body weight and thyroid effects. Increased incidences of thyroid tumors and ocular lesions (retinopathy) were observed in rats administered 750 ppm (equivalent to approximately 35 mg/kg/day) of mancozeb in their diet for two years. This compound is considered to show weak carcinogenic activity. Tests in some animals indicate that the compound may produce embryo and fetal toxicity, but only at maternally toxic doses.

Multi-generation studies in animals demonstrate no reproductive toxicity.

Mancozeb is metabolized to ethylenethiourea (ETU), a known thyroid carcinogen.

Although there have been isolated reports in the scientific literature of mutagenic activity of mancozeb, in general mancozeb

is not genotoxic in animals or in cell cultures. Mancozeb has not been tested for heritable gene mutation.

#### **Human Health Effects of Overexposure:**

Skin contact may initially include: skin irritation with discomfort or rash. The compound has been infrequently associated with skin sensitization in humans. Significant skin permeation and systemic toxicity after contact appears unlikely.

Eye contact may initially include: eye irritation with discomfort, tearing, or blurring of vision.

Based on animal studies, long-term exposure to high levels of mancozeb may cause abnormal thyroid function.

**Medical Conditions Aggravated by Exposure:** Individuals with pre-existing diseases of the thyroid may have increased susceptibility to the toxicity of excessive exposures.

**Toxicity Information:** 

 $\begin{array}{lll} \textbf{Oral LD}_{50} : > 5,000 \text{ mg/kg body weight} & \textbf{Dermal LD}_{50} : > 5,000 \text{ mg/kg (rabbits)} \\ \textbf{Inhalation LC}_{50} : \text{ (rat)} : \text{ ND} & \textbf{Eye Irritation} : \text{ Mild to severe.} \\ \end{array}$ 

Skin Irritation: Not a primary irritant. Positive Teratogen or Mutagen Carcinogen(NTP): No Potential Carcinogen (IARC or OSHA): No VI. **REACTIVITY** [] Unstable Stability: [X] Stable Conditions to Avoid: Keep away from fire or sparks. Do not allow to become wet during storage. Elevated temperature or free water promotes decomposition which may cause spontaneous combustion. Incompatibility: Incompatible with acids. Hazardous Decomposition Products: Hydrogen sulfide, carbon disulfide, oxides of sulfur, nitrogen and carbon. [] Will occur **Hazardous Polymerization:** [X] Will not occur SPILL, LEAK, AND DISPOSAL PROCEDURES VII. If material is spilled: Sweep, vacuum or shovel material into a container for disposal. Never return to container for reuse. Do not allow product to contaminate drains, sewers, streams, ditches or bodies of water. Keep animals away from large spills. Aquatic Toxicity: Mancozeb is toxic to fish. 96 hour, LC<sub>50</sub> for bluegill sunfish: 1.0 ppm. Waste Disposal Method: Dispose according to Federal EPA procedures as outlined in the Resource Conservation Recovery act (RCRA) and follow state and local guidelines. Be sure bags are empty before disposal. **SPECIAL PROTECTION INFORMATION** VIII. **Protective Equipment Suggested for Outdoor Application:** [X] Impervious Gloves [] Dust Mask [] Respirator(use NIOSH/MSHA approved) [X] Impervious Boots [X] Clean Clothing [X] Eye Goggles / Safety Glasses **Protective Equipment Suggested for Confined Areas:** [X] Sufficient Ventilation[] Respirator(use NIOSH/MSHA approved) [X] Dust Mask [X] Splash Googles/ [X] Eyewash Station [X] Emergency Shower [X] Impervious Apron [] Safety Glasses STORAGE AND HANDLING IX. Precautions: Store in a cool, dry, well ventilated area, if possible. Separate from other pesticides, fertilizers, seed, feed, foodstuffs, and away from drains, sewers, and water sources. Product that becomes wet during storage could lead to reduced effectiveness as a fungicide and the creation of flammable vapors. Keep container tightly closed. X. FEDERAL REGULATORY INFORMATION D.O.T. SHIPPING INFORMATION: SARA TITLE III; SEC. 311/312 HAZARD CATEGORIES Y Immediate (Acute) Health PROPER SHIPPING NAME: MANER PREPARATION Y Delayed (Chronic) Health For water: Pesticide water reactive N Fire **HAZARD CLASS:** ORM-C (water shipments) N Sudden Release of Pressure 4.3 Land Shipments Y Reactivity I.D. NUMBER NA2210 HAZMAT NUMBER: NA **SEC 302 SEC 313 SEC 304 CERCLA** CAA EPA Reg. No. TPQ=NA NA RQ=NA RQ=5000 lbs RQ=N/A 707-180-10404 (Ethylenebisdithiocarbamic Acid) NA = Not Applicable ND = Not Determined Preparation and distribution of this Material Safety Data Sheet done by LESCO, Inc., 15885 Sprague Road, Strongsville, OH 44136-1799, pursuant to the OSHA Hazard Communication Standard (29 CFR 1910.1200)..

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