



Specialized in chemicals

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Material Safety Data Sheet

Mancozeb 80% WP

Section 1: Chemical Product and Company Identification

Product Name: Mancozeb

CAS#: 8018-01-7

TSCA: Not available

CI#: Not available

Synonym:

Chemical Name: [1, 2-Ethaznediybis(carbamodithio)(2-)]manganese zinc salt

Molecular formula: C₄H₈MnN₂S₄Zn

Identified uses:

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Section 2: Composition and Information on Ingredients

Ingredients	CAS No	Conc,%	TWA (mg/m3)	STEL (mg/m3)
Mancozeb	8018-01-7	750g/kg	not set	not set
Other non hazardous ingredients	secret	to 100	not set	not set

This is a commercial product whose exact ratio of components may vary slightly. Minor quantities of other non hazardous ingredients are also possible.

The SWA TWA exposure value is the average airborne concentration of a particular substance when calculated over a normal 8 hour working day for a 5 day working week. The STEL (Short Term Exposure Limit) is an exposure value that may be equalled (but should not be exceeded) for no longer than 15 minutes and should not be repeated more than 4 times per day. There should be at least 60 minutes between successive exposures at the STEL. The term "peak "is used when the TWA limit, because of the rapid action of the substance, should never be exceeded, even briefly.

Section 3: Hazards Identification

Inhalation

Inhalation of dust can cause the following: irritation of nose, throat, and lungs.

Eye contact

Direct contact with material can cause the following: moderate irritation

Skin contact

Prolonged or repeated skin contact can cause the following: possible skin irritation-dermatitis due to skin sensitization

Ingestion

Very low toxicity by ingestion.

Section 4: First Aid Measures

General Information

You should call The Poisons Information Centre if you feel that you may have been poisoned, burned or irritated by this product. The number is 13 1126 from anywhere in Australia (0800 764 766 in New Zealand) and is available at all times. Have this MSDS with you when you call.

Inhalation

No first aid measures normally required. However, if inhalation has occurred, and irritation has developed, remove to fresh air and observe until recovered. If irritation becomes painful or persists more than about 30 minutes, seek medical advice.

Skin Contact

Wash gently and thoroughly with water (use non-abrasive soap if necessary) for 5 minutes or until chemical is removed.

Eye Contact

No effects expected. If irritation does occur, flush contaminated eye(s) with lukewarm, gently flowing water for 5 minutes or until the product is removed. Obtain medical advice if irritation becomes painful or lasts more than a few minutes. Take special care if exposed person is wearing contact lenses.

Ingestion

If product is swallowed or gets in mouth, do NOT induce vomiting; wash mouth with water and give some water to drink. If symptoms develop, or if in doubt contact a Poisons Information Centre or a doctor.

Section 5: Fire and Explosion Data

Flash Point (Method): 280° F/137.8° C (TOC)

Flammable limits: 0.2g/l(% by volume in air)

Autoignition temperature: Not determined

FIRE FIGHTING HAZARDS& PROCEDURES

General hazards

Like most organic powders or crystals, under severe dusting conditions this material may form explosive mixtures in air.

Extinguishing media

Use dry chemical carbon dioxide, water spray or foam.

Fire fighting equipment/instruction

Keep personnel removed and upwind of fire. Wear self-contained breathing apparatus.

Wear full protective equipment. Use water spray. Runoff from fire control may be a pollution hazard. If area is heavily exposed of fire and if conditions permit. Let fire burn itself out since water may increase the contamination hazard.

Hazardous combustion products

Hazardous gases/vapors produced in fire are H₂S, CS₂, and oxides of sulfur, nitrogen, and carbon.

Section 6: Accidental Release Measures

Spill or leak procedures: remove source of heat, sparks, flame, impact, friction, or electricity. Dike spill. Prevent material from entering sewers, waterways, or low areas. Shovel or sweep up. Never return to container for reuse. Scoop into bags or boxes with plastic or aluminum shovel.

Section 7: Handling and Storage

General information

Avoid breathing vapors or mist. Avoid breathing dust. Avoid contact with eyes, skin, or tobacco in areas where they may become contaminated with this material.

Handling

Users should wash hands before eating, drinking, chewing gum, using tobacco or using toilet. Remove personal protective equipment immediately after handling this product. Wash the outside of gloves before removing,. As soon as possible, wash thoroughly and change into clean clothing. Avoid dust regeneration.

Storage

Store in a well ventilated place. Keep container tightly closed. Do not store or consume food, drink, or tobacco in areas where they may become contaminated with this material. Never allow the product to become wet during storage. This may lead to chemical changes which will reduce the effectiveness as fungicide and create flammable vapors.

Section 8: Exposure Controls/Personal Protection

Ventilation

Provide local exhaust ventilation and/or general dilution ventilation to meet published exposure limits.

Respiratory protection

Wear dual cartridge respirator for dusts and mists.

Eye protection

Wear protective eyewear to prevent contact with this substance.

Protective clothing

Mixers and loaders must wear coveralls over long-sleeved shirt and long pant, shoe plus socks, protective eyewear, and chemical-resistant apron. Applicators and other handlers must wear coveralls over long-sleeved shirt and long pant, waterproof gloves, and shoe plus socks. Personnel re-entering treated areas that is permitted under the worker protection standard and that involves contact with anything that has been treated, such as plants, soil, or water coveralls over long-sleeved shirt and long pants, waterproof gloves, and shoes plus socks. Any clothing or heavily contaminated with this product's concentrate must be discarded. Do not reuse them. Follow manufacturer's instructions for cleaning/maintaining PPE. If no such instructions for washables, use detergent and hot water. Keep and wash PPE separately from other laundry.

Section 9: Physical and Chemical Properties

Color: Yellowish

State: Powder

Odor: sulfurous

Melting point: 192°C (decomposed before this degree)

Moisture: ≤2%

Bulk density: 0.35-0.5g/cm³

Vapor Pressure (@ 25°C mm Hg): neglectable

Section 10: Stability and Reactivity Data

Stability: Stable at normal temperature and storage conditions. Elevated temperatures and/or free water promotes decomposition of exposed material.

Conditions to Avoid: Open flames, sparks, ignition sources, dampness.

Incompatibility: Strong acids, oxidizers, dampness (in storage).

Hazardous Polymerization: N/A

Hazardous Decomposition Products: Toxic and flammable fumes produced: H₂S, CS₂, and oxides of sulfur, nitrogen, and carbon.

Section 11: Toxicological Information

Acute data:

Oral LD₅₀ (rat): >5000mg/kg

Dermal LD₅₀(rabbit): >5000mg/kg

Skin irritation(rabbit): >practically non-irritating

Eye irritation(rabbit): >not irritating(EEC Classification)

Moderately irritating(US Classification)

Inhalation LC₅₀(rat): >5.14mg/L for 4 hr.

Carcinogenicity data

A two-year feeding study of mancozeb in rats produced an increased incidence of thyroid tumors at 750ppm (29mg/kg/day). No evidence of carcinogenicity was observed in long-term studies with mice.

Mutagenicity data

Both mancozeb and ETU have been adequately tested in wide variety of in vitro and in vivo mutagenicity tests. The weight of the evidence of these tests indicates that mancozeb and ETU are not mutagenic in mammalian systems.

Reproductive/Teratolgy data

No reproductive effects were seen below exposure levels high enough to produce non-reproductive toxic effects in two-generation reproduction studies of mancozeb or ETU in rats.

Sensitization data

Mancozeb causes skin sensitization in guinea pigs when tested using the maximization procedure, but not when tested using the Buehler procedure. Consequently, mancozeb may have a weak potential for skin sensitization in humans. Toxicity class WHO (a.i.) III (Table 5); EPA (formulation) IV

Section 12: Ecological Information

Mallard duck, 10 day LD50: >6400mg/kg
Japanese quail, 10 day LD50:>6400my/kg
Mallard duck, reproduction, NOAEL: 125ppm

Bobwhite quail,reproduction, NOAEL:500ppm
Rainbow trout ,48hour LC50: 1.9ML/L
LC50(bluegill sunfish 96 hours):1ppm

Section 13: Disposal Considerations

Treatment, storage, transportation, and disposal must be in accordance with applicable federal, state/provincial, and local regulations. Do not flush to surface water or sanitary sewer system. Disposal of empty bag in a sanitary landfill or by incineration, or, if allowed by state and local authorities, by burned, stay out of smoke.

Section 14: Transport Information

U.S. Department of transportation dot information:
This material is not regulated for domestic surface transportation only when shipping in non-bulk packages.
For bulk packagings and shipments by vessel:
Environmentally hazardous substances, Sllid,n,o,s,(contains mancozeb) /9/un 3077/ pg iii/ Marine pollutant (mancozeb)

Section 15: Other Regulatory Information

EPA SARA TITLE III DATA:
SECTION 302 Substances: N/A SECTION 313 TOXIC CHEMICALS: Yes (Mancozeb)
RCRA Waste Number: N/A CERCLA RQ: N/A
SECTION 311/312 Hazardous Categories: N/A CALIFORNIA PROP 65: Yes (Mancozeb) (ETU)
Immediate Health: Yes Reactive: Yes NFPA RATINGS

Delayed Health: Yes Sudden Pressure: No Flammability: 1 Health: 1
Fire: Yes Resctivity: 1

Section 16: Other Information

Other Special Considerations: Not available.

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