



深圳恒宇丰生物科技有限公司 SHEN ZHEN YUFULL INDUSTRIES CO., LTD.

Material Safety Data Sheet

1. PRODUCT IDENTIFICATION

Product Name: Mancozeb 80% WP

Chemical Name: [[1,2-ethanediylbis[carbamodithioato]](2-)]manganese mixture with
[[1,2-ethanediylbis[carbamodithioato]](2-)]zinc

Chemical Family: Carbamate

Product Use: Fungicides

Supplier: Shenzhen Yufull Industries Co., Ltd

Add: Room 1311, Bldg A, Liu Jin Square, No3038, Bao'an North Road, Sungang Street, Luohu District, Shenzhen, China.

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2. HAZARDS IDENTIFICATION

Emergency overview: May irritate eyes, nose, throat, and skin. May be harmful if absorbed through the skin, inhaled, or swallowed.

Potential Health Effects:

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

Skin irritation: Mild skin irritant and sensitizer. Overexposure to mancozeb by 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.

Skin absorption: Slightly toxic by contact.

Ingestion: Very low toxicity by ingestion.

Based on animal studies, long-term exposure to high levels of mancozeb may cause abnormal thyroid function. Individuals with preexisting diseases of the thyroid may have increased susceptibility to the



深圳恒宇丰生物科技有限公司 SHEN ZHEN YUFULL INDUSTRIES CO., LTD.

toxicity of excessive exposure.

Inhalation: The effects in animals from repeated high doses of mancozeb 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.

Carcinogenicity information: None of the components present in this material at concentrations equal to or greater and 0.1% are listed by OSHA as a carcinogen.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Composition	Percent	CAS No.
Mancozeb	80% min	8018-01-7
Others	20% max	--
Total	100%	

4. FIRST AID MEASURES

Inhalation: Remove victim to fresh air. If not breathing, give artificial respiration preferably mouth-to-mouth. Get professional medical attention.

Eye contact: Hold eyelids open and flush with water for 15-20 minutes until no evidence of chemical remains. Get professional medical attention.

Skin contact: Remove contaminated clothing and shoes. Wash with plenty of soap and water for 15-20 minutes until no evidence of chemical remains. Get professional medical attention.

Ingestion: If victim is fully conscious, immediately give large quantities of water, but DO NOT induce vomiting. Get professional medical attention. Do not give anything by mouth to an unconscious person.

5. FIRE FIGHTING MEASURES

Flammable limits: 0.29g/L (%by volume in air)

Autoignition temperature: N/A



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Fire fighting hazards and procedures:

General hazard: 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/instructions: 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 to 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 H_2S , CS_2 , and oxides of sulfur, nitrogen, and carbon.

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.

7. HANDLING AND STORAGE

General information: Avoid breathing vapors or mist. Avoid breathing dust. Avoid contact with eyes, skin, or clothing. Do not store or consume food, drink, or tobacco in areas where they may become contaminated with this material.

Handling (Personnel): Users Should wash hands before eating, drinking, chewing gum, using tobacco or using the toilet. Remove clothing immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing. Remove personal protective equipment immediately after handling this product. Wash the outside of gloves before removing.

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



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become wet during storage. This may lead to chemical changes with will reduce the effectiveness as fungicide and crated flammable vapors.

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 pants, shoes plus socks, protective eyewear, and chemical-resistant apron. Applicators and other handlers must wear coveralls over long-sleeved shirt and long pants, waterproof gloves, and shoes plus socks.

9. PHYSICAL PROPERTIES

Solubility in Water: Wettable powder

Odor: Slightly sulfurous.

Form: Powder.

Color: Yellow.

Specific Gravity: N/A

Bulk density: 0.59g/ml

10. STABILITY AND REACTIVITY

General: This material is stable under normal conditions.

Incompatibility: Incompatible with acids and moisture (in storage)

Hazardous decomposition: Decomposes with heat. Hazardous gases/vapors produced are hydrogen sulfide, carbon disulfide, and oxides of carbon, nitrogen, and sulfur. Elevated temperature or free water promotes decomposition which may cause spontaneous combustion.

Hazardous polymerization: Material is not known to polymerize.



11. TOXICOLOGICAL INFORMATION

Acute oral: LD₅₀>5000 mg/kg

Acute dermal: LD₅₀ > 5000 mg/kg

Inhalation: LC₅₀ (4 h) for rats > 5.2mg/L

Eye irritation: Non-irritating.

Skin irritation: Non-irritating

Skin irritation: Not a sensitizer

12. ECOLOGICAL INFORMATION

Acute Toxicity - Fish : Data on Mancozeb

LC50 (96h, flow-through) Bluegill Sunfish > 3.6 mg/l

LC50 (96h, flow-through) Rainbow Trout 1.0 mg/l

Acute Toxicity - Daphnia : EC50 (96h, flow-through) Daphnia 3.8 mg/l

Acute Toxicity - Algae : EC50 (120h, cell density)

(Selenastrum capricornutum) 0.044 mg/l

Acute Toxicity - Other : LD50 (10d) Mallard Ducks > 5500 mg/l

Organisms : LD50 (10d) Japanese quail 5500 mg/l

LD50 Bee (contact) > 400 µg/bee (oral) > 209 µg/bee

LC50 (14d) Worms (Eisenia foetida) > 1000 mg/kg soil

Persistence and : Rapidly degrades in the environment by hydrolysis, oxidation,

Degradability photolysis, volatilization and bio-degradation. Mancozeb breaks down rapidly in soil, sediment and water, terminal metabolites are natural product and with mineralization to

carbon dioxide. It does not bioaccumulate Mobility in Soil : mancozeb adsorbs into soil and therefore leaching should not occur.



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13. DISPOSAL CONSIDERATIONS

Waste Disposal Method : Dispose of content/container in accordance with local regulation. Pesticide wastes are acutely hazardous. Improper disposal of excess pesticide or rinsate is a violation of Federal law. If the wastes cannot be disposed of by use or according to label instructions, contact your State Pesticide or Environmental Control Agency, or the Hazardous Waste representative at the nearest EPA Regional Office for guidance.

Contaminated Packaging : Empty containers should be taken for local recycling, recovery or waste disposal.

14. TRANSPORTATION INFORMATION

Shipping Information

DOT: Not regulated.

IATA/IMP:

Proper Shipping Name: Environmentally hazardous substance, solid, N.O.S. (mancozeb 80%)

Hazard Class: 9

UN No.: UN 3077

Special Information: Marine Pollutant (water or bulk).

Packing Group: III

15. REGULATORY INFORMATION

Extremely hazardous substance.

R-phrase:

R-43: May cause sensitization by skin contact.

R-37: Irritating to respiratory system.

S-phrase:

S-2: Keep out of the reach of children.

S-8: Keep container dry.

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S-24/25: Avoid contact with skin and eyes.

S-46: If swallowed, seek medical advice immediately and show container/label.

16. OTHER INFORMATION

This MSDS summarizes our best knowledge of the health and safety hazard information of the product and how to safely handle and use the product in the workplace. Each user should read this MSDS and consider the information in the context of the how the product will be handled and used in the workplace including in conjunction with other products.

If clarification or further information is needed to ensure that an appropriate risk assessment can be made the user should contact the company.