



Hangzhou Tianlong Biotechnology Co., Ltd.

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MATERIAL SAFETY DATA SHEET

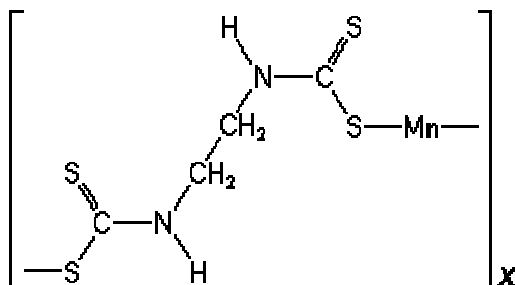
1. Chemical Product and company Identification

Product Name: Maneb

Molecular Formula: $C_4H_6MnN_2S_4$

Molecular Weight: 265.29

Structural Formula:



Chemical Name: [[2-[(dithiocarboxy)amino]ethyl]carbamdithioato(2-)-κS,κS'] manganese

CAS No.: 12427-38-2

Supplier: HANZHOU TIANLONG BIOTECHNOLOGY CO., LTD

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2. Composition / Information on Ingredients

Composition	CAS No.	Content %
Maneb	12427-38-2	90.0
Other ingredients		10.0

3. Hazards Summarizing

Route of exposure:

Skin Contact: May cause skin irritation.

Skin Absorption: May be harmful if absorbed through the skin.

Eye Contact: May cause eye irritation.

Inhalation: May be harmful if inhaled. Material is irritating to mucous membranes and upper respiratory tract.

Ingestion: May be harmful if swallowed.

Sensitization:

Skin: May cause allergic skin reaction.

4. First Aid Measures

Inhalation: If affected, remove from contaminated area to fresh air. Seek

medical advice.

Skin contact: wash affected skin areas with soap and water. Consult a physician if irritation persists. Remove and wash contaminated clothing thoroughly before reuse.

Eye contact: Immediately flush eyes with plenty of water for at least 15 minutes. Assure adequate flushing by separating the eyelids with fingers. Seek medical attention.

Ingestion: If swallowed, give 2 glasses of water to drink. Consult a physician. Never give anything by mouth to an unconscious person. Do not give alcohol.

5. Fire-Fighting Measures

Extinguishing media: CO₂, dry chemical powder, water spray or foam

Protective Equipment: Wear self-contained breathing apparatus and protective clothing to prevent contact with skin and eyes.

Specific Hazard(s): Emits toxic fumes under fire conditions.

6. Accidental Release Measures

Personal cautions: Wear respirator, chemical safety goggles, rubber boots, and heavy rubber gloves.

Methods for cleaning up:

Sweep up, place in a bag and hold for waste disposal. Avoid raising dust. Ventilate area and wash spill site after material pickup is complete.

7. Handling and Storage

Handling: Avoid breathing dust. Avoid contact with eyes, skin, and clothing. Avoid prolonged or repeated exposure.

Storage: Store in the closed, original container in a dry, cool, well-ventilated area. Do not store for prolonged periods in direct sunlight. Store in a locked room or place away from children, animals, food, animal feed, seed and fertilizers. Store at 2-8°C. Protect from frost.

8. Exposure Controls/Personal Protection

Engineering Controls: Control process conditions to avoid contact. Use local exhaust ventilation during manufacture. Use in a well-ventilated area only.

Personal Protective Equipment:

To avoid eye and skin contact, wearing the following personal protective clothing and equipment is recommended:

Eyes: Safety goggles or face shield

Clothing: Cotton overalls buttoned to the neck and wrist and a washable hat.

Gloves: Elbow length PVC gloves.

Respiratory: Respiratory protection is not normally required. If airborne concentrations are likely to exceed the exposure standard above, an AS/NZS 1715/1716 approved respirator should be worn.

Other: After use and before eating, drinking or smoking, wash hands, arms and face thoroughly with soap and water. After each day's use wash gloves, goggles or face shield and contaminated clothing.

9. Physical and Chemical Properties

Form: Powder

Color: Yellow

Odour: Faint odour

Melting point: Decomposes before melting

Density: 1.92

Flash point: Not available.

Stability: Soluble in water, practically insoluble in common inorganic solvents.

Vapor Pressure: Negligible

10. Stability and Reactivity

Stability: Stable under normal use and storage conditions.

Hazardous Decomposition Products: Carbon monoxide, Carbon dioxide, Nitrogen oxides, Sulfur oxides, Manganese/manganese oxides.

Hazardous Polymerization: Will not occur

Materials to avoid: oxidising agents

11. Toxicological Information

Acute Toxicity:

Oral Rat LD50 3000 mg/kg

Skin Rat LD50 > 5000 mg/kg

Oral Mouse LD50 2600 mg/kg

Carcinogenic effects: Available evidence suggests that Maneb is carcinogenic.

12. Ecological Information

Acute Ecotoxicity tests:

Test Type: EC50 Algae

Species: *Selenastrum capricornutum* resp. Time: 5 days

Value: 0.01 mg/l

Test Type: EC50 Daphnia Species: *Daphnia magna* Time: 48 h

Value: 1 mg/l

Test Type: LC50 Fish Species: *Cyprinus carpio* Time: 96 h

Value: 2 mg/l

Test Type: LC50 Fish

Species: *Lepomis macrochirus* (Bluegill)

Time: 96 h

Value: 0.2 - 1 mg/l

Test Type: LC50 Fish

Species: *Onchorhynchus mykiss* (Rainbow trout)

Time: 96 h

Value: 0.3 - 6 mg/l

13. Disposal Considerations

Contact a licensed professional waste disposal service to dispose of this material. Dissolve or mix the material with a combustible solvent and burn in a chemical incinerator equipped with an afterburner and scrubber. Observe all federal, state, and local environmental regulations.

14. Transport Information

Class: 9

UN No: UN 3077

Packaging Group III

15. Regulatory Information

Safety Phrases: Keep out of reach of children

Keep away from food, drink and animal feeding stuff

Do not breathe spray

When using do not eat, drink or smoke

In case of contact with eyes, rinse immediately with plenty of water and seek medical advice

In case of accident or if you feel unwell, seek medical advice immediately (Show the label where possible)

Use appropriate containment to avoid environmental contamination

16. Other Information

All information and instructions provided in this Material Safety Data Sheet (MSDS) are based on the current state of scientific and technical knowledge at the date indicated on the present MSDS and are presented in good faith and believed to be correct. This information applies to the product as such. In case of new formulations or mixes, it is necessary to ascertain that a new danger will not appear. It is the responsibility of persons on receipt of this MSDS to ensure that the information contained herein is properly read and understood by all people who may use, handle, dispose or in any way come in contact with the product. If the recipient subsequently produce formulations containing this product, it is the recipients sole responsibility to ensure the transfer of all relevant information from this MSDS to their own MSDS.