



MATERIAL SAFETY DATA SHEET

SECTION 1 - IDENTIFICATION OF THE SUBSTANCE AND COMPANY

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Product Name: CURE-M 72% WP (MANCOZEB 64% + METALAXYL 8%)

Formulation Type : Wettable Powder

CAS RN: Mancozeb: 8018-01-7, Metalaxyl: 57837-19-1

Chemical Name: (Mancozeb) Manganese ethylenebis (dithiocarbamate) (polymeric) complex with zinc salt.

: (Metalaxyl) methyl-N-(2-methoxyacetyl)-N-(2-6, xylyl)-DL-alaninate

Chemical family: Mancozeb, Alkylenebis (dithiocarbamate).

Metalaxyl, Acylalanine

SECTION 2 - COMPOSITION/ INFORMATION ON INGREDIENTS

Component	Percentage	CAS RN
Mancozeb	64%	8018-01-7
Metalaxyl	8%	57837-19-1
Inert ingredient	28%	---

SECTION 3 - IDENTIFICATION OF HAZARDS

Emergency Overview:

Symptoms of acute exposure:

- Avoid breathing product vapors or spray mist.
- Avoid contact with eyes, skin or clothing.
- Keep out of reach of children.

Hazardous decomposition products:

Can decompose at high temperatures forming toxic gases.



SECTION 4- FIRST AID MEASURES

Eye contact

Immediately flush with plenty of water.

Continue for at least 15 minutes.

If easy to do, remove contact lenses.

Obtain medical attention from an eye specialist.

Skin contact

Immediately wash affected skin with plenty of water.

Use soap if available.

Take off contaminated clothing, wristwatch, jewellery.

Get medical advice from a poison control center or doctor.

Wash clothes and clean shoes before re-use.

Inhalation

Remove to fresh air.

If breathing is difficult, give oxygen.

Get medical advice from a poison control center or doctor.

Ingestion

Do NOT induce vomiting.

Immediately offer water to drink.

Never give anything by mouth to an unconscious person.

SECTION 5 - FIRE FIGHTING MEASURES

Extinguishing media

Recommended: Water, foam, dry chemical, carbon dioxide (CO₂)

Unusual fire and explosion hazards

Minimize use of water to prevent environmental contamination.

Environmental precautions .

Hazardous products of combustion

Carbon monoxide (CO), nitrogen oxides (NO_x), hydrogen chloride (HCl) .

Fire fighting equipment

Self-contained breathing apparatus.

Equipment should be thoroughly decontaminated after use.



SECTION 6 - ACCIDENTAL RELEASE MEASURES

Spillage or Leak Disposal Procedures: Shut off or remove any sources of ignition. DO NOT smoke. Avoid contact with the spilled material or contaminated surfaces. When dealing with spills wear personal protective (clothing and equipment). Keep people and animals away and upwind. Prevent spilled material from entering drains or watercourses. Contain spill - remove liquid mechanically (explosion proof or hand pump) or absorb with earth, sand, clay, or other absorbent material. Collect and store in properly labelled, loosely covered drums for safe disposal. Deal with all spillages immediately. If contamination of drains, streams, watercourses, etc. is unavoidable, warn the local water authority.

Waste Disposal Methods: When returnable container is empty or contents no longer required return it to the point of purchase. For non-returnable containers, triple or (preferably) pressures rinse them before disposal. Add rinsing to spray tank. Do not dispose of undiluted chemicals onsite. If recycling, replace cap and return clean containers to recycler or designated collection point. If not recycling, break, crush, or puncture and bury empty containers in a local authority landfill. If no landfill is available, bury the containers below 500 mm in a disposal pit specifically marked and set up for this purpose clear of waterways, desirable vegetation and tree roots. Empty containers and product should not be burnt. Dispose of waste product via a licensed disposal contractor to an approved landfill.

SECTION 7 - HANDLING AND STORAGE

Handling

Avoid contact with eyes, skin and clothing.

Avoid breathing vapour or mist.

Wash hands thoroughly after handling or contact.

When using do not eat, drink or smoke.

Thoroughly clean equipment after use.

Do not contaminate drains, sewers and water ways when disposing of equipment rinse water.

Emptied containers retain vapour and product residue.

FOLLOW LABELLED WARNINGS EVEN AFTER CONTAINER IS EMPTIED.

Storage

Keep out of reach of children.

Keep away from food, drink and animal feed.

Keep only in the original container.

Keep container tightly closed in a cool, well-ventilated place.



SECTION 8 - EXPOSURE CONTROLS, PERSONAL PROTECTION

ENGINEERING CONTROLS: Control process conditions to avoid contact. Use only in well ventilated areas.

PERSONAL PROTECTIVE EQUIPMENT:

EYE PROTECTION: Wear Safety Goggles

CLOTHING: Wear cotton overalls buttoned to the neck and wrist and a washable hat.

GLOVES: Wear elbow length PVC gloves.

RESPIRATOR: If inhalation is likely, wear a respirator with an organic vapour cartridge.

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, respirator face piece and contaminated clothing.

USER SAFETY RECOMMENDATIONS:

1. Wash hands before eating, drinking, chewing gum, using tobacco or using the toilet.
2. Remove clothing immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing.
3. Wash the outside of gloves before removing. As soon as possible, wash thoroughly and change into clean clothing

SECTION 9 - PHYSICAL AND CHEMICAL PROPERTIES

PHYSICAL DESCRIPTION:	Pale yellow powder
ODOR:	Clay-like
DENISTY:	1.5 gm/cm ³
ALKALINITY:	0.59 ± 0.046 % as NaOH
WETTABILITY:	25 sec.
SUSPENSIBILITY:	80% after 30 min.
FOAMING:	35 ml after 1 min

SECTION 10 - STABILITY AND REACTIVITY

Stability: Stable under normal use and storage conditions.

Incompatibility With Other Materials: Strong alkalis, amines and oxidizers.

Hazardous Decomposition Products: Can decompose at high temperatures forming toxic gases

Hazardous Polymerization: Will not occur.



SECTION 11 - TOXICOLOGICAL INFORMATION

ACUTE TOXICITY:

Oral LD ₅₀ (rat)	- >5000 mg/Kg
Dermal LD ₅₀ (rabbit)	- >2000 mg/Kg
Inhalation LC ₅₀ (rat)	- >3.10 mg/l
Eye Irritation (rabbit)	- Non- irritant
Skin Irritation (rabbit)	- Non- irritant
Sensitization (guinea pig)	- Non skin sensitizer

SECTION 12 - ECOLOGICAL INFORMATION

ENVIRONMENTAL SUMMARY: DO NOT contaminate streams, rivers or waterways with the chemical or used containers. Do not apply directly to water, or to areas where surface water is present. Drift and runoff from treated areas may be hazardous to aquatic organisms in adjacent aquatic sites.

FISH TOXICITY:

Mancozeb: LC₅₀ (96 h, flow-through) for rainbow trout 1.0, bluegill sunfish >3.6 mg/l; (96 h static-renewal) for rainbow trout 0.15, 0.088, 0.074, bluegill sunfish 0.083, common carp (*Cyprinus carpio*) 4.0, 3.3 mg/l;

Metalaxyl: LC₅₀ (96 h) for rainbow trout, carp, and bluegill sunfish >100 mg/l.

AVIAN TOXICITY:

Mancozeb: Acute oral LD₅₀ (10 d) for mallard ducks >5500, Japanese quail 5500 mg/kg. Acute dietary LC₅₀ (8 d) for bobwhite quail and mallard ducks >5200 mg/kg diet.

Metalaxyl: LD₅₀ for Japanese quail (7 d) 923, mallard ducks (8 d) 1466 mg/kg. LC₅₀ (8 d) for Japanese quail, bobwhite quail and mallard ducks >10 000 mg/kg.

BEE TOXICITY:

Mancozeb: LD₅₀ (oral) >209 µg/bee; (contact) >400 µg/bee.

Metalaxyl: Not toxic to bees. LD₅₀ (48 h) (contact) >200 µg/bee; (oral) 269.3 µg/bee.

DAPHNIA TOXICITY:

Mancozeb: EC₅₀ (48 h, flow-through) 3.8 mg/l; (48 h, static-renewal) 0.073 mg/l; (24 h, static) 0.011 mg/l; (48 h, static) 0.39 mg/l.

Metalaxyl: LC₅₀ (48 h) >28 mg/l.

ALGAE TOXICITY:

Mancozeb: EC₅₀ (120 h, cell density) for *Selenastrum capricornutum* 0.044 mg/l.

Metalaxyl: IC₅₀ (5 d) for *Scenedesmus subspicatus* 33 mg/l.

WORMS TOXICITY:

Mancozeb: LC₅₀ (14 d) for *Eisenia foetida* >1000 mg/kg soil; (56 d) reproduction NOEC for *Eisenia foetida* 20 mg/kg soil.

Metalaxyl: LC₅₀ (14 d) for *Eisenia foetida* >1000 mg/kg soil.



SECTION 13 - DISPOSAL CONSIDERATIONS

WASTE: Pesticide wastes are toxic and hazardous. Dispose of in accordance with applicable federal, state and local laws and regulations. Do not discharge or pour into soil, drainage system or bodies of water.

CONTAINER: Triple rinse (or equivalent). Then offer for recycling or reconditioning, or puncture and dispose of in a sanitary landfill, or incineration, or if allowed by state and local authorities, by burning (plastic containers). If burned, stay out of smoke

SECTION 14 - TRANSPORT INFORMATION

The data provided in this section is for information only. Please apply the appropriate regulations to properly

DOT SHIPPING DESCRIPTION: Environmentally Hazardous Substance.

UN NUMBER:	3077
DOT HAZARD CLASS:	9
DOT PACKING GROUP:	PG III

SECTION 15- REGULATORY INFORMATION

Risk Symbols

Xi - Irritant

Risk Phrases

R37 - Irritating to respiratory system.

R43 - May cause sensitisation by skin contact.

SECTION 16 - OTHER INFORMATION

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