

METAZEB 700 WP

SAFETY DATA SHEET

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Product name: METAZEB 700 WP
Other identifier: Mancozeb & Metalaxyl 700 WP
Recommended use: Fungicide
Restrictions on use: Agriculture

Supplier: Villa Crop Protection (Pty) Ltd
Co. Reg. No.: 1992/002474/07
 PO Box 10413,
 Aston Manor, 1630, South Africa
Telephone: (011) 396 2233
Fax: (011) 396 4666
Website: www.villacrop.co.za

Emergency telephone numbers:
24 Hr Transport / Spill emergency no:
 (Hazcall24) +27 86 044 4411
 (Client: Villa Crop Protection)
 Griffon Poison Information Centre +27 82 446 8946
 (Client: Villa Crop Protection)
Poisoning Emergency telephone numbers:
 Griffon Poison Information Centre +27 82 446 8946
 Poisons Information Centre +27 861 555 777

2. HAZARDS IDENTIFICATION

UN GHS, Regulation EC 1272/2008 [EU-GHS/CLP] EU & SANS 10234:2008		
Hazard classes	Hazard categories	H-statements
Health		
Dermal	Skin Irritation 3 Skin Sensitisation 1	H316 H317
Carcinogenicity	Carcinogenicity 2	H351
Reproductive	Reproductive toxicity 1B	H360
Specific target organ toxicity – repeated exposure	STOT RE 2	H373
Environment		
Aquatic acute	Aquatic Acute 1	H400
Aquatic chronic	Aquatic Chronic 1	H410

The most important adverse effects:
Human health effects:
 Causes mild skin irritation.
 May cause an allergic skin reaction.
 Suspected of causing cancer.
 May damage fertility or the unborn child.

May cause damage to organs (thyroid, nervous system) through prolonged or repeated exposure.

Label elements:



Signal word: Danger

Hazard statements:

H316: Causes mild skin irritation.
 H317: May cause an allergic skin reaction.
 H351: Suspected of causing cancer.
 H360: May damage fertility or the unborn child.
 H373: May cause damage to organs (thyroid, nervous system) through prolonged or repeated exposure.
 H400: Very toxic to aquatic life.
 H410: Very toxic to aquatic life with long lasting effects.

Precautionary statements:

P203: Obtain, read and follow all safety instructions before use.
 P260: Do not breathe dust and spray.
 P272: Contaminated work clothing should not be allowed out of the workplace.
 P273: Avoid release into the environment.
 P280: Wear impervious rubber gloves and boots, protective clothing and chemical safety goggles.
 P302+P352: IF ON SKIN: Wash with plenty of water and non-abrasive soap.
 P318: IF exposed or concerned, get medical advice.
 P319: Get medical help if you feel unwell.
 P333+P317: If skin irritation or rash occurs: Get medical help.
 P391: Collect spillage.
 P405: Store locked up.
 P501: Dispose of content/container to suitable landfill in accordance with local regulations.

Other hazards:

None known.

Toxicity:

Classification according to GHS: Unclassified

3. COMPOSITION / INFORMATION ON INGREDIENTS

Substance / Mixture: Mixture

Composition:

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Chemical name	CAS	Conc. (m/m %)	Classification EC 1272/2008
Mancozeb	8018-01-7	60 %	Skin Sensitisation 1 (H317) Carcinogenicity 2 (H351) Reproductive toxicity 1B (H360D) STOT RE 2 (H373) Aquatic Acute 1 (H400) Aquatic Chronic 1 (H410)
Metalaxyl	57837-19-1	10 %	Acute Toxicity 4 (H302) Skin Sensitisation 1 (H317) Aquatic Chronic 3 (H412)
Amorf-silicate	112945-52-5	< 5 %	Skin Irritation 2 (H315) Eye Irritation 2 (H319) STOT SE 3 (H335)

4. FIRST AID MEASURES

Remove the victim from the area of exposure. Wash off remaining material with plenty of water. In the event of any complaints or symptoms, avoid further exposure. IF exposed or concerned, get medical advice.

Inhalation: Remove person from contaminated area to fresh air and assist breathing as needed. Seek medical attention if irritation occurs.

Skin: Remove contaminated clothing and shoes. Gently wipe off excess chemical. Wash skin gently and thoroughly with water and non-abrasive soap.

Obtain medical attention if irritation or rash occurs.

Eyes: Flush eyes with clean water for at least 15 – 20 minutes. Lift eyelids to facilitate irrigation. If present, remove contact lenses after 5 minutes and continue rinsing. Seek medical attention if irritation persists.

Ingestion: Seek medical attention or call a poison control centre for treatment advice. Do not induce vomiting unless instructed to do so by a poison control centre or doctor. Do not give anything by mouth to an unconscious person. If the person is alert, rinse mouth thoroughly with water.

Anticipated acute effects: Causes mild skin irritation. May cause an allergic skin reaction.

Anticipated delayed effects: Suspected of causing cancer. May damage fertility or the unborn child. May cause damage to organs (thyroid, nervous system) through prolonged or repeated exposure.

Most important symptoms / effects: None known.

Advice to physician: No specific antidotes are available against dithiocarbamate and/or acylalanine poisoning. Treat symptomatically. If the product has been ingested, and copious vomiting has not occurred, the stomach must be emptied, and steps taken to limit gastrointestinal absorption. Do not administer fats and oils.

5. FIRE-FIGHTING MEASURES

Suitable Extinguishing Media: Use carbon dioxide or dry chemical for small fires and water fog or foam for large fires.

Unsuitable Extinguishing Media: High volume water jet. Use a water jet only to cool heated containers.

Specific hazards: Combustion products are toxic and/or irritant. Dust particles may form explosive mixtures in air.

Special fire-fighting procedures: Remove spectators from surrounding area. Isolate the fire area and evacuate all personnel downwind of the fire. Fight fire from maximum distance and use unmanned hose holder or monitor nozzles. Remain upwind of fire. Avoid inhaling hazardous vapours and fumes from burning materials. Remove container from fire area if possible and without risk. Do not use high volume water jet, due to contamination risk. Do not scatter the burning material. Water can be used to cool unaffected containers but must be contained for later disposal. Contain fire control agents for later disposal. Avoid pollution of waterways by run-off from the site.

Personal protective equipment: Wear NIOSH / MSHA approved self-contained breathing apparatus and full protective gear.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions: Avoid contact with skin and eyes. Do not breathe in spray mist or dust. Ventilate area of spill or leak, especially in contained areas.

Protective equipment: Refer to Section 8 for personal protective equipment to be worn during containment and clean-up of a spill involving this product.

Emergency procedures: Alert firefighting personnel, evacuate unprotected personnel and animals.

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Environmental Precautions: Prevent spilled product from entering sewers, waterways or ground water. This product is classified as very toxic to aquatic organisms and may cause long-term adverse effects in the aquatic environment. Any spillages or uncontrolled discharges into watercourses should be reported immediately to the police and the Department of Water / Environmental Affairs.

Methods and Materials for Containment: Contain spilt product by diking area with sand or earth.

Methods and Materials for Clean-up: Contain spilt product by picking up with an electrically protected vacuum cleaner or by wet-brushing and transfer to a container for disposal. Do not create a powder cloud by using a brush or compressed air. Label containers with the contents and dispose of according to local regulations. Do not place spilt material back in original container. Do not re-use spilt material. To decontaminate the spill area, tools and equipment, wash with water and suitable detergent. Collect washings and add to the drums already collected. Do not flush spilt material or washings into drains or waterways. See section 13 for disposal considerations.

7. HANDLING AND STORAGE

Handling:

Precautions for safe handling: Avoid contact with skin and eyes. Do not breathe in spray mist or dust. Ensure adequate ventilation during handling and use. Do not handle broken packages without protective equipment. Immediately clean up spills that occur during handling. Keep containers closed when not in use. In the case of contact with the product refer to First Aid Measures – Section 4.

General occupational hygiene: Practice good hygiene when using this material. Wash hands before eating, drinking, chewing gum, smoking, using the toilet or applying cosmetics. Worker should shower at the end of each workday. Launder all clothing before it is re-used.

Storage:

Conditions for safe storage: Keep under lock and key and out of reach of unauthorised persons, children and animals. Store in its original, labelled container, tightly closed in an isolated, dry, cool and well-ventilated area. Avoid excess heat. Not to be stored next to foodstuffs, feed and water supplies. Avoid cross contamination with other pesticides and fertilisers.

Incompatible substances and mixtures: Refer to product label.

Packaging material: Plastic containers/bags, 3-ply paper/plastic bags or polyprop woven bags.

8. EXPOSURE CONTROLS AND PERSONAL PROTECTION

Permissible concentration

Components	Exposure limits	Type of exposure limit	Source
Mancozeb	2 mg/m ³	8-hr TWA	AEL
	1.5 mg/m ³	12-hr TWA	

Engineering Controls:

It is essential to provide adequate ventilation. The measures appropriate for a particular worksite depend on how this material is used and on the extent of exposure. Local Exhaust: Provide general or local exhaust ventilation systems to maintain airborne concentrations below OELs or other specified exposure limits. Local exhaust ventilation is preferred. Ensure that control systems are properly designed and maintained. Comply with occupational safety, environmental, fire and other applicable regulations.

Personal Protective Equipment:

Respiratory Protection: For most well-ventilated conditions, no respiratory protection should be needed. If used in a poorly ventilated area (airborne concentrations exceed exposure limits), use a NIOSH approved, air-purifying respirator with cartridges / canisters approved for organic vapours.

Hand Protection: Employees must wear chemically protective impervious gloves to prevent against skin contact.

Eye Protection: The use of chemical safety goggles is recommended to prevent against eye contact. Contact lenses are not protective eye devices.

Skin and Body Protection: Employees must wear appropriate protective impervious clothing, rubber boots, hat and equipment to prevent repeated or prolonged skin contact with this substance.

Emergency eyewash: Where there is any possibility that an employee's eyes may be exposed to this substance, the employer should provide an eye wash fountain or appropriate alternative within the immediate work area for emergency use.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance: Yellow homogeneous fine wettable powder.

Odour: Chemical odour.

Odour threshold: Not available.

pH (1% aqueous dilution): 6.5 – 8.5

Melting point: Not available.

Freezing Point: Not available.

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Boiling Point: Not available.
Flash Point: Not applicable.
Flammability: Not applicable.
Upper / lower explosion limits: Dust-air mixtures may explode when in contact with moisture.
Vapour Pressure (mm Hg): Not available.
Relative Vapour Density: Not available.
Density / Relative density: Not applicable.
Solubility: Miscible in water.
n-octanol / water partition coefficient: Not available.
Auto-ignition temperature: Not applicable.
Decomposition temperature: Not available.
Viscosity: Not applicable.

10. STABILITY AND REACTIVITY

Chemical stability: The product is stable for two years at ambient temperature and pressure, under normal storage and handling conditions. Avoid storage under extreme temperatures and conditions. Store below 50 °C, preferably below 30 °C, and not for prolonged periods in direct sunlight.
Reactivity: None known.
Possibility of hazardous reactions: Unlikely to occur.
Conditions to avoid: Keep away from moisture, heat or flame.
Incompatible materials: Avoid contact with oxidizing agents and acids.
Hazardous decomposition products: Products of hydrogen sulphide, carbon dioxide, carbon monoxide, nitrogen oxides, sulphur dioxide and carbon disulfide form on heating. During processing, dust may form explosive mixture in air. Decomposition by contact with water may generate vapours, which can be ignited by heat or open flames.

11. TOXICOLOGICAL INFORMATION

ACUTE TOXICITY:
Calculated according to GHS
Oral LD₅₀: (24h) > 6000 mg/kg (rat)
Dermal LD₅₀: > 30 000 mg/kg (rat)
Inhalation LC₅₀: (4h) > 30 mg/l (rat)
Skin Irritation / Corrosion Causes mild skin irritation.
Eye Damage / Irritation: Not classified.
Skin Sensitization: May cause an allergic skin reaction.
Respiratory Sensitization: Not classified.
Reproductive cell mutagenicity: Not classified.
Carcinogenicity: Suspected of causing cancer.
Reproductive toxicity: May damage fertility or the unborn child.

Specific target organ toxicity – single exposure: Not classified.
Specific target organ toxicity – repeated exposure: May cause damage to organs (thyroid, nervous system) through prolonged or repeated exposure.
Aspiration hazard: Not classified.
Chronic Effects: Not available.
POTENTIAL ADVERSE EFFECTS:
Ingestion: Do not ingest.
Other information: None known

12. ECOLOGICAL INFORMATION

This product is very toxic to aquatic life with long lasting effects.

ECOTOXICITY DATA:

Fish:

Mancozeb		
LC ₅₀ (96 h)	Rainbow trout	0.074 mg/l
	Bluegill sunfish	0.083 mg/l

Metalaxyl

LC ₅₀ (96 h)	Rainbow trout	>100 mg/l
	Bluegill sunfish	>100 mg/l
	Carp	>100 mg/l

Daphnia:

Mancozeb		
EC ₅₀ (48 h)		0.073 mg/l

Metalaxyl

LC ₅₀ (48 h)		>28 mg/l
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Algae:

Mancozeb		
E _r C ₅₀ (72 h)	<i>Pseudokirchneriella subcapitata</i>	0.059 mg/l

Metalaxyl

LC ₅₀ (120 h)	<i>Scenedesmus subspicatus</i>	33 mg/l
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Birds:

Mancozeb		
Acute oral LD ₅₀ (10 d)	Mallard ducks	>5500 mg/kg

	Japanese quail	>5500 mg/kg
	English sparrow	>1290 mg/kg
	European starlings	>2400 mg/kg

Dietary LC ₅₀ (8d)	Mallard ducks	>5200 mg/kg diet
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	Bobwhite quail	>5200 mg/kg diet
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Metalaxyl

Acute oral LD ₅₀ (8 d)	Mallard ducks	1470 mg/kg
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Acute oral LD ₅₀ (7 d)	Japanese quail	923 mg/kg
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Dietary (8d)	LC ₅₀	Mallard ducks	>10000 mg/kg diet
		Bobwhite quail	>10000 mg/kg diet
		Japanese quail	>10000 mg/kg diet

Bees:

Mancozeb

LD ₅₀ contact	162 µg/bee
LD ₅₀ oral	141 µg/bee

Metalaxyl

LD ₅₀ contact (48 h)	>200 µg/bee
LD ₅₀ oral (48 h)	269 µg/bee

Worms:

Mancozeb

LC ₅₀ (14 d)	<i>Eisenia fetida</i>	>1000 mg/kg soil
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Metalaxyl

LC ₅₀ (14 d)	<i>Eisenia fetida</i>	>1000 mg/kg soil
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ENVIRONMENTAL EFFECTS

Plants:

Mancozeb

Extensively metabolised in plants, forming ethylenethiourea, ethylenethiuram monosulfide, ethylenethiuram disulfide and sulfur as transitory intermediates. Terminal metabolites are natural products, especially those derived from glycine.

Metalaxyl

Metalaxyl is metabolised by more than four types of phase I reaction to form major metabolites; at phase II, most of the metabolites are conjugated with sugar. The types of reaction in phase I are: oxidation of the phenyl ring, oxidation of the methyl group, cleavage of the methyl ester and *N*-dealkylation.

Persistence and degradability:

Mancozeb

Rapidly degraded in the environment by hydrolysis, oxidation, photolysis and metabolism. Soil DT₅₀ <1 d (ave., 20 °C).

Metalaxyl

In soil, DT₅₀ 29 days (realistic range 10–40 days). DT₅₀ in water 22–48 days. Photolytically stable in water and on soil surfaces.

Bio-accumulative potential:

Mancozeb

Poorly absorbed and rapidly excreted in animals.

Metalaxyl

Log K_{ow} 1.75. In rats, metalaxyl is rapidly absorbed and also rapidly and almost completely eliminated with urine and faeces. There was no evidence for

accumulation or retention of metalaxyl or its metabolites.

Mobility in soil:

Mancozeb

K_{oc} 998 ml/g (ave., 4 soils).

Metalaxyl

K_{oc} 70 ml/g (realistic range 30–300 ml/g).

Other adverse effects: Not determined

13. DISPOSAL CONSIDERATIONS

Waste: Open dumping or burning of this pesticide is prohibited. Waste resulting from the use of this product cannot be reused or re-processed. Never pour untreated waste or surplus product into public sewers or where there is any danger of run-off or seepage into water systems. Do not contaminate rivers, dams or any other water sources with the product or used containers. Comply with local legislation applying to waste disposal. The product may be taken to a registered waste disposal site or incineration plant.

Container: Emptied containers retain product residues. Do not re-use the empty container for any other purpose. Empty containers by inverting the empty container over the spray or mixing tank. Thereafter, rinse the container three times with a volume of water equal to a quarter of that of the container. Puncture the triple rinsed container and dispose of via an approved collector or recycler (www.croplife.co.za). Do not bury, burn or donate the container to any other parties that may use it as a container for food or beverages. Observe all labelled safeguards until container is destroyed.

14. TRANSPORT INFORMATION

UN Number: 3077

Road Transport ADR/IRD:

Class: 9
 Packaging group: III
 UN Proper Shipping Name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (Mancozeb 600 g/kg + Metalaxyl 100 g/kg)

Maritime Transport IMDG/IMO:

Class: 9
 Packaging group: III
 UN Proper Shipping Name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (Mancozeb 600 g/kg + Metalaxyl 100 g/kg)

Marine Pollutant (Y): Yes

Air Transport IATA/ICAO:

Class: 9
 Packaging group: III

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UN Proper Shipping Name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (Mancozeb 600 g/kg + Metalaxyl 100 g/kg)

Special / Environmental Precautions: Wedge drums tightly to avoid movement.

Transport in bulk: Refer to MARPOL 73/78, Annex II and the IBC code.

recommendations are not followed. All information is given in good faith but without guarantee in respect of accuracy, and no responsibility is accepted for errors and omissions or the consequence thereof.

15. REGULATORY INFORMATION

Safety, health and environmental regulations / legislation for the mixture:

OHSA 1993 Regulations for Hazardous Chemical Substances.

Relevant information regarding restrictions: None.

EU regulation: Regulation EC1272/2008 (EU-GHS/CLP)

Other national regulations: None.

Chemical Safety Assessment carried out? No

END OF DOCUMENT

Compiled: July 2022
Reviewed: July 2022
Revision no.: (1)
Next revision: July 2027

For detailed information on revisions, contact the Registration holder.

16. OTHER INFORMATION

Packaging: Packed in 200g, 250g, 500g, 1 kg, 2 kg, 5 kg, 10 kg, 15 kg, 20 kg, 25 kg & 50 kg plastic containers/bags, 3-ply paper/plastic bags or polyprop woven bags labelled according to South African regulations and guidelines.

Other hazard statements, abbreviations and explanations:

H302: Harmful if swallowed.

H315: Causes skin irritation.

H319: Causes serious eye irritation.

H335: May cause respiratory irritation.

H412: Harmful to aquatic life with long-lasting effects.

IATA: International Air Transport Association.

IBC: International Bulk Chemical.

ICAO: International Civil Aviation Organization.

IMDG: International Maritime Dangerous Goods

IMO: International Maritime Organization.

LD₅₀ value: The median lethal dose or the amount of a toxic agent that is sufficient to kill 50 percent of a population within a certain period of time.

OEL/RL: Occupational exposure limit-recommended limit.

TWA: Time-weighted average – The average exposure over a specified period, usually a nominal eight hours.

ST/STEL: Short-term exposure limits.

Disclaimer: The information on this sheet is not a specification; it does not guarantee specific properties. The information is intended to provide general guidance as to health and safety based upon our knowledge of the handling, storage and use of the product. It is not applicable to unusual or non-standard uses of the product nor where instructions or