

CYMOXAZEB WP

SAFETY DATA SHEET

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Product name: CYMOXAZEB WP
Other identifier: Mancozeb + Cymoxanil 760 WP
Recommended use: Fungicide
Restrictions on use: Agriculture (Only for commercial farm use. Not for use with any handheld equipment and/or in residential areas and aerial application)

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 Helpline +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
Eye	Eye Irritation 2	H319
Carcinogenicity	Carcinogenicity 2	H351
Reproductive	Reproductive toxicity 2	H361
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:

Physiochemical effects: None known

Human health effects:

Causes serious eye irritation.
Causes mild skin irritation.
May cause an allergic skin reaction.
Suspected of causing cancer.
Suspected of damaging fertility or the unborn child.
May cause damage to organs through prolonged or repeated exposure.

Label elements:



Signal word: Warning

Hazard statements:

H316: Causes mild skin irritation.
H317: May cause an allergic skin reaction.
H319: Causes serious eye irritation.
H351: Suspected of causing cancer.
H361: Suspected of damaging fertility or the unborn child.
H373: May cause damage to organs 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.
P264+P265: Wash hands thoroughly after handling. Do not touch eyes.
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.
P305+P351+P338: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P318: IF exposed or concerned, get medical advice.

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P319: Get medical help if you feel unwell.
P333+P317: If skin irritation or rash occurs: Get medical help.
P337+P317: If eye irritation persists: 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: Category 5

3. COMPOSITION / INFORMATION ON INGREDIENTS

Mixture:

Chemical name	CAS	Conc. (m/m %)	Classification EC 1272/2008
Mancozeb TC	8018-01-7	70 %	Skin Sensitisation 1 (H317) Carcinogenicity 2 (H351) Reproductive toxicity 2 (H361D) STOT RE 2 (H373) Aquatic Acute 1 (H400) Aquatic Chronic 1 (H410)
Cymoxanil	57966-95-7	6 %	Acute Toxicity 4 (H302) Skin Sensitisation 1 (H317) Reproductive toxicity 2 (H361fd) STOT RE 2 (H373) Aquatic Acute 1 (H400) Aquatic Chronic 1 (H410)
Fatty alcohol sulphonate	68955-20-4	< 5 %	Skin Irritation 2 (H315) Eye Damage 1 (H318)

			Aquatic Chronic 3 (H412)
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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 serious eye irritation. Causes mild skin irritation. May cause an allergic skin reaction.

Anticipated delayed effects: Suspected of causing cancer. Suspected of damaging fertility or the unborn child. May cause damage to organs through prolonged or repeated exposure.

Most important symptoms / effects: None known.

Advice to physician: No specific antidotes are available. Treat supportively and symptomatically.

If a large amount has been ingested in the last few hours, and if copious vomiting has not already occurred, the stomach must be emptied and steps taken to limit gastrointestinal absorption. If the patient is fully alert and nervous system depression is not anticipated, oral administration of Syrup of Ipecac is probably the best way to empty the stomach.

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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: Slight fire hazard when exposed to heat or flame. Dust-air mixtures may ignite or explode. Combustion products are toxic and/or irritant.

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.

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 or polyprop woven bags / 3-ply paper bags.

8. EXPOSURE CONTROLS AND PERSONAL PROTECTION

Permissible concentration

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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: Employees must wear chemical safety goggles 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: Light grey homogeneous fine wettable powder.

Odour: Chemical odour.

Odour threshold: Not available.

pH (1% aqueous dilution): 7.5 – 9.5

Melting point: Not available.

Freezing Point: Not available.

Boiling Point: Not available.

Flash Point: Not applicable.

Flammability: Not applicable.

Upper / lower explosion limits: Dust-air mixtures may explode when in contact with moist.

Vapour Pressure (mm Hg): Not available.

Relative Vapour Density: Not available.

Density / Relative density: Not applicable.

Solubility: Wettable powder – miscible in water.

n-octanol / water partition coefficient: Not available.

Auto-ignition temperature: Not available.

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: Moisture, extreme heat or exposure to flames.

Incompatible materials: Strong oxidizers, strong bases, strong reducing 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 flame.

11. TOXICOLOGICAL INFORMATION

ACUTE TOXICITY:

Calculated according to GHS

Oral LD₅₀: (24h) > 12 000 mg/kg (rat)

Dermal LD₅₀: > 30 000 mg/kg (rabbit)

Inhalation LC₅₀: (4h) > 5 mg/l (rat)

Skin Irritation / Corrosion: Causes mild skin irritation.

Eye Damage / Irritation: Causes serious eye irritation.

Skin Sensitization: May cause an allergic skin reaction

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Respiratory Sensitization: Not classified.
Reproductive cell mutagenicity: Not classified.
Carcinogenicity: Suspected of causing cancer.
Reproductive toxicity: Suspected of damaging fertility or the unborn child.
Specific target organ toxicity – single exposure: Not classified.
Specific target organ toxicity – repeated exposure: May cause damage to organs through prolonged or repeated exposure.
Aspiration hazard: Not classified.
Chronic Effects: Not available.
POTENTIAL ADVERSE EFFECTS:
Ingestion: Do not ingest.
Eyes: Causes serious eye irritation.
Skin: May cause an allergic skin reaction.
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

Cymoxanil

LC ₅₀ (96 h)	Rainbow trout	61 mg/ℓ
	Bluegill sunfish	29 mg/ℓ
	Carp	91 mg/ℓ
	Sheepshead minnows	>47.5 mg/ℓ

Daphnia:

Mancozeb

EC ₅₀ (48 h)		0.073 mg/ℓ
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Cymoxanil

LC ₅₀ (48 h)		27 mg/ℓ
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Algae:

Mancozeb

ErC ₅₀ (72 h)	<i>Pseudokirchneriella subcapitata</i>	0.059 mg/ℓ
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Cymoxanil

EC ₅₀ (120 h)	<i>Selenastrum capricornutum</i>	1.21 mg/ℓ
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Birds:

Mancozeb

Acute oral LD ₅₀ (10 d)	Mallard ducks	> 5500 mg/kg
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		Japanese quail	> 5500 mg/kg
		English sparrow	> 1290 mg/kg
		European starlings	> 2400 mg/kg
Dietary (8d)	LC ₅₀	Mallard ducks	>5200 mg/kg diet
		Bobwhite quail	>5200 mg/kg diet
Cymoxanil			
Acute oral LD ₅₀		Mallard ducks	> 2250 mg/kg
		Bobwhite quail	> 2250 mg/kg
Dietary (8d)	LC ₅₀	Mallard ducks	>5620 mg/kg diet
		Bobwhite quail	>5620 mg/kg diet

Bees:

Mancozeb

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

Cymoxanil

LD ₅₀ contact (48 h)		>25 µg/bee
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Worms:

Mancozeb

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

LC ₅₀ (14 d)	Earthworms	>2208 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.

Cymoxanil

Degraded to glycine with subsequent incorporation into natural products (proteins and starch).

Persistence and degradability:

Mancozeb

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

Cymoxanil

In lab. soils, DT₅₀ 0.75–1.6 days (5 soils, pH range 5.7–7.8, o.m. 0.8–3.5%). In the field, DT₅₀ (bare soil) 0.9–9 d. In aquatic studies, DT₅₀ <1 d.

Bio-accumulative potential:

Mancozeb

Poorly absorbed and rapidly excreted in animals.

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Cymoxanil

Log K_{ow} 0.59 (pH 5), 0.67 (pH 7). In rats, cymoxanil was readily absorbed through the intestines; the majority of the dose was excreted in the urine.

Mobility in soil:

Mancozeb

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

Cymoxanil

K_{oc} 38–237. Cymoxanil is mobile, adsorption K_f 0.29–2.86 in four soil types.

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 700 g/kg + cymoxanil 60 g/kg)

Maritime Transport IMDG/IMO:

Class: 9

Packaging group: III

UN Proper Shipping Name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (Mancozeb 700 g/kg + cymoxanil 60 g/kg)

Marine Pollutant (Y): Yes

Air Transport IATA/ICAO:

Class: 9

Packaging group: III

UN Proper Shipping Name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (Mancozeb 700 g/kg + cymoxanil 60 g/kg)

Special/Environmental Precautions: None known.

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

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

16. OTHER INFORMATION

Packaging: Packed in 200g, 250g, 500g, 1 kg, 2 kg, 5 kg and 10 kg plastic containers and 20 kg, 25 kg & 50 kg 3 ply paper/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.

H318: Causes serious eye damage.

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.

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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 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.

END OF DOCUMENT

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For detailed information on revisions, contact the Registration holder.