



MANCOZEB 750 WG FUNGICIDE

SECTION 1: IDENTIFICATION: PRODUCT IDENTIFIER AND CHEMICAL IDENTITY

Product Identifier	MANCOZEB 750 WG FUNGICIDE
Active Constituent	750 g/kg MANCOZEB
Other means of Identification	GROUP M3 FUNGICIDE Grow Choice product code number: 626 AVPMA registered number: 65465/50991
Recommended use of the chemical and restrictions on due	For the control of certain fungus diseases of fruit, field crops, tobacco, turf, vegetables and ornamentals as per the Directions for Use Table.
Suppliers name, address and phone number:	Grow Choice Pty Ltd 113 Fitzroy Street TAMWORTH NSW 2340 Phone: 02 6766 3979 1800 817 676 Fax: 02 6766 2922 Email: admin@growchoice.com.au
Emergency phone number:	In Case Of Emergency Dial 000
Poisons Information Centre	Phone: 13 11 26 and speak to a Poisons Information Specialist. Fax:+61 2 9845 3597 http://www.chw.edu.au/poisons/contact.htm

SECTION 2: HAZARDS IDENTIFICATION (continued on page 2)

- Classified as **HAZARDOUS** in accordance with the Globally Harmonized System of Classification and Labelling of Chemicals (the GHS) AND Safe Work Australia.
- Considered **non-dangerous** for road and rail transport by the Australian Code for the Transport of Dangerous Goods Road and Rail (August 2014 edition)
- Considered **DANGEROUS** for transport by sea and air in accordance with the IMDG Code 37-14 (refer Section 14)

Classification of hazardous chemical

Sensitization – Skin: Hazard	Category 1, 1A, 1B.
Toxic to Reproduction	Hazard Category 2.
Hazardous to the Aquatic Environment – Acute Hazard: Hazard	Category 1.

Signal Word
GHS Symbols

DANGER



Health Hazard **H317** **May cause an allergic skin reaction.**

H361 **Suspected of damaging fertility or the unborn child.**
H400 **Very toxic to aquatic life.**

Hazard Statements

Precautionary Statements

Prevention

- P100** If medical advice is needed, have product container or label at hand.
- P101** Keep out of reach of children.
- P102** Read label before use
- P201** Obtain special instructions before use.
- P202** Do not handle until all safety precautions have been read and understood.
- P261** Avoid breathing mist, vapours or spray.
- P272** Contaminated work clothing should not be allowed out of the workplace.
- P273** Avoid release to the environment.
- P280** Wear protective gloves/protective clothing/eye protection/face protection.
- P281** Use personal protective equipment as required.

Response	P302 + P352	IF ON SKIN: Wash with plenty of soap and water.
	P308 + P 313	IF exposed or concerned: Get medical advice/ attention:
	P321	Specific treatment (see Safety Directions on the product label).
	P333 + P313	If skin irritation or rash occurs: Get medical advice/attention.
	P363	Wash contaminated clothing before reuse.
	P391	Collect spillage.
Storage	P403+P235+P233	Store in a well-ventilated place. Keep cool. Keep container tightly closed.
	P405	Store locked up
Disposal	P501	Dispose of contents and container in accordance with local, regional and national regulations.

SECTION 3: COMPOSITION AND INFORMATION ON INGREDIENTS

Chemical ingredients: CAS number and other unique identifiers: Concentration of ingredients:	Component	CAS No	Concentration %
	Mancozeb	8018-01-7	75
	Other ingredients, Including water	(non-hazardous)	balance

SECTION 4: FIRST AID MEASURES

In Case Of Emergency Dial 000 and/or Poisons Information Centre: Phone: 13 11 26 and speak to a Poisons Information Specialist. Take this SDS and or DFU/Label with you or when calling the Poisons Information Centre.

Description of necessary first aid measures

Swallow	If swallowed and if more than 15 minutes from a hospital DO NOT induce vomiting. Seek immediate medical advice. Avoid giving alcohol.
Eye:	If product gets in eyes, brush granules away from eyes, wash it out immediately with water for at least 15 minutes holding eyes open. . Seek medical attention.
Skin:	Remove contaminated clothing and wash affected areas thoroughly with soap and water.
Inhaled	Move affected person to fresh air and keep at rest until recovered. Seek urgent medical attention if skin is irritated.

Symptoms caused by exposure

Irritation of skin, eyes and respiratory tract.
Skin sensitization.
Chronic skin disease has been observed in occupationally exposed workers.

Inhalation: Cough. Sore throat.
Skin: Redness.
Eyes: Redness. Pain
Ingestion: Diarrhea. Nausea. Vomiting.

Medical Attention and Special Treatment

Mancozeb has low acute oral and dermal toxicity. There is no specific antidote available. Treat symptomatically

SECTION 5: FIRE FIGHTING MEASURES

Specific Hazard: Generally considered a low risk.

Extinguishing media: Extinguish fire using carbon dioxide, foam or dry agent. If not available, use water fog or fine water spray but ensure all runoff is contained. Contain all runoff.

Hazards from combustion products: On heating, product will emit irritating and toxic fumes. The formation of hydrogen sulphide, carbon disulphide, sulphur oxides and carbon oxides can be expected in a fire situation. Finely dispersed particles may form explosive mixtures in air.

Precautions for fire-fighters and special protective equipment: Isolate fire area. Evacuate downwind residents. Do not breathe smoke or vapours generated. Fire fighters should wear full protective gear, including self-contained breathing apparatus (AS/NZS 1715/1716). Keep unnecessary people away. If it can be done safely, remove intact containers from the fire. Otherwise, use water spray to cool them. Bund area with sand or earth to prevent contamination of drains or waterways. Dispose of fire control water or other extinguishing agent and spillage safely later

SECTION 6: ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

In case of spillage it is important to take all steps necessary to:
Avoid contact with the spilled material or contaminated surfaces. Extinguish or remove any sources of ignition. When dealing with spills do not eat, drink or smoke and wear protective clothing and equipment. Keep people and animals away. Prevent spilled material from entering drains or watercourses.

Environmental precautions

Do not allow to get into surface water, drains and ground water. If the product contaminates rivers and lakes or drains inform respective authorities.
Reposition any leaking containers so as to minimise leakage. Dam and absorb spill with an absorbent material (eg sand or soil). Shovel the absorbed spill into drums

Methods and materials for containment and cleaning up

Contain spill and absorb with earth, sand, clay, or other absorbent material. Collect and store in properly labelled, sealed drums for safe disposal. Deal with all spillages immediately. Clean contaminated floors and objects thoroughly, observing environmental regulations. If contamination of drains, streams, watercourses, etc. is unavoidable, warn the local water authority.

Reference to other sections

Information regarding safe handling see section 7.
Information regarding personal protective equipment see section 8.
Information regarding waste disposal, see section 13.

SECTION 7: HANDLING AND STORAGE

Precautions for safe handling

Safe work practices are recommended.
Avoid contact with eyes and skin.
When opening the container and preparing spray wear appropriate PPE (refer Section 8).
Do not spray under high wind conditions.
Hygiene measures:

When using products, do not eat, drink or smoke.
Contaminated work clothing should not be allowed out of the workplace.
Wash hands thoroughly with soap and water after use and before eating, drinking, smoking/using tobacco, chewing gum, using the toilet or applying cosmetics.
After each day's use, wash gloves, face shield or goggles and contaminated clothing.
Avoid contact with eyes and skin.

Conditions for safe storage, including any incompatibilities

Keep out of reach of children, unauthorised persons and animals.
Store in tightly sealed original containers in a dry secure place away from fertilizers, feed and food.
Store out of direct sunlight and extreme temperature.
Always read the label and any attached leaflet before use.

SECTION 8: EXPOSURE CONTROLS AND PERSONAL PROTECTION (continued on page 4)

Exposure Standards: 8018-01-7 Mancozeb

NES TWA: 1 mg/m³ as mn

Appropriate engineering controls

Keep containers closed when not in use. No special engineering controls are required, however make sure that the work environment remains clean and that dust is minimised.

Exposure Guidelines:

No exposure guidelines have been established for this product by Safe Work Australia.

Biological Limit Values:

No biological limit allocated.

Personal protective equipment (PPE):

When opening the container, preparing the spray wear cotton overalls buttoned to the neck and wrist and a washable hat, elbow length PVC chemical resistant and face shield or goggles.

When using the prepared spray, wear cotton overalls buttoned to the neck and wrist and a washable hat and optional once chemical is prepared for use, elbow length PVC chemical resistant and face shield or goggles if protected from spray drift/contamination.

Face and Eye Protection: Face shield or goggles.

Clothing: Cotton overalls buttoned to the neck and wrist (or equivalent clothing) and a washable hat.

Gloves: Elbow-length chemical resistant PVC gloves.

Respiratory: If airborne concentrations are likely to exceed the exposure standards above or if exposed to dust, an AS/NZS 1715/1716 approved respirator should be worn.

Recommended to use Australian and New Zealand Standard PPE:

Overalls	AS 3765, Clothing for protection against Hazardous chemicals
Gloves:	AS/NZS 2161, Industrial safety gloves and mittens (not electrical and medical gloves)
Goggles and face shield	As/NZS 1337, Eye protectors for industrial applications.
Footwear	AS/NZS 2210, Occupational protective footwear
Respirators	AS NZS 1715 Selection, Use and Maintenance of Respiratory Protective Devices
Devices	AS/NZS 1716, Respiratory Protective Devices

Requirements Concerning Training

Check State and/or Territory regulations that require people who use pesticides in their job or business to have adequate training in the application of the materials.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

Appearance:	Yellow to brown coloured granules.
Odour:	Musty, sulphurous type odour.
Boiling point:	Not applicable – solid at room temperature.
Freezing point:	Not applicable – solid at room temperature.
Specific Gravity:	No data.
Solubility in Water:	Disperses in water.
pH:	No data available.
Flammability:	Not flammable.
Corrosive hazard:	Not available.
Flashpoint (°C):	Not flammable.
Poisons Schedule:	This product is a Schedule 5 (S5) poison.
Formulation type:	Water Dispersible Granule.

SECTION 10: STABILITY AND REACTIVITY

Chemical Stability: Product is considered stable in ambient conditions for a period of up to 2 years after manufacture. Product must be used within 2 years of manufacture.

Conditions to avoid: Do not store for prolonged periods in direct sunlight. Keep away from moisture, heat and flames.

Incompatible materials: Strong acids and oxidising agents.

Hazardous decomposition products: When involved in a fire will emit toxic and noxious fumes containing hydrogen sulphide, carbon disulphide, sulphur oxides and carbon oxides.

Hazardous reactions: No particular reactions to avoid. Hazardous polymerisation is unlikely to occur.

SECTION 11: TOXICOLOGICAL INFORMATION (continued on page 5)

Toxicology Information	No harmful effects are expected if the precautions on the label and this MSDS are followed.
Acute Toxicity - Oral	LD50 (rat) >5000 mg/kg for mancozeb technical
Acute Toxicity - Dermal	LD50 (percutaneous, rat) >2,000 mg/kg for mancozeb
Acute Toxicity - Inhalation	LC50 (rat) (4hr) 5.14 mg/l
Ingestion	The concentrate is of low toxicity if swallowed.
Inhalation	Inhalation of dust may result in respiratory irritation.
Skin	May cause sensitisation by prolonged skin contact.
Eye	May irritate the eyes.
Reproductive Toxicity	Evidence from animal studies suggests the potential for developmental toxicity on repeated or prolonged exposure.
Chronic Effects	Prolonged exposure to dust or mists containing manganese compounds can cause progressive poisoning. The signs and symptoms are apathy, loss of balance and weakness. More advanced poisoning may show evidence of central nervous system disturbance.
Skin corrosion/irritation	Mild to moderate skin irritant.
Human Effects	Prolonged and repeated exposure can occasionally cause skin irritation, conjunctivitis and bronchitis. May cause sensitisation by inhalation or skin contact.
Other Information	The Australian Acceptable Daily Intake (ADI) for mancozeb for a human is 0.006 mg/kg/day, set for the public for daily, lifetime exposure. This is based on the NOEL of 0.6 mg/kg/day, the level

determined to show no effects during long term exposure for the most sensitive indicators and the most sensitive species. (Ref: Comm. Dept. of Health and Ageing, Office of Chemical Safety, 'ADI List', June 2014).

SECTION 12: ECOLOGICAL INFORMATION

Persistence and degradability	Mancozeb is rapidly absorbed and inactivated by contact with soil. Half-life in soil is typically 6 - 15 days.
Acute Toxicity – Fish	Harmful to fish. LC50 (48hr) for rainbow trout is 0.074 mg/l.
Acute Toxicity - Daphnia	EC50 (48hr) for daphnia magna is 0.073 mg/l for Mancozeb.
Acute Toxicity - Algae	EC50 for Pseudokirchneriella subcapitata is 0.044 mg/l.
Acute Toxicity -	Bees: Not toxic to bees. LD50 193 µg/bee.
Other Organisms	Birds: Not toxic to birds. LD50 for mancozeb is >1000 mg/kg

SECTION 13: DISPOSAL CONSIDERATIONS

Disposal of product	On site disposal of the concentrated product is not acceptable. Ideally, the product should be used for its intended purpose. If there is a need to dispose of the product, approach local authorities who hold periodic collections of unwanted chemicals (ChemClear®).
Disposal of Container	Do not use this container for any other purpose. Triple rinse containers; add rinsate to the spray tank, then offer the container for recycling/reconditioning, or puncture top, sides and bottom and dispose of in landfill in accordance with local regulations. drumMUSTER is the national program for the collection and recycling of empty, cleaned, non-returnable crop production and on-farm animal health chemical containers. If the label on your container carries the drumMUSTER symbol, triple rinse the container, ring your local Council, and offer the container for collection in the program. If recycling, replace cap and return clean containers to recycler or designated collection point. If not recycling, puncture or shred and bury containers in local authority landfill. If no landfill is available, bury the containers below 500mm 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.

SECTION 14: TRANSPORT INFORMATION

General Transport Information	It is considered good practice not to transport agricultural chemical products with food, food related materials and animal feed products.
Land	Considered non-dangerous for road and rail transport by the Australian Code for the Transport of Dangerous Goods Road and Rail (August 2014 edition)
Sea and Air	Considered DANGEROUS for transport by sea and air in accordance with the IMDG Code 37-14 IMDG, IATA UN 3077 Proper Shipping Name; IMDG, IATA ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (contains Mancozeb) Dangerous Goods Class; IMDG Class: 9 Miscellaneous dangerous substances and articles. Packing Group: IMDG, IATA III Marine pollutant: Yes EMS Number: F-A,S-F Hazchem Code: 179, 274, 331, 335, AU01 Special Provisions: 2Z

SECTION 15: REGULATORY INFORMATION

Under the Standard for Uniform Scheduling of Medicines and Poisons (SUSMP), this product is a Schedule 5 poison (S5). This product is registered under the Agricultural and Veterinary Chemicals Code Act 1994. Product Registration No. 626

SECTION 16: ANY OTHER RELEVANT INFORMATION

This Safety Data Sheet (SDS) was completed 27 January 2017 and replaces MSDS dated 8/9/11.

Acronyms:

AVPMA: Australian Pesticides and Veterinary Medicines Authority.
GHS: Globally Harmonised system of Classification and Labelling of chemicals
HSIS: Hazardous Substances Information System
NOHSC: National Occupational Health and Safety Commission
CAS No.: unique numerical identifier assigned by Chemical Abstracts Service (division of the American Chemical Society)
STEL: Exposure standard - short term exposure limit.
AS/NZS: Australian Standards and New Zealand Standards for Personal protective equipment
ADI: Acceptable Daily Intakes For Agricultural And Veterinary Chemicals
ADG: Australian Dangerous Goods
IMDG: International Maritime Code of Dangerous Goods
IATA: International Air Transport Association

End of SDS

DISCLAIMER:

This SAFETY DATA SHEET has been developed according to the Work Health and Safety Regulations (WHS Regulations) Code of Practice for the Preparation of Safety Data Sheets for Hazardous Chemicals December 2011. The data, information and recommendations herein ("information") are represented in good faith and believed to be correct as of the date hereof. The purpose of this SAFETY DATA SHEET is to describe product in terms of their safety requirements. Grow Choice Pty Ltd makes no representation of merchantability, fitness for a particular purpose of application, or of any other nature with respect to the information or the product to which the information refers ("the product"). The information is supplied upon the condition that the persons receiving same will make their own determination as to its suitability for their purpose prior to the use of the product. The physical data shown herein are typical values based on the material tested. These values should not be construed as a guaranteed analysis of any specific lot or as guaranteed specification for the product or specific lots thereof.

Due care should be taken to make sure that the use or disposal of this product and/or its packaging is in compliance with Relevant Federal, State and Local