

FUNGICIDE MALZEB™ WP

A wettable powder fungicide that consists
of a contact- and systemic fungicide
for the control of various
diseases on the crops indicated

ACTIVE INGREDIENT: % BY WT

MANCOZEB.....	64.0%
METALAXYL.....	8.0%
OTHER INGREDIENTS:.....	28.0%
TOTAL:.....	100.0%

KEEP OUT OF REACH OF CHILDREN
CAUTION

See Inside for Additional Precautionary Statements and Directions for Use



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ACTIVE CONSTITUENTS:

640 g/kg MANCOZEB**80 g/kg METALAXYL**

GROUP

4 | M3

FUNGICIDE

Controls Downy Mildew and certain other foliar diseases as specified in the Directions for Use table

Formulation type

Wettable**Powder****DIRECTIONS FOR USE****RESTRAINTS:**

DO NOT apply if rain is expected within 6 hours.

DO NOT apply as a post-infection curative spray on crops as this will favour the development of resistant disease strains.

Application should be on a protectant programme basis only.

DO NOT use for disease control in greenhouse crops.

DO NOT apply more than 4 sprays per season (except for Tobacco).

CROP	DISEASE CONTROLLED	STATE	RATE	WHP	CRITICAL COMMENTS
Grapevines	Downy Mildew	Qld, NSW, Vic, Tas, SA, WA only	Dilute Spraying 250 g/100 L water Concentrate Spraying Refer to the Application section	14 days	<p>Apply by dilute or concentrate spraying equipment. Apply the same amount of product to the target crop whether applying this product by dilute or concentrate spraying methods.</p> <p>Limit the use of Group 4 fungicides to periods when conditions favour disease development. Commence disease control sprays when the grapevine shoots are approximately 20 cm (200 mm) long and continue spraying at 7 - 21-day intervals, using a protectant or non-phenylamide fungicide (not Group 4). Use the shorter interval under prolonged humid and wet conditions.</p> <p>When conditions favour Downy Mildew development (prolonged humid and wet conditions) apply two consecutive sprays.</p> <p>Apply before the first sign of oil spots or as soon as possible after the infection period.</p> <p>DO NOT apply more than two consecutive sprays of a Group 4 product. Resume the program protectant sprays. Apply a maximum of four sprays per season.</p> <p>DO NOT apply to grapevines in flower in Queensland.</p> <p>Minor phytotoxic reactions on some varieties of grapes may occur under certain conditions.</p> <p>Dilute spraying: Apply to the point of run-off. Use a minimum of 500 litres mixture per hectare before flowering, increasing volume to a minimum of 1000 litres per hectare when vines are in full foliage.</p> <p>Concentrate spraying: Use a minimum of 125 litres mixture per hectare before flowering, increasing volume to a minimum of 250 litres per hectare when vines are in full foliage.</p>

CROP	DISEASE CONTROLLED	STATE	APPLICATION RATE			WHP	CRITICAL COMMENTS
			BOOM/ SPRAYING/ LOW VOLUME APPLICATION	AIRCRAFT SPRAYING	HIGH VOLUME APPLICATION		
Cucurbits (Cucumber)	Downy Mildew	All States	2.5 kg in 200 - 500 litres of water per hectare	2.5 kg in 20 - 40 litres of water per hectare	250 g per 100 litres of water	7 days	<p>This use is subject to a phenylamide anti-resistance strategy.</p> <p>Maintain a regular spray program. Commence spraying early (ie. before main disease infection period) with a registered fungicide from a different activity group, e.g. mancozeb.</p> <p>When conditions favour disease development apply 2 consecutive sprays of at 7 - 10 day intervals and then resume the program of protectant or non-Group 4 fungicides.</p> <p>DO NOT wait for disease to appear. Use the shorter interval when infection pressure is severe. Ensure thorough coverage of plants.</p>
	Anthracnose, Gummy Stem Blight, Alternaria Leaf Spot; also Septoria Spot (Pumpkins)	Qld only					
Lettuce	Downy Mildew, Septoria Leaf Spot, Anthracnose	All States	2.5 kg in 200 - 500 liters of water per hectare	-	250 g per 100 liters of water; 35 g per 15 liters of water	14 days	
		Qld, Vic, SA, WA, Tas only	-	2.5 kg in 20 - 40 liters of water per hectare	-		
Onions	Downy Mildew	All States	2.5 kg in 200 - 500 liters of water per hectare		250 g per 100 litres of water	7 days	
	Purple Blotch	Qld only	2.5 kg in 500 litres of water per hectare				
Tomatoes	Downy Mildew	All States	2.5 kg in 200 - 500 litres of water per hectare	-	150 g - 250 g per 100 litres of water	10 days	
Potatoes	Late Blight, Early Blight			2.5 kg in 30 - 50 litres of water per hectare	250 g per 100 litres of water	7 days	
	Pink Rot	Vic, Tas, SA, WA only					Make the first application 4-6 weeks after planting to crops. Repeat applications at 14-day intervals then apply a program of protectant or non-Group 4 fungicide.
Poppies	Downy Mildew (<i>Peronospora arborens</i>)	Tas only	2.5 kg/ha	-	-	7 weeks	<p>Commence spraying early (ie. before main disease infection period) with a registered non-Group 4 fungicide, e.g. mancozeb.</p> <p>When conditions favour disease development apply 2 applications at 7 to 10 day intervals and then resume the program of protectant or non-Group 4 fungicides. Use the shorter interval when infection pressure is severe.</p> <p>DO NOT wait for disease to appear. Ensure thorough coverage of plants.</p>

2. OTHER CROPS – *continued*

CROP	DISEASE CONTROLLED	STATE	APPLICATION RATE			WHP	CRITICAL COMMENTS
			BOOM/ SPRAYING/ LOW VOLUME APPLICATION	AIRCRAFT SPRAYING	HIGH VOLUME APPLICATION		
Rhubarb	Downy Mildew (<i>Peronospora arborens</i>)	All States	2.5 kg in 200 - 500 litres of water per hectare	-	-	14 days	Maintain a regular spray program. Commence spraying early (ie. before main disease infection period) with a registered non-Group 4 fungicide, e.g. mancozeb. When conditions favour disease development apply 2 consecutive sprays at 7 to 10 day intervals and then resume the program of protectant or non-Group 4 fungicides. Use the shorter interval when infection pressure is severe. DO NOT wait for disease to appear. Ensure thorough coverage of plants.
Strawberries (non-fruiting)	Eye Spot (<i>Mycosphaerella fragariae</i>), Leaf Blight (<i>Dendroploma obscurans</i>), Root Rot (<i>Phytophthora nicotianae</i> var. <i>parasitica</i>), Scorch (<i>Diplcaropon eerlianus</i>)		-		100 g + 50 g Benlate* in 100 litres of water	7 days	Apply as a combined dip for runners after digging. For control of diseases only in Strawberry Runner Approval Schemes.
Tobacco – Field	Blue Mould, Brown Spot	Qld, NSW, Vic only			250 g per 100 litres of water	7 days	Spray at 7-day intervals commencing 10 days after transplanting. Spray to thoroughly wet leaves. Apply initially – 200 litres per hectare Plants 1 m high – 500 litres per hectare Fully grown – 800 litres per hectare
	Frog Eye Leaf Spot	Qld only					
Tobacco – Seedbed	Blue Mould	Qld, NSW, Vic only			18 g per 15 litres of water per 60 - 80 square metres	-	Spray at 7-day intervals commencing 5 weeks after emergence. Make final application the day before planting out. Spray to thoroughly wet leaves. DO NOT drench. DO NOT apply to seedbeds until 5 weeks after emergence.

NOT TO BE USED FOR ANY PURPOSE, OR IN ANY MANNER CONTRARY TO THIS LABEL, UNLESS AUTHORISED UNDER APPROPRIATE LEGISLATION.

WITHHOLDING PERIODS

**CUCURBITS, ONIONS, POTATOES, STRAWBERRIES, TOBACCO:
GRAPES, LETTUCE, RHUBARB:
POPPIES:**

**DO NOT HARVEST FOR 7 DAYS AFTER APPLICATION.
DO NOT HARVEST FOR 14 DAYS AFTER APPLICATION.
DO NOT HARVEST FOR 7 WEEKS AFTER APPLICATION.**

GENERAL INSTRUCTIONS:

Malzeb is a fungicide combining both systemic and curative properties of metalaxyl with the protective properties of mancozeb. Malzeb should be applied as a protective fungicide before Downy Mildew disease occurs. However if infection has already occurred Malzeb should be applied as soon as possible after the infection period and preferably before oil-spots appear, to obtain optimum control of downy mildew.

MIXING

Malzeb is a wettable powder formulation packed in water soluble packaging. The water soluble bags dissolve easily in water. DO NOT excessively handle water soluble bags or expose to moisture. DO NOT touch bags with wet hands. Return unused bags to a primary pack. For mixing adhere to the following recommendations.

1. Partially fill the spray tank with water.
2. Throw in the required number of water soluble bags (or premix bags in bucket and add slurry to spray tank).
3. Ensure agitation system is fully engaged. Ensure bag does not enter filter system.
4. Top up with correct volume of water. Bag should be completely dissolved before spraying commences. Continue agitation to ensure Malzeb is in suspension during spraying.
5. DO NOT store prepared spray solution, when spray solutions have been allowed to stand in the spray tank thoroughly re-agitate before using.

APPLICATION**Application in vine crops**

Dilute Spraying: Use a sprayer designed to apply high volumes of water up to the point of run-off and matched to the crop being sprayed. Set up and operate the sprayer to achieve even coverage throughout the crop canopy. Apply sufficient water to cover the crop to the point of run-off. Avoid excessive run-off. The required water volume may be determined by applying different test volumes, using different settings on the sprayer, from industry guidelines or expert advice. Add the amount of product specified in the Directions For Use table for each 100 L of water. Spray to the point of run-off. The required dilute spray volume will change and the sprayer set up and operation may also need to be changed, as the crop grows.

Concentrate Spraying: Use a sprayer designed and set up for the concentrate spraying (that is a sprayer which applies water volumes less than those required to reach the point of run-off) and matched to the crop being sprayed. Set up and operate the sprayer to achieve even coverage throughout the crop canopy using your chosen water volume. Determine an appropriate dilute spray volume (See Dilute Spraying above) for the crop canopy. This is needed to calculate the concentrate mixing rate. The mixing rate for concentrate can then be calculated in the following way:

EXAMPLE ONLY

1. Dilute spray volume as determined above: For example 2000 L/ha.
2. Your chosen concentrate spray volume: For example 500 L/ha.
3. The concentration factor in this example is: $4 \times$ (ie $2000 \text{ L} \div 500 \text{ L} = 4$).
4. If the dilute label rate is 250 g/100 L, then the concentrate rate becomes 4×250 , that is 1 kg/100 L of concentrate spray.

The chosen spray volume, amount of product per 100 L of water, and the sprayer set up and operation may need to be changed as the crop grows. For further information on concentrate spraying, users are advised to consult relevant industry guidelines, undertake appropriate competency training and follow industry Best Practices.

FUNGICIDE RESISTANCE WARNING

Malzeb Fungicide is a combination of a Phenylamide and a Multi-site Activity Fungicide. For fungicide resistance management Malzeb is both a Group 4 and a Group M3 fungicide. Some naturally occurring individual fungi resistant to Malzeb and other Group 4 and/or Group M3 fungicides may exist through normal genetic variability in any fungal population. The resistant individuals can eventually dominate the fungi population if these fungicides are used repeatedly. These resistant fungi will not be controlled by Malzeb and other Group 4 and/or Group M3 fungicides, thus resulting in a reduction in efficacy and possible yield loss.

Since the occurrence of resistant fungi is difficult to detect prior to

use, CROWNBRIDGE MANAGEMENT L.P. accepts no liability for any losses that may result from the failure of Malzeb to control resistant fungi.

COMPATIBILITY

Malzeb is compatible with Methidathion, Methomyl, Alcohol Alkoxylate and some formulations of Carbaryl, Sulphur and Copper Oxchloride.

PRECAUTION**Re-entry Period**

DO NOT allow entry into treated areas until the spray has dried. When prior entry is necessary, wear cotton overalls buttoned to the neck and wrist and chemical resistant gloves. Clothing must be laundered after each day's use.

Flaggers

DO NOT use human flaggers unless they are protected by engineering controls such as vehicles with cabs.

PROTECTIONS OF WILDLIFE, FISH, CRUSTACEANS AND ENVIRONMENT

DO NOT contaminate streams, rivers and waterways with the chemical or used containers.

STORAGE AND DISPOSAL

Store in the closed, original container in a dry, cool, well-ventilated area out of direct sunlight. DO NOT dispose of undiluted chemicals on site. 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.

SAFETY DIRECTIONS

Will irritate the eyes, nose, throat and skin. Avoid contact with the eyes and skin. DO NOT inhale dust or spray mist. When preparing spray and using prepared spray wear cotton overalls buttoned to the neck and wrist, a washable hat, elbow-length PVC gloves and face shield or goggles. If product in eyes, wash it out immediately with water. Wash hands after use. After each day's use, wash gloves, face shield or goggles and contaminated clothing.

Hazard statement(s)

H317: May cause an allergic skin reaction.

H361d: Suspected of damaging the unborn child.

H411: Toxic to aquatic life with long lasting effects.

Precautionary statement(s)

P261: Avoid breathing dust and spray. P280: Wear nitrile gloves and protective clothing. P302+P352: IF ON SKIN: Wash with plenty of soap and water. P308+P313: IF exposed or concerned: Get medical advice/attention. P501: Dispose of contents/container to an authorized hazardous waste collection site in accordance with national regulation.

Phytotoxicity:

Non-phytotoxic to most crops when used as recommended. Always try for varietal tolerance on ornamentals

FIRST AID

If poisoning occurs, contact a doctor or Poisons Information Centre. Phone Australia 13 11 26. Avoid giving alcohol.

SDS

Additional information is listed in the safety data sheet (SDS).

CONDITIONS OF SALE:

The use of Malzeb Fungicide being beyond the control of the manufacturer, no warranty expressed or implied is given by CROWNBRIDGE MANAGEMENT L.P. regarding its suitability, fitness or efficiency for any purpose for which it is used by the buyer, whether in accordance with the directions or not and CROWNBRIDGE MANAGEMENT L.P. accepts no responsibility for any consequence whatsoever from the use of this product.