

BEFORE USING THIS PRODUCT READ THE LABEL CAREFULLY!

Fungicide



**METAZEB 700 WP**

Reg. No. L 7463 Act/Wet No. 36 of/van 1947

2:18/9/2012-Jan2017

*A wettable powder contact and systemic fungicide for the control of diseases on crops as indicated.*

*'n Benatbare poeier kontak- en sistemiese swamdoder vir die beheer van siektes op gewasse soos aangedui.*

**ACTIVE INGREDIENTS / AKTIEWE BESTANDELE**

metalaxyl (phenylamide) **100 g/kg** metalaksil (fenielamied)  
mancozeb (dithiocarbamate) **600 g/kg** mankoseb (ditiokarbamaat)

FRAC FUNGICIDE GROUP CODE **4** FRAC SWAMDODER GROEPKODE  
FRAC FUNGICIDE GROUP CODE **M3** FRAC SWAMDODER GROEPKODE

kg

**villa**

Registration holder / Registrasiehouer:

Villa Crop Protection (Pty) Ltd.

Co. Reg. No. / Mpy. Reg. Nr. 1992/002474/07

PO Box / Posbus 10413, Aston Manor, 1630

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UN Number: 3077

Willow Set & Print 011 394-4486



CAUTION  
VERSIGTIG



**METAZEB 700 WP**

Reg. No. L 7463 Act/Wet No. 36 of/van 1947

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Registration holder / Registrasiehouer:

**VILLA CROP PROTECTION (PTY) LTD.**

Co. Reg. No. 1992/002474/07 Mpy. Reg. Nr.

PO Box / Posbus 10413 ASTON MANOR, 1630, Tel. (011) 396 2233

**CAUTION / VERSIGTIG****WARNINGS****Withholding periods:**

Minimum number of days between last application and harvest or feeding:	
Pineapples	21 days
Potatoes	14 days
Tomatoes	7 days
Table grapes	56 days
Wine grapes	21 days
Youngberries & Boysenberries	14 days

**NOTE**

**ABOVE-MENTIONED WITHHOLDING PERIODS REFER TO COMPLIANCE WITH LOCAL MAXIMUM RESIDUE LIMITS (MRL'S). HOWEVER, IT IS IMPORTANT TO NOTE THAT IMPORT TOLERANCES OF OTHER COUNTRIES MIGHT POSSIBLY BE EXCEEDED. IF THE TREATED CROP WILL BE EXPORTED, FIRST CONSULT THE RELEVANT IMPORTER OR EXPORTING BODY REGARDING THE USE OF THIS PRODUCT, MRL'S AND RECOMMENDED WITHHOLDING PERIODS.**

- Handle with care.
- Harmful if inhaled or swallowed.
- Irritating to eyes and skin and causes skin sensitization.
- Very toxic to fish and aquatic organisms. Do not contaminate dams, rivers, lakes or any other water sources.
- **Flammable:** Store away from open flames, fires and sparks. Do not allow **METAZEB 700 WP** to become wet and thereafter warmed in storage. Flammable vapours can be generated under such conditions.
- Store the product in this original container/bag and always keep tightly closed.
- Store in a cool, dry, well-ventilated place, away from food, seed and feed stuffs.
- Keep out of reach of children, uninformed persons and animals.
- Re-entry: Do not enter treated area until spray deposit has dried unless wearing protective clothing.

**Aerial application:**

Notify all inhabitants in the immediate vicinity of the lands to be sprayed and issue the necessary warnings. Do not spray over or allow drift to contaminate water or adjacent areas.

**Although this remedy has been extensively tested under a large variety of conditions, the registration holder does not warrant that it will be efficacious under all conditions, because the action and effect thereof may be affected by factors such as abnormal climatic and storage conditions, quality of dilution water, compatibility with other substances not indicated on the label and the occurrence of resistance of the disease against the remedy concerned, as well as by the method, time and accuracy of application. The registration holder furthermore does not accept responsibility for damage to crops, vegetation, the environment or harm to man or animal or for lack of performance of the remedy concerned, due to failure of the user to follow the label instructions or to the occurrence of conditions, which could not have been foreseen in terms of the registration. Consult the supplier in the event of any uncertainty.**

**PRECAUTIONS**

- Avoid inhalation of dust and spray mist.
- Avoid contact of product with skin and eyes.

- Wear rubber gloves and a face shield when handling the concentrate.
- Wash contaminated clothes daily after use.
- Wash thoroughly with soap and water after application and accidental skin contact.
- In case of eye contamination, rinse the eyes thoroughly with plenty of clean, cold water for at least 20 minutes, holding the eyelid(s) open. If irritation persists obtain medical aid.
- Do not eat, drink or smoke whilst mixing, applying or before washing hands and face or change of clothing.
- Prevent spray drift onto other crops, grazing, rivers, dams or areas not under treatment.
- Clean spraying equipment directly after use and dispose of wash water where it will not contaminate food, grazing, boreholes, rivers or dams.
- Containers and packages must be completely emptied before being disposed of. Shake out thoroughly into the mixing tank and destroy the empty container/bag thereafter and burying it.
- **Never** re-use the empty container/bag for any other purpose.
- **Do not** burn the empty container/bag.
- Prevent contamination of food, feeds, drinking water and eating utensils.

### **RESISTANCE WARNING**

**METAZEB 700 WP** contains group code 4 + M3 fungicides. Any fungus population may contain individuals naturally resistant to **METAZEB 700 WP** and other group code 4 + M3 fungicides. The resistant individuals can eventually dominate the fungus population if these fungicides are used repeatedly. These resistant fungi may not be controlled by **METAZEB 700 WP** or any other group code 4 + M3 fungicides.

To delay fungicide resistance:

- avoid exclusive repeated use of fungicides from the same fungicide group code. Alternate or tank mix with products from different fungicide group codes,
- for tank mixing or alternation with products in fungicide group code M, refer to applicable individual product labels,
- integrate other control methods (chemical, cultural, biological) into disease control programmes.

For specific information on resistance management contact the registration holder of this product.

### **Resistance – additional notes:**

**METAZEB 700 WP** controls diseases caused by Oömycetes fungi such as Late blight (*Phytophthora infestans*) and Downy mildew (*Plasmopara viticola*). The activity of **METAZEB 700 WP** may be affected adversely in areas known to have tolerant disease strains or isolates, on crops listed in this label. The following areas have a history of disease strains or isolates showing resistance to the phenylamide group of fungicides e.g. **Metalaxyl**:

- **Downy mildew in grapes** - various areas of the South Western Cape.
- **Late blight in potatoes** - Gamtoos Valley, George, Sandveld & Western Cape and other parts of South Africa.

Refer to the notes above to avoid or manage resistance.

### **PRODUCT PROPERTIES**

**METAZEB 700 WP** consists of a systemic, protective and curative fungicide (**Metalaxyl**), as well as a residual protective fungicide (**Mancozeb**). **Metalaxyl** can be absorbed by roots, green stems and foliage, and is translocated upwards in the plant. Absorption happens very rapidly (generally within an hour), when the product is sprayed on foliage.

### **USE RESTRICTIONS**

- Apply immediately following an infection period or disease warning, **before the disease can gain momentum**.
- The spray programme for control of fungal diseases must include protective fungicides that can be applied at regular 7 day intervals, before application of **METAZEB 700 WP**, and be continued again within a week of the last application of **METAZEB 700 WP**.
- The spraying programme must commence in the early stage of the crop's growth cycle, when the plant is actively growing, to ensure protection during the critical stages of flowering and early fruit formation.
- Do not apply to plants under drought or flood stress.
- Application of **METAZEB 700 WP** can be ceased when plants have matured and begin to senesce. From this stage the systemic action of the product is reduced significantly.
- Degradation of **METAZEB 700 WP** in the soil: It is possible in some soils that an increase in the rate of degradation of **Metalaxyl** can occur after prolonged or constant use of **METAZEB 700 WP**. Therefore,

do not use **METAZEB 700 WP**, or other related products, exclusively or for extended periods as a soil treatment.

- **METAZEB 700 WP** can be applied maximum four times per season on youngberries, boysenberries, grapes, potatoes and tomatoes.
- The effectiveness of **METAZEB 700 WP** cannot be guaranteed in tunnels, greenhouses or nurseries due to extremely high disease pressure, which can develop under such practices.
- It is not recommended to apply **METAZEB 700 WP** through overhead irrigation systems.
- Do not alternate **METAZEB 700 WP** with any other phenylamide fungicide.

**DIRECTIONS FOR USE: Only use as directed.**

**General:**

- **METAZEB 700 WP** must be used in a preventative control spray programme.
- In order to obtain most effective results, **METAZEB 700 WP** must be applied before the disease becomes established in the crop.

**Compatibility:**

- The compatibility of **METAZEB 700 WP** in tank mixtures with other products has not been confirmed and can be influenced by the formulations involved, as well as quality of the dilution water.
- A physical compatibility test of all products involved is recommended, before mixing as formulations can change from time to time, and water quality may vary from area to area.
- Do not mix **METAZEB 700 WP** with alkaline products e.g. Bordeaux mixture as well as copper based products, **Sulphur** and **Captab**.
- Contact the registration holder when in doubt.

**Quality of the spray water:**

Use clean water with a pH value of 5.5 (slightly acidic) to 7.0 (neutral). If the spray water is too alkaline, a buffer like **Commodobuff** can be added to the water, before the addition of **METAZEB 700 WP**.

**Mixing instructions:**

- Premix the required quantity of **METAZEB 700 WP** with a small amount of water in another container to obtain a slurry.
- Half-fill the mixing tank with clean water. Ensure continuous agitation.
- Add the slurry into the mixing tank through a 50-mesh sieve, and fill the mixing tank up to the required volume of water.
- Ensure continuous agitation during mixing and application.
- The spray mixture must be sprayed immediately after mixing. Prepared spray mixture must not be left in the spray tank for any length of time e.g. overnight.

**APPLICATION INSTRUCTIONS**

**Ground application:**

**METAZEB 700 WP** can be applied with a correctly calibrated conventional high volume ground sprayer that is in a good working order. It is recommended to fit hollow cone nozzles, to achieve spray of fine to medium droplets.

**Aerial application:**

Aerial application of **METAZEB 700 WP** may only be done by a registered aerial application operator using a correctly calibrated, registered aircraft according to the instructions of SANS Code 10118 (Aerial Application of Agricultural Pesticides). Ensure that the spray mixture is distributed evenly over the target area and that the loss of spray material during application is restricted to a minimum. It is therefore essential that the following criteria be met:

- Volume: A spray mixture volume of 30 to 40 litres per hectare is recommended. As this product has not been evaluated at a reduced volume rate, the registration holder cannot guarantee efficacy, or be held responsible for any adverse effects if this product is applied aerially at a lower volume rate than recommended above.
- Droplet coverage: 50 to 70 droplets per cm<sup>2</sup> must be recovered at the target area.
- Droplet size: A droplet spectrum with a VMD of 250 micron is recommended. Limit the production of fine droplets less than 150 micron (high drift and evaporation potential) to a minimum.
- Flying height: Maintain the height of the spray boom at 3 to 4 metres above the target. Do not spray when aircraft is diving, climbing or when banking.

- Use suitable atomizing equipment that will produce the desired droplet size and coverage, but which will ensure the minimum loss of product. The spraying system must produce a droplet spectrum with the lowest possible Relative Span.
- Position all the atomizers within the inner 60 to 75 % of the wingspan to prevent droplets from entering the wingtip vortices.
- The difference in temperature between the wet and dry bulb thermometers, of a whirling hygrometer, should not exceed 8°C.
- Stop spraying if the wind speed exceeds 15 km per hour.
- Stop spraying under turbulent, unstable and dry conditions during the heat of the day.
- Spraying under temperature inversion conditions (spraying in or above the inversion layer) and/or high humidity conditions (relative humidity 80 % and above) may lead to the following:
  - a) reduced efficacy due to suspension and evaporation of small droplets in the air (inadequate coverage),
  - b) damage to other sensitive crops and/or non-target areas through drifting of the suspended spray cloud away from the target field.
- Ensure that the aerial spray operator knows exactly which fields to spray.

Obtain an assurance from the aerial spray operator that the above requirements will be met and that relevant data will be compiled in a logbook and kept for future reference.

#### APPLICATION RATES

<b>Crop / Pest</b>	<b>Dosage rate</b>	<b>Remarks</b>
<b><u>Pineapples</u></b> Root- and Base rot ( <i>Phytophthora</i> spp.)	5.0 kg / ha	Apply in 2000 to 3000 litres water per hectare. <b>New plantings:</b> Commence application immediately after planting and follow up within 6 months. Apply regularly thereafter with 3 month intervals. <b>Established plants:</b> Apply at 3 month intervals.
<b><u>Potatoes</u></b> Late blight ( <i>P. infestans</i> )	2.0 kg / ha	Other registered contact fungicides that control Late blight must be included in the spray programme with <b>METAZEB 700 WP</b> . Apply <b>METAZEB 700 WP</b> immediately after an infection period or disease warning. Repeat treatments at 10 to 14 day intervals. <u>Ground application:</u> Full cover spray using 500 to 1500 litres water per hectare, depending on plant size and foliage density.
	2.2 kg / ha	<u>Aerial application:</u> Apply in 30 to 40 litres water per hectare.
<b><u>Tomatoes</u></b> Early blight ( <i>Alternaria</i> spp.), Late blight ( <i>P. infestans</i> ) & Leaf spot ( <i>Septoria</i> spp.)	270 g to 360 g / 100 l water	Other registered contact fungicides, which control Late blight must be included in the spray programme with <b>METAZEB 700 WP</b> . Apply <b>METAZEB 700 WP</b> immediately after an infection period or disease warning. The contact action of the active ingredient ( <b>Mancozeb</b> ) provides control of Early blight and Leaf spot. If more than 13 mm of rain or overhead irrigation occurs between <b>METAZEB 700 WP</b> applications, follow up with <b>Chloronil 500 SC</b> or <b>Villa Unizeb 800 WP</b> . Repeat treatments at 7 to 10 day intervals. Apply in 500 to 2000 litres per hectare depending on plant size. Apply the higher dosage rate under high disease infection pressure.

<b>Crop / Pest</b>	<b>Dosage rate</b>	<b>Remarks</b>
<u><b>Table and Wine grapes</b></u> Downy mildew ( <i>Plasmopara viticola</i> )	270 g / 100 ℓ water	Other registered contact fungicides, which control Downy mildew must be included in the spray programme with <b>METAZEB 700 WP</b> . Apply <b>METAZEB 700 WP</b> immediately after an infection period of disease warning. Repeat at 10 to 14 day intervals. <b>Do not</b> apply after the end of December. <b>Do not</b> apply on table grapes after reaching “pea-berry” size. Increase the spray volume until reaching “pea-berry” size, ensuring good coverage of the crop. Apply in 500 to 1200 litres water per hectare in <b>table grapes</b> . Apply in 250 to 1000 litres water per hectare in <b>wine grapes</b> .
<u><b>Youngberries and Boysenberries</b></u> Downy Mildew ( <i>Perenospora rubi</i> )	270 g / 100 ℓ water	Commence application two weeks after green tip stage as a high volume spray, to ensure a full cover spray. Repeat every 2 weeks.

The following products mentioned in this label may be replaced with equivalent products:

- **COMMODOBUFF** (L 5390 / N-AR 1107) = **AQUABUFF** (L 5451 / W 130060) = **PAZBUFF** (L 5385),
- **CHLORONIL 500 SC** (L 7394) = **CHLORONIL PLUS 500SC** (L 7020) (**Chlorothalonil**) and
- **VILLA UNIZEB 800 WP** (L 8056 / N-AR 1091) = **COZEB 800 WP** (L 7098) = **NEWZEB 800 WP** (L 8167) (**Mancozeb**).

**COMMODOBUFF, AQUABUFF** and/en **VILLA UNIZEB 800 WP** are registered products of / is geregistreerde produkte van **VILLA CROP PROTECTION (PTY) LTD.**

**PAZBUFF, COZEB 800 WP** and/en **CHLORONIL 500 SC** are registered products of / is geregistreerde produkte van **UNIVERSAL CROP PROTECTION (PTY) LTD.**

**NEWZEB 800 WP** is a registered product of / is 'n geregistreerde produk van **CROPASURE (PTY) LTD.**