

READ THE LABEL BEFORE USE. SHAKE THE BOTTLE WELL BEFORE USE. KEEP OUT OF REACH OF CHILDREN AND ANIMALS.



Fungicide

THIAZOLE 500 SC

Reg. No. L 7832 Act No. 36 of 1947

4: 09/04/2024 – Apr2024

A suspension concentrate fungicide for the control of post-harvest rot in crops as listed and the disinfection of empty cold stores.

ACTIVE INGREDIENT

thiabendazole (benzimidazole) 500 g/l

GROUP

1

FUNGICIDE



WARNING

Hazard Statements:

May be harmful in contact with skin.
Harmful if inhaled.
Very toxic to aquatic life with long lasting effects.

Precautionary Statements:

IF ON SKIN: Get medical help.
IF INHALED: Remove person to fresh air and keep comfortable for breathing. Get medical help.
Avoid release into the environment.



villa 

UN Number: 3082

Registration holder: UNIVERSAL CROP PROTECTION (PTY) LTD.
Co. Reg. No. 1983/008184/07
65 Botes Road, Glen Marais, Kempton Park, 1619
Tel. (011) 396 2233
Website: www.villacrop.co.za

IN CASE OF POISONING / 24 HR EMERGENCY NUMBERS:
Griffon Poison Information Centre (National): +27 82 446 8946
Poison Information Helpline (National): +27 861 555 777
24 Hr Transport / Spill emergency no: (Hazcall24) +27 86 044 4411
(Client: Villa Crop Protection)

REFER TO DETAILS AS PRINTED ON CONTAINER / BAG

DIRECTIONS FOR USE ENCLOSED

Batch Number:

Date of Manufacture:

THIAZOLE 500 SC

Reg. No. L 7832 Act No. 36 of 1947
 FRAC FUNGICIDE GROUP CODE: 1

ACTIVE INGREDIENT:

thiabendazole (benzimidazole)..... 500 g/l

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WARNINGS**NOTE**

THE MAXIMUM RESIDUE (MRL'S) LEVELS WILL NOT BE EXCEEDED, PROVIDED APPLICATIONS ARE APPLIED AS HEREWITH PRESCRIBED. WHEN PRODUCTION IS DESTINED FOR THE EXPORT MARKET, THE EXPORT AGENCY OF CONCERN MUST BE CONTACTED, PRIOR TO THE USE OF THIS PRODUCT IN A SPRAY PROGRAMME.

Hazard statements:

May be harmful in contact with skin.
Harmful if inhaled.
Very toxic to aquatic life with long lasting effects.

- Handle with care.
- Store the product inside the original container and always keep tightly closed.
- Store in a cool, dry, well-ventilated place, away from food, seed and feedstuffs.
- 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.

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**Precautionary statements:**

Avoid breathing mists and spray.
Use only outdoors or in a well-ventilated area.
Avoid release into the environment.
IF ON SKIN: Get medical help.
IF INHALED: Remove person to fresh air and keep comfortable for breathing. Get medical help.
Collect spillage.
Dispose of contents/container to suitable landfill in accordance with local regulations.

- Avoid contact with skin and eyes.
- Wear a face shield and rubber gloves when handling the product.
- Wash with soap and water after use and after accidental skin contact.
- Wash contaminated clothing after use.
- Do not eat, drink or smoke whilst mixing or applying the product or before washing hands and face and change of clothing.

- In case of eye contamination, rinse the eyes thoroughly with a stream of clean water, for at least 20 minutes. If irritation persists, obtain medical aid.
- Prevent drift onto other crops, grazing, rivers, dams or areas not under treatment or to nearby water sources.
- Thoroughly clean spraying equipment directly after use and dispose of wash water, where it will not contaminate food, grazing, boreholes, rivers or dams.
- **TRIPLE RINSE THE EMPTY CONTAINER AS FOLLOWS:** Invert the empty container over the spray or mixing tank and drain for at least 30 seconds after the flow has slowed down to dripping. Thereafter rinse the empty container three times in succession with one quarter of the container volume fresh water and decant the rinsate into the spray or mixing tank. 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.
- Destroy the empty container by perforation and flattening and dispose of it in a safe way.
- **Never** re-use the empty container for any other purpose.
- Prevent contamination of food, feeds, drinking water and eating utensils.

First Aid Treatment:

- 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. **Immediately consult a doctor.**
- 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. **If irritation persists, obtain medical attention.**
- Eyes: Immediately flush eyes with clean water for at least 15-20 minutes. Lift eyelid (s) to facilitate irrigation. If present, remove contact lenses after 5 minutes and continue rinsing.
- Ingestion: If the person is alert, rinse mouth thoroughly with water and administer activated charcoal. Do not give anything by mouth to an unconscious person. **Seek medical attention or call a poison control centre** for treatment advice if you feel unwell. Do NOT induce vomiting unless instructed to do so by a poison control centre or doctor.

Relevant hazardous components	
Thiabendazole	500 g/l
Anti-freeze additive	<10 g/l

NOTE: The ingredients listed above contribute to the overall GHS classification, the remaining ingredients do not have to be listed according to the South African Regulations for Hazardous Chemical Agents 2021, Regulation 14(b).

In case of poisoning, call the following number: +27 82 446 8946 (Griffon Poison Information Centre) or +27 861 555 777 (Poison Information Helpline).

In case of a chemical spill call the following 24 Hr Transport / Spill emergency number: +27 86 044 4411 (Hazcall24 / Client: Villa Crop Protection).

RESISTANCE WARNING

THIAZOLE 500 SC is a group code 1 fungicide. Any fungus population may contain individuals naturally resistant to **THIAZOLE 500 SC** and any other group code 1 fungicides. The resistant individuals can eventually dominate the fungus population if these fungicides are used repeatedly. These resistant fungi may not be controlled by **THIAZOLE 500 SC** or any other group code 1 fungicide.

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. Since the occurrence of resistance cannot be forecast, users are advised to keep treated plants or fruit under close observation. If treatment is not effective following the use of **THIAZOLE 500 SC** as recommended, a resistant strain may be present. If a resistant strain is positively identified, consideration should be given to prompt use of a fungicide with a different mode of action for which there is no record of resistance.

Mode of action:

THIAZOLE 500 SC is a systemic fungicide with protective and curative action that forms a protective deposit on the treated surface of the fruit and tubers. **Thiabendazole** inhibits mitosis by binding tubulin and thus severely impairs fungal growth and development.

USE RESTRICTIONS**Avocados**

- Fruit waxed and then wrapped, may develop internal browning.
- For fruit coating, the recommended dosage of **THIAZOLE 500 SC** should not exceed 2.8 mL per 1 ton of fruit.
- **DO NOT** discard treated fruit in orchards.
- Only make one **THIAZOLE 500 SC** post-harvest application to fruit per season.
- Do not reduce the dosage rates of **THIAZOLE 500 SC** treatments beyond recommendations.
- Consider FRAC restrictions if other **thiazoles** are used during pre-harvest applications.

DIRECTIONS FOR USE: Only use as indicated.**NOTICE TO USER:**

Read the entire label before application. This agricultural remedy is to be used only in accordance with the instructions on the label. It is an offence under the Act to use this agricultural remedy for any purpose in a manner contrary with the directions on the label.

Compatibility:

- **THIAZOLE 500 SC** is compatible with **Target 200 WDG (Fludioxonil)** and **Masterlock® (L 10496)**.
- The compatibility of **THIAZOLE 500 SC** may be influenced by several factors. As factors influencing compatibility may vary, a physical compatibility test must always be performed, before such tank mixture is sprayed.
- If the products are physically compatible, this does **NOT** imply that they will be biologically compatible (effective against the target pathogen), thus the registration holder will not take responsibility for ineffective control in these scenarios.
- When **THIAZOLE 500 SC** is used in conjunction with any other agricultural remedy, adhere to all **WARNINGS, PRECAUTIONS** and **DIRECTIONS FOR USE** mentioned on that label.

Mixing instructions:

- Half fill the spray tank with clean water.
- Add the required amount of **THIAZOLE 500 SC** to the water, while stirring.
- Fill the spray tank with water to the required level, while maintaining agitation, to ensure thorough mixing.
- Maintain agitation during application.
- Prepared spray mixture must not be left in the spray tank for any length of time, e.g. overnight.
- Ensure agitation during application, to keep the solution in suspension.
- Maintain the concentration of each fungicide when topping up with fresh water. Replace the dip solution regularly to maintain a clean tank and effective treatment.
- 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.
- **NOTE:** The following formulation mixing sequence if other products will be tank mixed with **THIAZOLE 500 SC**: buffer/acidifier; powders or granules, suspension concentrates, emulsifiable formulations (EC/EW), soluble concentrates, wetters/spreaders/stickers (e.g. **Masterlock®**). Pre-mix each product separately with a small volume of water before adding it to the spray tank. Thereafter, fill the tank to the required volume with clean water while maintaining agitation to ensure thorough mixing of the spray mixture before application commences.
- When applying wax and fruit coatings, it's important to note that **THIAZOLE 500 SC** doesn't blend easily with cold water or cold water-based wax products. To ensure consistent residue distribution, begin by combining **THIAZOLE 500 SC** with approximately 350 mL of warm water (around 40°C) before introducing it into the applicator. Following the dilution process, vigorously stir the mixture for a minimum of 15 minutes using a mixing device, maintaining continuous agitation of the prepared solution.

APPLICATION RATES

Crop / Disease	Dosage Rate	Remarks
Apples and Pears Blue mould (<i>Penicillium expansum</i>) Grey mould (<i>Botrytis cinerea</i>)	210 ml / 100 ℓ water	WARNING Do not use on fruit, which is destined for export. <u>Apples:</u> Apply the first treatment within 24 hours after harvesting and a second treatment after cold storage. Dip in the suspension solution for 30 seconds or spray/flood for maximum 3 minutes. <u>Pears:</u> Once off treatment within 24 hours after harvesting.
Avocados Anthracnose (<i>Colletotrichum gloeosporioides</i>) Stem-end rot (<i>Lasiodiplodia spp.</i>)	Treat fruit as soon as possible after harvest, preferably within twelve (12) hours of harvest. Fruit should be thoroughly rinsed, and surface sanitised with a registered disinfectant before treatment with THIAZOLE 500 SC in accordance with standard packhouse procedures. DO NOT mix fungicides into the chlorine treated water. Ensure thorough drying of treated fruit, before packing and storing.	<u>Dip Treatment:</u> Dip fruit for 20 seconds. Thorough mixing and agitation of the dip treatment solution is required to ensure uniform distribution of the fungicides. <u>Wax Treatment:</u> Apply in the water emulsion wax. Ensure thorough coverage with the wax.
Suppression of Anthracnose (<i>Colletotrichum gloeosporioides</i>)	540 to 750 ml / 100 ℓ water 270 ml / 100 ℓ water PLUS 75 ml / 100 ℓ water Masterlock 270 ml / 100 ℓ water PLUS 300g / 100 ℓ water Target 200 WDG PLUS 75 ml / 100 ℓ water Masterlock	<u>Spray-on Treatment:</u> Prepare the spray-on mix using an appropriate volume of water for the amount of fruit to be treated. Apply at a pressure of three (3) bar. Fruit should be sprayed for approximately 30 to 45 seconds to ensure thorough coverage on the fruit surface. Maintain agitation of the spray mix throughout use to avoid products settling out of the mix. Vigorous stirring may result in excess foam and should be avoided. NOTE: When THIAZOLE 500 SC is to be used as a spray on treatment on a pack-line for the first time, prior to avocado fruit being added, prime the brushes by running the spray over brushes for one (1) to two (2) minutes. After use, brushes should be thoroughly cleaned and surface-sanitised to prevent carry-over. Ensure packhouse application equipment is properly calibrated for accurate product deposition onto fruit. Residue levels of Fludioxonil when Target 200 WDG is applied as directed will be in line with the South African MRL. However, levels of fludioxonil may be close to 1.5 mg/kg depending on the design of the pack-line, the cultivar as well as the size of fruit treated. It is recommended to perform spray optimisation tests for the specific pack-line set up on relevant cultivars prior to commercial use. Refer to CROP RECOMMENDATIONS, DIRECTIONS FOR USE, WARNINGS and PRECAUTIONS above. Consult the Target 200 WDG label for USE RESTRICTIONS, WARNINGS (including RESISTANCE WARNINGS), PRECAUTIONS and DIRECTIONS FOR USE.

Crop / Disease	Dosage Rate	Remarks
Bananas Collar rot (<i>Colletotrichum musae</i>)	45 ml / 100 l water	Apply to the fruit after washing, cleaning and trimming.
Citrus Blue mould (<i>Penicillium italicum</i>)	Treat the fruit after washing and cleaning.	
Green mould (<i>Penicillium digitatum</i>)	400 ml / 100 l water	Apply by means of spraying or brushing the suspension onto the fruit.
Stem-end rot (<i>Alternaria citri</i>)	200 ml / 25 l wax	Apply in the water emulsion wax by means of a special wax applicator.
Disinfection of empty cold stores	20 ml / 10 water	Apply as a wall and floor wash, to help with disinfection of <i>Aspergillus</i> spp., <i>Botrytis</i> spp. and <i>Penicillium</i> spp.
Mushrooms Dry bubble (<i>Lecanicillium fungicola</i>)	230 to 300 ml / 100 l water	<u>Drench treatment:</u> Apply 100 litres suspension solution per 80 m ² of a mushroom bed. Use the high dosage rate after casing, and the low dosage rate between breaks.
Wet bubble (<i>Mycogone perniciosa</i>)		
Cobweb (<i>Cladobotryum</i> spp.)		
Plaster mould (<i>Scopulariopsis fimicola</i>)		
Musk melons Post harvest rot (<i>Fusarium incarnatum</i>)	80 ml / 25 l wax	Apply in the water emulsion wax. Ensure thorough coverage of the fruits with the wax. Ensure that the treated fruit are thoroughly drained and dry, before packing. This treatment will not control bacterial diseases.
Pineapples Post harvest rot (<i>Ceratocystis paradoxa</i>)	500 ml / 100 l water	Apply within 24 hours after harvesting. Dip the fruit for 30 seconds. Avoid wetting the tops of the pineapples. Top up the dip mixture with 500 ml per 100 litres water.

Crop / Disease	Dosage Rate	Remarks
Potatoes Seed potatoes: Fusarium dry rot (<i>Fusarium spp</i>) Gangrene (<i>Boeremia foveate</i>) Suppression of Black scurf (<i>Rhizoctonia solani</i>)	Apply immediately after lifting. Treat potato tubers (whole). Do not use bags in the dip treatments. Change the dipping mixture frequently. Agitate tubers during dipping, to remove air bubbles. Ensure that the tubers are completely dry, before storing.	
	2100 to 4200 ml / 100 ℓ water	<u>Spray application:</u> Spray on a running conveyor belt system using the necessary misting equipment. Apply 4 litres suspension at the lower rate, or 2 litres suspension at the higher rate, per one ton of potatoes.
	400 ml / 100 ℓ water	<u>Dip Treatment:</u> Dip for 5 minutes. Ensure that the tubers are clean, before dipping. Top up the dip mixture with 400 ml per 100 litres water.
Stem canker and Black scurf (<i>Rhizoctonia solani</i>)	90 ml / ton	<u>Waterless Spray:</u> Spray tubers on a running conveyor belt system, using the MANTIS ULV applicator.
	Apply to the tubers before planting.	
Table Potatoes: Fusarium dry rot (<i>Fusarium spp.</i>)	800 ml / 100 ℓ water	<u>Dip Treatment:</u> Dip for 5 minutes. Ensure that the tubers are clean, before dipping. Top up the dip mixture with 800 ml per 100 litres water.
	135 ml / ton	<u>Waterless Spray:</u> Spray tubers on conveyor belt system using the MANTIS ULV applicator. Not recommended for tubers with severe Black scurf infection.
	Treat immediately after lifting. Ensure that the tubers are completely dry before storing.	
Fusarium dry rot (<i>Fusarium spp.</i>)	315 to 630 ml / 100 ℓ water	<u>Spray application:</u> Spray on conveyor belt system using the necessary misting equipment. Apply 4 litres suspension at the lower rate, or 2 litres suspension at the higher rate, per one ton of potatoes.
	400 ml / 100 ℓ water	<u>Dip Treatment:</u> Dip for 2 minutes. Clean the tubers before dipping treatment. Top up the dip mixture with 400 ml per 100 litres water.
	90 ml / ton	<u>Waterless Spray:</u> Spray the tubers on conveyor belt system using the MANTIS ULV applicator.

Consult the **Target 500 SC**, **Masterlock®** and light mineral oil labels for **USE RESTRICTIONS**, **WARNINGS** (including **RESISTANCE WARNINGS**), **PRECAUTIONS** and **DIRECTIONS FOR USE**.

The following product mentioned in this label may be replaced with equivalent product listed below:

- **TARGET 200 WDG** (L10387) = **BALANCE 200 WDG** (L10393) (Fludioxonil)

TARGET 200 WDG is a registered product of
VILLA CROP PROTECTION (PTY) LTD.

BALANCE 200 WDG is a registered product of
UNIVERSAL CROP PROTECTION (PTY) LTD.

MASTERLOCK® is a registered trademark of
WINFIELD SOLUTIONS REGISTRATIONS HOLDINGS (PTY) LTD.