

Fungicide



# DETECT 400 SC

Reg. No. L 9238 Act No. 36 of 1947  
N-AR 2189 / W1301440

4: 07/07/2022 – May2023

A suspension concentrate fungicide with contact action for the preventative control of diseases in crops as indicated.

## ACTIVE INGREDIENT

dithianon (quinone)

400 g/ℓ

GROUP

M9

FUNGICIDE



### Hazard Statements:

Harmful if swallowed.

Toxic if inhaled.

Very toxic to aquatic life with long lasting effects.

### Precautionary Statements:

Avoid breathing mists, vapours or spray.

IF INHALED: Remove person to fresh air and keep comfortable for breathing.

Avoid release into the environment.

**DANGER**



**villa**



UN Number: 2902

Registration holder: UNIVERSAL CROP PROTECTION (PTY) LTD.

Co. Reg. No. 1983/008184/07

PO Box 801, Kempton Park, 1620

Tel. (011) 396 2233

Website: [www.villacrop.co.za](http://www.villacrop.co.za)

### 24 HR EMERGENCY NUMBERS:

Griffon Poison Centre: +27 82 446 8946

24 HR Transport / Spill Emergency no: (Hazcall24) +27 86 044 4411

(Client: Villa Crop Protection)

DIRECTIONS FOR USE ENCLOSED

Batch Number:

Date of Manufacture:

REFER TO DETAILS AS PRINTED ON CONTAINER / BAG

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FRAC FUNGICIDE GROUP CODE: M9

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**WARNINGS****Withholding periods:**

Minimum time between the last application and harvest or feeding:	
Apples and Pears	21 days
Table grapes (Do not apply after pea berry stage due to possible visual residues)	21 days
Wine grapes	21 days
Stone fruit	21 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.

**Hazard statements:**

Harmful if swallowed.
Toxic if inhaled.
Very toxic to aquatic life with long lasting effects

- Handle with care.
- Store away from food, feeds, seed, fertilizers and other agricultural chemicals.
- Store in a cool, dry, well-ventilated place in the original container, tightly closed and secured.
- Keep out of reach of children, uninformed persons and animals.
- Re-entry: Do not enter treated area within 1 day after treatment 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 diseases 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, vapours or spray.
Wash hands and face thoroughly after handling.
Do not eat, drink or smoke when using this product.
Use only outdoors or in a well-ventilated area.
Avoid release into the environment.
IF SWALLOWED: Get medical help.
IF INHALED: Remove person to fresh air and keep comfortable for breathing. Get emergency medical help immediately.
Rinse mouth.

Collect spillage.
Store in a well-ventilated place. Keep container tightly closed.
Store locked up.
Dispose of contents/container to suitable landfill in accordance with local regulations.

- Avoid contact of product with skin and eyes.
- Wear goggles, a respirator and rubber gloves when handling the concentrate and during mixing.
- Wash with soap and water after use and after accidental skin contact.
- Wash contaminated clothes daily after use.
- Prevent spray drift onto other crops, grazing, rivers, dams or areas not under treatment.
- Clean the 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 (3) 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](http://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.
- **Do not** re-use the empty container for any other purpose.
- Prevent contamination of food, feeds, drinking water and eating utensils.

<b>Relevant hazardous components</b>	
Dithianon	400 g/ℓ
Sodium dodecylbenzene sulfonate	< 5 g/ℓ

### **FIRST AID TREATMENT**

- **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 to 20 minutes. Lift eyelid(s) to facilitate irrigation. If present, remove contact lenses after 5 minutes and continue rinsing. Seek medical attention if irritation persists.
- **Inhalation:** Remove person from contaminated area to fresh air and assist breathing as needed. **Seek medical attention immediately.**
- **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 and then drink 200 to 300 ml of water.

### **RESISTANCE WARNING**

**DETECT 400 SC** is a group code M9 fungicide. Any fungus population may contain individuals naturally resistant to **DETECT 400 SC** and other group code M9 fungicides. The resistant individuals can eventually dominate the fungus population if these fungicides are used repeatedly. These resistant fungi may not be controlled by **DETECT 400 SC** or any other group code M9 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,
- integrate other control methods (chemical, cultural, biological) into disease control programmes.

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

### **Additional information with regard to Resistance Management Strategy:**

- In order to prevent development of resistance to **DETECT 400 SC** by pathogen populations, it is important that **DETECT 400 SC** be alternated with registered fungicides from different chemical classes (e.g., strobilurins registered in apples). This management strategy to prevent resistance should, however, not include fungicide products to which resistance has already developed in the past, or fungicides using the same mode of action.
- Always apply **DETECT 400 SC** preventively as instructed in the recommendations table.
- Adhere to the dosage rates recommended on the label, do not reduce any dosage rate.

**Mode of Action:**

**DETECT 400 SC** has multi-site, contact activity by targeting the thiol group of multiple enzymes involved in cellular respiration of the fungus thereby providing preventative control.

**USE RESTRICTIONS**

- Do not apply if it is likely to rain before spray is dry.
- Do not apply **DETECT 400 SC** on Doyenne du Comice and Kieffer pears.
- Do not apply under slow drying conditions as an increase in fruit russet may occur.
- Do not apply **DETECT 400 SC** on apples or pears within 14 days before, or following, an application of a mineral oil to the crop.
- Do not apply **DETECT 400 SC** on crops that are still wet after rain, dew or irrigation.

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

- Apart from the compatibility with **D-Zole 250 EC** as indicated in the label recommendations, the compatibility of **DETECT 400 SC** in tank mixtures with other products has not been confirmed and can be influenced by the formulations involved, as well as the water quality.
- **Do not mix with alkaline products or spray oils.**
- A physical compatibility test of all products involved is recommended, before application, as formulations can be altered, and water quality can vary from area to area.
- Always consult the labels of products to be tank mixed with **DETECT 400 SC**.

**Mixing instructions:**

**Shake the container well before use. Replace cap directly after use.**

- Fill the spray tank to half of the desired volume with clean water and ensure continuous agitation.
- Pre-mix the required volume of **DETECT 400 SC** in 10 litres water and add this pre-mix to the mixing tank, while agitation is continued.
- Observe the following formulation mixing sequence if other products will be tank mixed with **DETECT 400 SC**: buffer/acidifier; wettable powder or granules, suspension concentrate, emulsifiable concentrate, wetters. 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.
- 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:**

- **Calibration:** It is important to ensure that all application equipment is in good working order and correctly calibrated to apply the required spray volumes and dosage rate. Ensure good coverage by using the spray volumes as indicated.
- Repeat the application if rain falls within two (2) hours after application.
- **IMPORTANT** – always ensure even coverage of the target area.
- **Water volumes for wine and table grapes:** Apply just before the point of run-off using 300 to 1500 litres spray mixture per hectare as indicated below:

Growth stage	Water volume: Litres per hectare	
	Wine grapes	Table grapes
Shoots 10 cm long up to, and including just before blossom	300 to 750	500 to 1000
Flowering up to pea-size berries	750 to 1000	1000 to 1500
Pea-size berries at up to harvest	1000 to 1500	Not recommended

- Water volume for tree crops: The spray volume required for a specific growth stage must be determined accurately according to the Tree-Row-Volume method as described by Unrath (*Deciduous Fruit Grower*, November 1986). The application volume rate per hectare is then determined according to the spray volume calculated for high volume application per hectare.

#### **NOTES REGARDING APPLICATION ON APPLES, PEARS AND STONE FRUIT**

##### **High volume application (HV):**

- The water volume to be applied per hectare must be calculated according to the Tree Row Volume (TRV) formula of Unrath (*Deciduous Fruit Grower*, November 1986):

$$\text{HV l / ha} = \frac{\text{Tree height} \times \text{Tree diameter} \times 937}{\text{Row width}}$$

- This is the water volume required when the trees are in full leaf.
  - Use the water volume required per hectare to calculate the amount of **DETECT 400 SC** required per hectare.
- The following water requirements per hectare for **apples and pears** are recommended according to the different growth stages of the tree:

Growth stage	% Water volume per hectare with regard to high-volume (HV calculated above)
From green tip to ± 30 % blossom	60 %
From ± full blossom to ± mid-November	80 %
From ± beginning December	100 %

**APPLICATION RATES**

<b>Crop / Disease</b>	<b>Dosage rate</b>	<b>Remarks</b>
<b><u>Apples and Pears</u></b> Scab ( <i>Venturia</i> spp.)	56 ml / 100 l water  <b>OR</b>  56 ml / 100 l water  <b>PLUS</b>  10 ml / 100 l water <b>D-Zole 250 EC</b>	<p>Refer to “Resistance Management, Withholding periods, Use restrictions and Directions for use” above.  <b>Always apply DETECT 400 SC as part of a program application.</b></p> <p>Start with the applications at the green-tip stage and apply at weekly intervals until 75 % petal fall. After 75 % petal fall, apply every fortnight during post-blossom period. If weather conditions favour disease development at this stage, revert back to 7-day intervals. Continue up to mid-December. Thereafter, treatments can be applied at monthly intervals. Last application not later than 21 days before harvest.</p> <p>It is advisable to apply <b>DETECT 400 SC</b> in combination with <b>D-Zole 250 EC</b> when conditions are conducive to disease development.</p> <p>When an infection period occurs, <b>DETECT 400 SC</b> in combination with <b>D-Zole 250 EC</b> should be applied as a curative treatment within two (2) days from the start of an infection period. In such situations, apply the higher rate of <b>D-Zole 250 EC</b> as indicated. Curative applications are only recommended when adequate and reliable disease prediction systems are followed.</p> <p>Always ensure complete coverage.</p> <p>Consult the <b>D-Zole 250 EC</b> label for <b>USE RESTRICTIONS, WARNINGS (including RESISTANCE WARNINGS and WITHHOLDING PERIODS), PRECAUTIONS and DIRECTIONS FOR USE.</b></p>

<b>Crop / Disease</b>	<b>Dosage rate</b>	<b>Remarks</b>
<b><u>Stone fruit</u></b> Leaf curl ( <i>Taphrina deformans</i> )	65 ml / 100 l water	<p>Refer to “Resistance Management, Withholding periods, Use restrictions and Directions for use” above.</p> <p>Always apply <b>DETECT 400 SC</b> as part of a preventative disease management program.</p> <p>Commence applications with <b>DETECT 400 SC</b> from 21 to 28 days after fruit set. Apply four (4) to five (5) applications at fourteen (14) day spraying intervals until <b>21 days before harvest</b>.</p> <p>Ensure complete coverage of the tree canopy.</p>
<b><u>Table and Wine grapes</u></b> Downy mildew ( <i>Plasmopara viticola</i> )	75 ml / 100 l water	<p>Refer to “Resistance Management, Withholding periods, Use restrictions and Directions for use” above.</p> <p>Apply <b>DETECT 400 SC</b> from 10 cm shoot length as part of a program application. <b>DETECT 400 SC</b> must be applied strictly preventatively at 7 to 10-day intervals. If conditions are conducive to disease development, reduce the spray intervals to seven (7) days.</p> <p>Always ensure complete coverage of the target area.</p>

Consult the **D-Zole 250 EC** labels for **USE RESTRICTIONS, WARNINGS (including RESISTANCE WARNINGS and WITHHOLDING PERIODS), PRECAUTIONS and DIRECTIONS FOR USE**.

The following product mentioned in this label can be replaced with the following equivalent products:

- **D-ZOLE 250EC** (L 7923) = **SCOPE 250 EC** (L 7942 / N-AR 1098 / W 1301370) (**Difenoconazole**).

**D-ZOLE 250 EC** is a registered product of **UNIVERSAL CROP PROTECTION (PTY) LTD.**

**SCOPE 250 EC** is a registered product of **VILLA CROP PROTECTION (PTY) LTD.**