

Main Panel  
For further information see attached pamphlet  
Vir verdere inligting sien aangehegte pamflet

Read the label carefully before opening

# MANAGER® SC

Botswana: Reg. No. W130568, Act No. 18 of 1999

A suspension concentrate fungicide for the control of fungal diseases as indicated on apples, beans (dry and green), groundnuts, citrus, onions, pears, potatoes, tomatoes and grapevines.

'n Suspensie konsentraat swamdoder vir die beheer van swamsiektes soos aangedui op aartappels, appels, bone (droë en groen), grondbone, pere, sitrus, tamaties, uie en wingerd.

FUNGICIDE GROUP CODE

M3 SWAMDODERGROEPKODE

**Aktiewe bestanddele:**

**Active ingredients:**

Maneb (ditiokarbamaat).....435 g/l.....Maneb (dithiocarbamate)  
Sinkoksied.....4.7 g/l.....Zinc oxide

Net Volume



Netto Volume

**REGISTRATION HOLDER / REGISTRASIEHOUER:**

AECI Limited)/ AECI Beperk  
Reg. No. / Nr. 1924/002590/06  
P.O. Box / Posbus 14418  
Witfield, 1467  
Tel : (011) 823 8000



IN CASE OF POISONING PLEASE PHONE / IN GEVAL VAN VERGIFTIGING SKAKEL 0861 555777 / 0824468946

Manager® is a registered trademark of AECI Limited

**Batch No:**

**Lotnommer:**

**Date of Manufacture:**  
**Datum van Vervaardiging:**

**UN No./ VN Nr. 3082** Environmentally Hazardous substance, Liquid N.O.S



**CAUTION  
VERSIGTIG**



**Pamphlet**

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**CAUTION**

**WARNINGS:**

**IF THE CROP TO BE TREATED IS INTENDED FOR EXPORT, CONSULT THE RELEVANT EXPORTING ORGANISATION REGARDING WITHHOLDING PERIODS.  
IN CASE OF CROPS GROWN FOR LOCAL CONSUMPTION ALLOW THE FOLLOWING NUMBER OF DAYS BETWEEN THE LAST APPLICATION AND HARVESTING OR FEEDING/GRAZING.**

APPLES AND PEARS.....14 DAYS  
BEANS AND POTATOES.....3 DAYS  
CITRUS.....14 DAYS  
GRAPEVINES.....4 – 6 WEEKS  
GROUNDNUTS (HAY).....21 DAYS  
TOMATOES.....3 DAYS

**Withholding periods are based on good agricultural practice and when followed, local (SA) MRL's will be met if the recommended dosage is applied. For fruit destined for export, consult your export agent or supplier for the latest withholding periods relevant to your export market.**

May be harmful when swallowed or inhaled.

May cause skin allergies and serious eye irritation.

Very toxic to fish or other aquatic organisms.

Store in a cool place, away from food, feed, seed or other agricultural remedies.

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.  
**CALL A DOCTOR AND MAKE THIS LABEL AVAILABLE TO HIM/HER.**

Aerial application - notify all inhabitants of the immediate area 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 DISEASES TO 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:**

Do not inhale fumes or spray mist. Wear rubber gloves and boots and a face shield when preparing spray mixture.

Wash contaminated clothing daily.

Wash with soap and water after use or accidental skin contact.

In the case of contact with eyes flush for at least 15 minutes. If irritation persists, get medical attention.

Use only in well ventilated areas.

Do not eat, drink or smoke whilst mixing or applying or before washing hands and face and changing clothes.

Prevent contamination of food, eating utensils, feed and drinking water.

Prevent spray drift onto other crops, grazing, rivers, dams and areas not under treatment.

Clean applicator thoroughly after use and dispose of wash water where it will not contaminate crops, grazing, rivers or dams.

Rinse empty container three times with a volume of water equal to a minimum of 30 % of that of the container and add rinsings to the contents of the spray tank before disposing of the container.

Destroy the empty container and dispose of it in a safe manner. Do not use for any other purpose.

The triple-rinsed container may be sent to an approved recycling facility for processing.

#### **RESISTANCE WARNING:**

For resistance management, **MANAGER 435 SC** is a group code M3 fungicide. Any fungus population may contain individuals naturally resistant to **MANAGER 435 SC** and other group code 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 **MANAGER 435 SC** or any other group code M3 fungicides.

To delay fungicide resistance:

- Avoid exclusive repeated use of fungicides from the same fungicide group code. Alternate or tank mix with registered products from different fungicide group codes.
- Integrate other control methods (chemical, cultural, biological) into disease control programs.

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

**DIRECTIONS FOR USE:** USE ONLY AS DIRECTED

**COMPATIBILITY:**

**MANAGER 435 SC** is compatible with most fungicides and insecticides but should not be used with alkaline products such as Lime sulphur or Bordeaux Mixture.

**MIXING INSTRUCTIONS:**

Mix the recommended quantity with a little water to form a thick cream. Add to the bulk of the water and stir well.

**HIGH VOLUME APPLICATION:**

If the dosage per 100 l water recommended is followed, ensure that total coverage of plants but without run-off is achieved.

**SPRAY INTERVALS:**

Rain is the main reason for depletion of fungicide deposits on plant surfaces. Intervals between applications as indicated on this label only serve as a guideline and should be adjusted according to the prevalent climatic conditions. Heavy rainfall before the spray deposit has dried completely will remove most of the fungicide. The residual effect will then be much shorter. Once the fungicide spray deposit has dried, rainfall thereafter will have less effect. Generally, the closer the rainfall after the application the shorter the effect of the fungicide residue. Adjust your spraying intervals accordingly.

**FUNGICIDAL DEPOSITS:**

In tree crops where fruit need to be protected by non-systemic fungicides such as **MANAGER 435 SC**, the foliage acts as a very important reservoir for fungicide which is slowly released during precipitation and is redistributed to the fruit. It is therefore of great importance to cover both foliage and fruit in the crops where the target disease is on the fruit, e.g. black spot in citrus.

**AERIAL APPLICATION: (POTATOES ONLY)**

Aerial application 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 Remedies). It is important to 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 are met:

**Equipment:**

Use a conventional boom equipped with hollow cone spray nozzles, e.g. D10-45 that will produce the desired droplet size and coverage, but which will ensure the minimum loss of product through drift.

The operator must use a setup that will produce a droplet spectrum with the lowest possible relative span.

All nozzles / atomisers should be positioned within the inner 60 to 75 % of the wingspan to prevent droplets from entering the wingtip vortices.

Application parameters:

A minimum volume of 30 – 40 ℓ spray mixture 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.

A droplet coverage of 50 - 70 droplets per cm<sup>2</sup> must be recovered at the target.

A droplet spectrum with a VMD (Volume Median Diameter) of 250 microns is recommended.

Ensure that the production of fine droplets (smaller than 150 microns) is restricted to a minimum.

The height of the spray boom should be maintained at 3-4 metres above the target. Do not spray when aircraft is in a climb, at the top or during a dive, or when banking.

Apply before the crop becomes too dense, thus preventing proper coverage of the plants.

Meteorological conditions:

The difference between the wet and dry bulb readings as determined by a whirling hygrometer, must not exceed 8 °C

Do not spray under turbulent, unstable conditions during the heat of the day when rising thermals and downdraughts occur.

Do not spray under temperature inversion conditions (spraying in or above the inversion layer).

Do not spray if the wind speed exceeds 15 km/h.

- 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:
  - reduced efficacy due to suspension and evaporation of small droplets in the air (inadequate coverage).
  - damage to other sensitive crops and/or non-target areas through drifting of the suspended spray cloud away from the target field.

General:

Ensure that fields are accurately marked and that the aerial spray operator knows exactly which fields to spray.

Obtain an assurance from the aerial spray operator that the above requirements

APPLICATION TABLE:

| CROP / DISEASE                                                                                                                                                                                                                                     | DOSAGE /<br>100 ℓ WATER<br>OR AS<br>INDICATED | REMARKS                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>POTATOES</b><br>Late blight<br>( <i>Phytophthora infestans</i> )<br><br>Early blight<br>( <i>Alternaria solani</i> )                                                                                                                            | 320 mℓ<br>(0,64 – 3,2 ℓ<br>per ha)            | <p>Apply high volume using 200 - 1 000 ℓ spray mixture per ha and ensure good coverage of entire plant above ground growth. Repeat application at intervals of 7 to 14 days and use the higher dosage and volume at shorter intervals under favourable disease conditions and especially after bloom when plants are more susceptible to early blight and a larger plant surface must be protected.</p> <p><b>Late blight only:</b> Under conditions which are extremely favourable for late blight development, <b>MANAGER 435 SC</b> must be alternated with a systemic/eradictive fungicide containing Metalaxyl i.e. (Mancolax 700 WP Reg. No. L7382, Act No. 36 of 1947) , Cymoxanil or Oxadixyl.</p> <p><u>Aerial Application:</u> Apply in not less than 30 ℓ water per ha.</p> |
| <b>TOMATOES</b><br>Late blight<br>( <i>Phytophthora infestans</i> ),<br>Early blight<br>( <i>Alternaria solani</i> ),<br>Septoria leaf spot<br>( <i>Septoria lycopersici</i> )                                                                     | 320 mℓ<br>(0,64 – 6.4 ℓ<br>per ha)            | <p>For the control of early and late blight and <i>Septoria</i> leaf spot, commence with application after plants are established and apply preventatively at intervals of 5 to 10 days depending on weather conditions which may favour the disease and decrease the fungicidal activity. Apply 200 to 2 000 ℓ spray mixture per hectare depending on plant size.</p> <p>For the control of early blight, thorough coverage of foliage is necessary. For low volume application, concentration of fungicide in the spray mixture should be increased proportionately.</p> <p><b>Do not use on tomato seedbeds.</b></p>                                                                                                                                                                |
| <b>GROUNDNUTS</b><br>Early <i>Cercospora</i> leaf spot ( <i>Cercospora arachidicola</i> ),<br>Late <i>Cercospora</i> leaf spot ( <i>Cercospora personata</i> ),<br>Web blotch ( <i>Phoma arachidicola</i> ),<br>Rust ( <i>Puccinia arachidis</i> ) | 3 ℓ/ha                                        | <p>Commence with program when the first symptoms appear from middle to end of December and repeat application at intervals of 7 to 14 days depending on infection pressure and weather conditions which decrease the fungicidal activity. Apply in sufficient volume of water to obtain full coverage of all leaves.</p> <p>During early growth stages under dryland conditions, the spray may be directed over the rows.</p>                                                                                                                                                                                                                                                                                                                                                          |
| <b>BEANS</b><br>(Dry and green)<br>Rust<br>( <i>Uromyces appendiculatus</i> )                                                                                                                                                                      | 320 mℓ<br>(0.64 – 1.6 ℓ/ha)                   | <p><b>Preventative treatment:</b></p> <p>Apply when the first symptoms appear and repeat at intervals of 7 to 14 days depending on conditions, which may favour the disease.</p> <p>Apply, depending on plant size, 200 to 500 ℓ spray mixture per ha and ensure thorough coverage of all leaves.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |

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|----------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>ONIONS</b><br>Downy mildew<br>( <i>Peronospora destructor</i> )                                 | 480 mℓ                                                                                                                                                                                                    | Apply once or twice per week up to 1 000 ℓ spray mixture per ha when weather favours the disease. Make use of a suitable registered wetting agent and ensure thorough coverage of the leaves.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| <b>CITRUS</b><br>Black spot ( <i>Guignardia citricarpa</i> )                                       | 200 mℓ                                                                                                                                                                                                    | Apply 4 to 5 sprays at intervals of 21 to 28 days. Apply the first spray at 100% petal drop. Intervals must be adjusted according to rainfall using shorter intervals when frequent rain has occurred since last application.<br>Also use a tank mix with eradicative Benzimidazole fungicides to slow down development of resistance. Will also control rust mite.<br><b>WARNING:</b> When applying medium narrow range mineral oil in combination with <b>MANAGER 435 SC</b> , do not exceed an oil concentration of 0.5 %.                                                                                                                                                              |
| <b>APPLES AND PEARS</b><br>Scab<br>( <i>Venturia inaequalis</i> )<br>and <i>Septoria</i> Leaf spot | HV 150 mℓ<br>(3.0 – 4,5 ℓ /<br>ha)                                                                                                                                                                        | May be applied as both pre and post-blossom sprays.<br><b>Pre Blossoming:</b> Apply 3 times, the first application when the trees have reached green tip stage and the last application prior to blossoming.<br><b>Post Blossoming:</b> Apply immediately after blossoming and repeat 4 – 6 times at intervals of 7 to 14 days.<br><b>Note:</b> The spray volume required per ha for HV or LV application at the specific growth stage should be determined according to the tree row volume method of Unrath (Deciduous Fruit Grower Nov. 1986). The dosage rate per hectare for HV/LV applications are then determined by the spray volume that has been calculated for HV applications. |
| <b>GRAPEVINES</b><br>Downy mildew<br>( <i>Plasmopara viticola</i> )                                | <b>Pre Blossoming</b><br>200 mℓ<br>(1.0 – 1.5 ℓ /<br>ha)<br><br><b>Blossoming to 80 % Calyx fall</b><br>200 mℓ<br>(1.5 – 2.0 ℓ /<br>ha)<br><br><b>Post Blossoming:</b><br>200 mℓ<br>(2.0 – 3.0 ℓ /<br>ha) | Apply the first spray when young shoots have reached a length of 10 cm. Further applications, depending on the weather conditions, should be applied at 7 to 10 day intervals. During this period a spray volume of not less than 500 – 750 ℓ (high dosage) spray mixture / ha should be applied.<br><br>Application necessary only if the blossoming period exceeds 14 days. Apply 750 – 1 000 ℓ spray mixture / ha.<br><br>Apply 2 more applications with 7 to 14 day intervals depending on weather conditions at a dosage rate of 1 000 – 1 500 ℓ spray mixture / ha.                                                                                                                  |
| Dead arm<br>( <i>Phomopsis viticola</i> )                                                          | 200 mℓ / ha<br>(1.0 – 1.5 ℓ /<br>ha)                                                                                                                                                                      | Apply the first application when the shoot lengths have reached a height of 0.5 to 1 cm. Apply 3 times with intervals of 7 to 10 days prior to blossoming. Use a minimum of 500 to 750 ℓ spray mixture / ha (high volume).                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |

**MANCOLAX 700 WP** is the registered tradename of AECI Ltd.