

BEFORE USING THIS PRODUCT READ THE LABEL CAREFULLY!

SHAKE THE BOTTLE WELL BEFORE USE.

Fungicide



IMPROVE 250 SC

Reg. No. L 9311 Act/Wet No. 36 of/van 1947

2: 5/11/2014-March2018

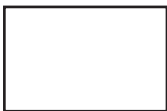
A suspension concentrate fungicide with systemic action for the control of fungal diseases on crops as listed.

'n Suspensie konsentraat swamdoder met sistemiese werking vir die beheer van swamsiektes op gewasse soos aangedui.

ACTIVE INGREDIENTS / AKTIEWE BESTANDELE

azoxystrobin (strobilurin) **125 g/l** asoksistrobien (strobilurin)
epoxiconazole (triazole) **125 g/l** epoksikonasool (triasool)

FRAC FUNGICIDE GROUP CODE **3** FRAC SWAMDODER GROEPKODE
FRAC FUNGICIDE GROUP CODE **11** FRAC SWAMDODER GROEPKODE



villa

Registration holder / Registrasiehouer:

Villa Crop Protection (Pty) Ltd.

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

PO Box / Posbus 10413, Kempton Park, 1630

Tel: 011 396 2233

Website / Webblad: www.villacrop.co.za

UN Number: 3082

Willow Set & Print 011 394-4486

GEBRUIKSAANWYSINGS INGESLUIT

VERWYS NA BESONDERHEDE
GEDRUK OP HOUER/SAK

Date formulated:
Formuleringsdatum:

DIRECTIONS FOR USE ENCLOSED
REFER TO DETAILS PRINTED
ON CONTAINER/BAG

Batch number:
Lotnummer:



CAUTION
VERSIGTIG



IMPROVE 250 SC

Reg. No. L 9311 Act/Wet No. 36 of/van 1947

FRAC FUNGICIDE GROUP CODE / FRAC SWAMDODER GROEPKODE: 3 + 11

ACTIVE INGREDIENTS/AKTIEWE BESTANDELE:

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 epoxiconazole (triazole) / epoksikonasool (triasool)..... 125 g/ℓ

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**

Allow the following number of days between the last application and harvest or grazing of the crops as listed below:	
Barley and Wheat (Do not graze barley and wheat)	60 days
Groundnuts	28 days
Maize including Sweet Corn	30 days
Soybeans	40 days
Sorghum	40 days

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 IMPROVE 250 SC IN A SPRAY PROGRAMME.

- Handle with care.
- Harmful if swallowed, inhaled or when absorbed through the skin.
- Mild skin and moderate eye irritant.
- Toxic to fish and aquatic organisms. Do not contaminate dams, rivers, lakes or any other water sources.
- Store the product in the original container in a cool, dry, well-ventilated place away from food, seed, feedstuff and other agricultural chemicals.
- 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 area to be sprayed and issue the necessary warnings. Do not spray 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 products not indicated on the label and the occurrence of resistance of the disease to the remedy concerned, as well as by the method, time and accuracy of application. The registration holder further 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 event of any uncertainty.

PRECAUTIONS

- Avoid inhalation of the spray mist.
- Avoid eye and skin contact.
- Wear a face shield, rubber gloves and boots when handling the concentrate, preparing the spray mixture and during application.
- Wash with soap and water after use and accidental skin contact.

- In case of eye contamination, rinse the eyes thoroughly with plenty of clean water for at least 15 minutes, holding the eyelid(s) open. Obtain medical assistance immediately.
- Wash contaminated clothing after use.
- Do not eat, drink or smoke whilst mixing and applying the product or before washing hands and face and change of clothing.
- 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** empty containers in the following manner. Invert the empty container over the spray or mixing tank and allow draining for at least 30 seconds after the flow has slowed down to a drip. Thereafter rinse the container three times with a volume of water equal to a minimum of a third of that of the container. Add the rinsing to the contents of the spray tank before destroying the container in the prescribed manner.
- 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, feed, drinking water and eating utensils.

RESISTANCE WARNING

IMPROVE 250 SC is a group code 3 + 11 fungicide. Any fungus population may contain individuals naturally resistant to **IMPROVE 250 SC** and other group code 3 + 11 fungicides. The resistant individuals can eventually dominate the fungus population if these fungicides are used repeatedly. These resistant fungi may not be controlled by **IMPROVE 250 SC** or any other group code 3 + 11 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.
- Do not exceed two (2) applications of **IMPROVE 250 SC** per season.
- integrate other control methods (chemical, cultural, biological) into disease control programmes.

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

DIRECTIONS FOR USE: Only use as indicated.

General information:

Azoxystrobin, one of the active ingredients of **IMPROVE 250 SC**, belongs to the strobilurin group of fungicides. Apart from their fungicidal activity, research has shown that strobilurins can increase physiological effects, beneficial to the crop. During the development of **IMPROVE 250 SC** locally, results have proven that the use of **IMPROVE 250 SC**, can increase yields even in situations when low disease pressure is evident.

Compatibility:

- **IMPROVE 250 SC** is compatible with the adjuvant **Direct**.
- The compatibility of **IMPROVE 250 SC** with other products may vary. A physical compatibility test must always be performed before such a tank mixture is sprayed. Water quality may influence the compatibility of **IMPROVE 250 SC**.
- When **IMPROVE 250 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.
- Shake the **IMPROVE 250 SC** container well before use.
- Premix the required quantity of **IMPROVE 250 SC** with at least 10 litres of water.
- Add the premix to the water in the spray tank.
- Agitate well to obtain a homogeneous emulsion.
- Fill the spray tank with water to the required level while maintaining agitation to ensure thorough mixing.
- Maintain agitation while spraying.
- If another product is to be mixed with **IMPROVE 250 SC**, the required quantity of the other product should be premixed, prior to slowly adding to the spray mixture after the **IMPROVE 250 SC**.
- Do not leave the prepared spray mixture in the spray tank for any length of time, e.g. overnight.

APPLICATION

General:

IMPROVE 250 SC should be applied to protect crops and prevent diseases.

Ground application:

IMPROVE 250 SC can be applied with conventional high volume spray equipment. It is important that the sprayer be in good working order and correctly calibrated prior to application, to ensure that the correct delivery rate and even distribution of the spray mixture is obtained.

Aerial application:

Aerial application of **IMPROVE 250 SC** 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 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: 30 to 40 droplets per cm² must be recovered at the target area.
- Droplet size: A droplet spectrum with a VMD of 280 to 300 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 meters above the target. Do not spray when aircraft is in a climb, at the top or during a dive, or when banking.
- Use suitable atomising equipment (hydraulic nozzles or rotary atomizers) 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 atomisers 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:
 - 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.
- 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

Crop and disease	Dosage rate mℓ / ha	Remarks
Maize & Sweet Corn Grey leaf spot (<i>Cercospora zeae-maydis</i>) Northern leaf blight (<i>Exserohilum turcicum</i>) Rust (<i>Puccinia sorghi</i>)	<u>Ground application</u> 800 mℓ / ha PLUS 50 mℓ Direct /100 ℓ water	<p>IMPROVE 250 SC IS RECOMMENDED IN AN INTEGRATED DISEASE MANAGEMENT PROGRAMME. IN ORDER TO ACHIEVE CONSISTENT AND RELIABLE DISEASE CONTROL, PREVENTIVE FUNGICIDE APPLICATIONS ARE CRITICALLY IMPORTANT.</p> <p>Apply the first application of IMPROVE 250 SC at the 5 to 6 leaf stage before any disease symptoms are noticed.</p> <p>A second application of IMPROVE 250 SC is recommended 3 weeks later. Under continued high disease pressure conditions, a third application with Sparta 375 SC is recommended, 3 to 4 weeks later.</p> <p>In certain areas/conditions, where low disease presence is expected, apply a single application of IMPROVE 250 SC at the 5 to 6 leaf stage. If extended disease control is required, revert back to the above mentioned, follow-up application of IMPROVE 250 SC.</p> <p><u>Ground application:</u> Apply as a full cover spray in 300 to 500 litres water per hectare.</p> <p><u>Hand-held Spinning disk applicator:</u> Apply 50 to 70 litres water per hectare.</p> <p><u>Aerial application:</u> Apply in 30 to 40 litres water per hectare. Refer to “Aerial application Instructions” above”.</p> <p><u>Row application for low density plantings:</u> e.g. in the Free State and Western parts of RSA: This dosage is based on an overall ground application of 800 mℓ per hectare, in 300 litres water per hectare.</p> <p>Apply, using a tandem fitting with two solid- or hollow cone nozzles, mounted on the boom above each row.</p> <p>Use sufficient water (not less than 100 litres per hectare, to ensure total coverage of the plants.</p>
	<u>OR</u> <u>Hand-held Spinning disc applicator and Aerial application</u> 800 mℓ / ha PLUS 100 mℓ Direct /100 ℓ water	
	<u>Row application for low density plantings</u> 270 mℓ/100 ℓ water PLUS 100 mℓ Direct /100 ℓ water	

Crop and disease	Dosage rate ml / ha	Remarks
Soybeans Soybean rust (<i>Phakopsora pachyrhizi</i>)	<u>Ground application</u> 600 ml / ha PLUS 50 ml Direct /100 ℓ water OR <u>Aerial application</u> 600 ml / ha PLUS 100 ml Direct /100 ℓ water	Apply the first application of IMPROVE 250 SC at the onset of flowering before any disease symptoms are noticed. A second application of IMPROVE 250 SC is recommended 3 to 4 weeks later . Under expected high disease pressure conditions, use a 3 weekly spray interval is recommended. <u>Ground application:</u> Apply as a full cover spray in 300 to 500 litres water per hectare. <u>Aerial application:</u> Apply in 30 to 40 litres water per hectare. Refer to “ Aerial application Instructions ” above”.
Barley Net blotch (<i>Pyrenophora teres</i>) Leaf spot (<i>Rhynchosporium secalis</i>) Leaf rust (<i>Puccinia hordei</i>) Powdery mildew (<i>Erysiphe graminis</i>)	<u>Ground application</u> 800 ml / ha PLUS 50 ml Direct /100 ℓ water OR <u>Aerial application</u> 800 ml / ha PLUS 100 ml Direct /100 ℓ water	Apply the first application not later than the 7 leaf stage . Apply a second application 3 to 4 weeks later if disease pressure is evident (normally at flag leaf stage before appearance of the head). The first product application must be applied STRICTLY PREVENTATIVE before any symptoms are noticed. <u>Ground application:</u> Apply in 200 to 400 litres of water per hectare. <u>Aerial application:</u> Apply in 30 to 40 litres of water per hectare. Refer to “ Aerial application Instructions ” above”.
Wheat Brown rust (<i>Puccinia triticina</i>) Stem rust (<i>Puccinia graminis</i>) Speckled leaf and Glume blotch (<i>Septoria</i> spp.) Eyespot (<i>Pseudocercospora herpotrichoides</i>) Powdery mildew (<i>Erysiphe graminis</i>) Yellow rust / Stripe rust (<i>Puccinia striiformis</i>)	<u>Ground application</u> 800 ml / ha PLUS 50 ml Direct /100 ℓ water OR <u>Aerial application</u> 800 ml / ha PLUS 100 ml Direct /100 ℓ water	Apply the first application between the 5 and 7 leaf stage . Apply a second application 3 to 4 weeks later if disease pressure is evident (normally at flag leaf stage before appearance of the head). The first product application must be applied STRICTLY PREVENTATIVE before any symptoms are noticed. <u>Ground application:</u> Apply in 200 to 300 litres of water per hectare. <u>Aerial application:</u> Apply in 30 to 40 litres of water per hectare. Refer to “ Aerial application Instructions ” above.

Crop and disease	Dosage rate ml / ha	Remarks
<u>Sorghum</u> Leaf blight (<i>Exserohilum turcicum</i>) Rust (<i>Puccinia purpurea</i>) Sooty stripe (<i>Ramulispora sorghi</i>)	<u>Ground application</u> 800 ml / ha PLUS 50 ml Direct /100 l water OR <u>Aerial application</u> 800 ml / ha PLUS 100 ml Direct /100 l water	Apply the first application of IMPROVE 250 SC at the 5 to 6 leaf stage before any disease symptoms are noticed. A second application of IMPROVE 250 SC is recommended 3 weeks later . Under continued high disease pressure conditions, a third application with Sparta 375 SC is recommended, 3 to 4 weeks later. In certain areas/conditions, where low disease presence is expected, apply a single application of IMPROVE 250 SC at the 5 to 6 leaf stage. If extended disease control is required, revert back to the above mentioned, follow-up application of IMPROVE 250 SC . <u>Ground application:</u> Apply as a full cover spray in 300 to 500 litres water per hectare. <u>Aerial application:</u> Apply in 30 to 40 litres water per hectare. Refer to “ Aerial application Instructions ” above”.
<u>Groundnuts</u> Leaf spot (<i>Cercospora spp.</i>) Leaf blotch / Web spot (<i>Phoma arachidicola</i>) Rust (<i>Puccinia arachidis</i>)	<u>Ground application</u> 600 ml / ha PLUS 50 ml Direct /100 l water OR <u>Aerial application</u> 600 ml / ha PLUS 100 ml Direct /100 l water	Apply the first application of IMPROVE 250 SC at the onset of disease development (first infection noticed on the basal leaves). A second application of IMPROVE 250 SC is recommended 3 weeks later . Under continued high disease pressure conditions, a third application with Sparta 375 SC is recommended, 3 weeks later. <u>Ground application:</u> Apply as a full cover spray in 300 to 500 litres water per hectare. <u>Aerial application:</u> Apply in 30 to 40 litres water per hectare. Refer to “ Aerial application Instructions ” above”.

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

- **DIRECT** (L 8680) = **LINK** (L 8675),
- **SPARTA 375 SC** (L 8403 / N-AR 1340) = **FLUSILAZIM 375 SC** (L 8400 / W 130493) (**Flusilazole + Carbendazim**) and
- **PROPIZOLE 250 EC** (L 7561) = **PROPICONAZOLE 250EC** (L 7306).

FLUSILAZIM 375 SC and/en **PROPICONAZOLE 250EC** are registered products of / is geregistreerde produkte van
UNIVERSAL CROP PROTECTION (PTY) LTD.

LINK, PROPIZOLE 250 EC, DIRECT and/en **SPARTA 375 SC** are registered products of / is geregistreerde produkte van
VILLA CROP PROTECTION (PTY) LTD.