

# PROTHOCOL 480 SC

Act No. 36 of 1947 / Wet Nr. 36 van 1947  
SA Reg. No. L11462

**READ ATTACHED PACKAGED LEAFLET BEFORE USE  
KEEP OUT OF REACH OF CHILDREN AND ANIMALS**

**GROUP**

**3**

**FUNGICIDE**

**PRODUCT INFO:**

A suspension concentrate, systemic fungicide for the preventative control of diseases on crops as listed.

**PRODUK INFO:**

'n Suspensie konsentraat, sistemiese swamdoder vir die voorkomende beheer van siektes op gewasse soos gelys.



**WARNING**

**HAZARD STATEMENTS:**

Very toxic to aquatic life with long lasting effects.

**PRECAUTIONARY STATEMENTS:**

Wear protective gloves, protective clothing, eye and face protection.

## Active Ingredient / Aktiewe Bestanddeel

Prothioconazole (triazole)

480 g/ℓ

Protiokonasool (triasool)

Net (ℓ) **SEE CONTAINER**

Registration Holder / Registrasiehouer



ICA International Chemicals (Pty) Ltd. • Reg. No. 2001/013319/07  
28 Planken Street • Plankenbrug Industrial • STELLENBOSCH • 7600 • SOUTH AFRICA  
Tel. +27-21 886 9812 • [www.icaonline.co.za](http://www.icaonline.co.za)

Batch No.  
Date of Manufacture

**SEE  
CONTAINER**

Lot Nr.  
Datum van Vervaardiging

Human Poison Helpline +27-861 555 777 • Griffon Poison Information Centre +27-82 446 8946

GROUP III

UN No. / VN Nr. 3082

SA-PT-001

# Prothocol 480 SC

Act No. 36 of 1947  
SA Reg. No. L11462

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## ACTIVE INGREDIENT:

Prothioconazole (triazole) ..... 480 g/ℓ

## REGISTERED BY:

ICA International Chemicals (Pty) Ltd., Reg. No. 2001/013319/07  
28 Planken Street • Plankenbrug Industrial • Stellenbosch • 7600 • South Africa  
Tel. +27-21 886-9812 • www.icaonline.co.za

## WARNINGS

Very toxic to aquatic life with long lasting effects

**WITHHOLDING PERIODS** (Minimum number of days between last application and harvest or grazing):

- ▶ *Barley* ..... 77 Days
- ▶ *Maize & Sweetcorn* ..... 28 Days
- ▶ *Maize & Sweetcorn (Grazing)* ..... 28 Days
- ▶ *Soya beans* ..... 28 Days
- ▶ *Soya beans (Grazing)* ..... 28 Days
- ▶ *Wheat* ..... 77 Days
- ▶ *Wheat & Barley (Grazing)* ..... 77 Days

Compliance with these withholding periods and application methods will ensure that residues do not exceed local maximum residue limits (MRL) but may not meet the import requirements of other countries. If the crop to be treated is intended for export, consult the relevant importer or exporting body regarding the use of this product, MRL and recommended waiting periods. Although **Prothocol 480 SC** is regarded as crop-safe on most of the important cultivars, this does not mean that a more sensitive cultivar might be available in future. **Prothocol 480 SC** must be tested on new cultivars prior to usage over big areas.

**RE-ENTRY INTERVAL:** Do not enter treated field until spray deposit has dried unless wearing protective clothing. Wash protective clothing after use.

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, and the environment or harm to man/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

If medical advice is needed, have product container or label at hand.  
Avoid release to the environment.  
Wear protective gloves, protective clothing, eye and face protection.  
Collect spillage.  
Dispose of contents and container in accordance with national regulations.

**TRIPLE RINSE THE EMPTY CONTAINER AS FOLLOWS:** Invert the empty container over the spray or mixing tank and drain for at least 30 seconds until the flow has slowed down to a drip. Thereafter, rinse the empty container three times in succession with one quarter of the container volume with 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.

## RELEVANT SUBSTANCES:

Prothioconazole (Cas no: 178928-70-6) Aquatic Acute Category 1, H400; Aquatic Chronic Category 1, H410 (48 % w/v).

## FIRST AID TREATMENT

**In case of accident or if you feel unwell seek medical advice immediately and show this LABEL where possible**

- INHALATION:** Remove the victim from immediate source of exposure. Move victim to fresh air, if it can be done safely, and keep comfortable. If victim's breathing has stopped, perform artificial respiration. Administer oxygen if victim's breathing is difficult or irregular. Get medical help.
- SKIN:** Remove and isolate contaminated clothing, shoes, and leather goods immediately and take a shower. Rinse affected areas (skin) immediately with non-abrasive soap or mild detergent and large amounts of running water. Wash contaminated clothing before reuse. Get medical help if irritation develops and persists.
- EYES:** Rinse eyes cautiously with clean running water for at least 15 minutes, while holding eyelids apart. Remove contact lenses after 5 minutes if present and easy to do. Continue rinsing while holding eyelids apart. Seek medical help if irritation continues.
- INGESTION:** If swallowed, DO NOT induce vomiting, unless instructed to do so by poison control center or doctor. Have person sip a glass of water if able to swallow. Never give anything by mouth to an unconscious person. If vomiting does occur, keep on giving fluids. Get medical help.
- NOTE TO PHYSICIAN:** There is no specific antidote. All treatments should be based on observed signs and symptoms of distress in the patient.

**POTENTIAL HEALTH EFFECTS,  
ACUTE AND DELAYED:**

Effects of exposure (inhalation, ingestion, or skin contact) to substance may be delayed.

**SYMPTOMS OF HUMAN  
POISONING:**

Prolonged or repeated exposure may cause eye damage, headaches, and dizziness. Some individuals may develop an allergic response.

### RESISTANCE WARNING

**For resistance management: Prothocol 480 SC** is a FRAC group code **(3)** triazole fungicide. Any fungal population may contain individuals naturally resistant to **Prothocol 480 SC** and other FRAC group code **(3)** fungicides. The resistant individuals can eventually dominate the fungal population if these fungicides are used repeatedly. These resistant fungi may not be controlled by **Prothocol 480 SC** or any other FRAC group code **(3)** fungicides.

To prevent or 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.
- For tank mixing or alternation with products in other fungicide group codes, refer to individual product labels.
- Integrate other forms of control methods (chemical, cultural, biological) into disease control programmes.
- Where resistance has been confirmed or previously suspected do not apply **Prothocol 480 SC** alone but in combination with a suitable partner from different fungicide group codes. 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.
- For specific information on resistance management contact the registration holder of this product or contact your local supplier.
- In order to minimise risk of small grain disease pathogens developing resistance against group code **3** fungicides, it is recommended to apply **Prothocol 480 SC** in wheat and barley as tank mixtures with registered strobilurin fungicides (which has a different mode of action) like **\*PicoFlo 250 SC**, as per registration.
- **DO NOT** exceed two **Prothocol 480 SC** tank mixture treatments per season in wheat or barley.
- Adhere to the dosage rates recommended on the label, **DO NOT** reduce dosage rate.
- **DO NOT** apply any other triazole, or related chemicals, in the same control programme with **Prothocol 480 SC**.

### MODE OF ACTION

Prothioconazole (triazole) is a FRAC group 3, demethylation inhibiting fungicide (DMI). It is systemic with protective, curative and eradicant action. Prothioconazole works by affecting the cell walls of fungi by suppressing spore germination and fungal growth.

### USE RESTRICTIONS

**Prothocol 480 SC IS RECOMMENDED IN AN INTEGRATED DISEASE MANAGEMENT PROGRAMME. IN ORDER TO ACHIEVE CONSISTENT AND RELIABLE DISEASE CONTROL, PREVENTIVE FUNGICIDE APPLICATIONS ARE CRITICALLY IMPORTANT.**

Consult the labels for **USE RESTRICTIONS, WARNINGS (including RESISTANCE WARNINGS), PRECAUTIONS** and **DIRECTIONS FOR USE**.

### DIRECTIONS FOR USE – use only as directed

**COMPATIBILITY:**

**Prothocol 480 SC** is generally compatible with fungicides and non-ionic adjuvants with spreading and penetrating properties. The compatibility of **Prothocol 480 SC** with other products depends on the formulations of the respective products as well as the quality of the spray water to be used. It is possible that formulations may change from time to time. It is therefore recommended that a small-scale physical compatibility test be done prior to the tank mixture being made. Always consult the labels of products to be tank mixed with **Prothocol 480 SC**.

**MIXING INSTRUCTIONS:**

**Shake the Prothocol 480 SC container well before use. Replace cap directly after use.** Half-fill the spray tank with water and ensure continuous agitation. Only use water suitable for irrigation and avoid using water with high levels of chlorine. Add the required quantity of **Prothocol 480 SC** to the mixing tank, while agitation is continued.

Pre-mix Prothocol 480 SC as follows:

Observe the following formulation mixing sequence if other products will be tank mixed with **Prothocol 480 SC**: buffer/acidifier, wettable powders, water dispersible granules, suspension concentrates, emulsifying concentrates and soluble concentrates last.

- Pre-mix each product separately with a small volume of water before adding it to the spray tank.

Add the required quantity of **Prothocol 480 SC** in at least 10 ℓ water and mix. Add the pre-mixture to the water and fill the tank to the required volume with clean water while maintaining agitation, to ensure thorough mixing of the spray mixture, before and during application. **TANK MIXTURES MUST BE SPRAYED OUT IMMEDIATELY AND NOT ALLOWED TO STAND IN THE SPRAY TANK OVERNIGHT.** Spraying equipment must be thoroughly flushed out at the end of the spraying operation.

**APPLICATION:**

- Ensure that the equipment is correctly calibrated and is checked regularly to ensure even and accurate application. Repeat the application if it rains within two (2) hours after application.

**Aerial Application:**

Aerial application of **Prothocol 480 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). Familiarise yourself and inform the pilot of the Stewardship requirements related to the aerial application of **Prothocol 480 SC**. It is important to ensure that the spray mixture is evenly distributed 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:

- A spray mixture volume of 30 – 40 litres per hectare is recommended. However, this product has not been evaluated at a reduced volume rate, and 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.
- 25 – 35 droplets per cm<sup>2</sup> must be recovered at the target area.
- A droplet spectrum with a VMD of 280 – 300 microns is recommended. Fine droplets less than 150 micron (high drift and evaporation potential) should be limited to a minimum.
- Limit the production of fine droplets less than 150 micron (high drift and evaporation potential) to a minimum.
- Maintain the height of the spray boom at 3 – 4 metres above the target. Do not spray when the 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 – 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.
- When wind speed exceeds 15 km/h, stop spraying.
- During the heat (dry) of the day conditions can become turbulent and unstable. If so, stop spraying.
- 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 inadequate coverage caused by suspension and evaporation of small droplets in the air,
  - b) drifting of the spray mixture to non-target areas which may cause damage to other sensitive crops and contamination of such areas.
- Ensure that the Aerial Spray Operator knows exactly which fields to spray.
- Notify all inhabitants in the immediate vicinity of the lands to be sprayed and issue the necessary warnings. Do not spray over or allow spray drift to contaminate water or areas not under treatment.
- Assurance needs to be obtained from the Aerial Spray Operator that the requirements mentioned above will be met, and that relevant data will be compiled and kept in a logbook for future reference.

APPLICATION TABLE		
CROP and DISEASE	DOSAGE RATE per hectare or as indicated	REMARKS
<b>BARLEY</b> <b>Leaf spot</b> <i>(Rhynchosporium secalis)</i>  <b>Leaf rust</b> <i>(Puccinia hordei)</i>  <b>Net blotch</b> <i>(Pyrenophora teres)</i>  <b>Powdery mildew</b> <i>(Brumeria graminis)</i>	150 mℓ Prothocol 480 SC/ha + 400 mℓ *PicoFlo 250 SC/ha + *adjuvant	It is <b>CRITICALLY IMPORTANT</b> that the first fungicide product must be applied <b>STRICTLY PREVENTATIVE</b> , before any symptoms are observed, and <b>NOT LATER</b> than the <b>7-leaf</b> stage.  Under conditions conducive for disease development, apply a second application <b>3 – 4 weeks later</b> , normally at the <b>flag-leaf</b> stage, before the head appear.  <u>Ground application:</u> Apply in 200 – 400 ℓ of water per hectare. <u>Aerial application:</u> Apply in 30 – 40 ℓ of water per hectare. Refer to <b>aerial application instructions</b> above.
	<b>NOTE:</b> Disease control can be achieved when <b>Prothocol 480 SC</b> is applied at 150 mℓ per hectare together with an adjuvant, without <b>*PicoFlo 250 SC</b> , if the application is part of a disease control spray programme. Under conditions conducive for disease development, it is not recommended to spray <b>Prothocol 480 SC</b> + adjuvant without the addition of <b>*PicoFlo 250 SC</b> as the first application in a disease management programme.	
<b>MAIZE &amp; SWEETCORN</b> <b>Grey leaf spot</b> <i>(Cercospora zae-maydis)</i>  <b>Northern leaf blight</b> <i>(Exserohilum turcicum)</i>  <b>Rust</b> <i>(Puccinia sorghi)</i>	140 mℓ Prothocol 480 SC/ha + 400 mℓ *PicoFlo 250 SC/ha + *adjuvant  <b>OR</b>  140 mℓ Prothocol 480 SC/ha + 400 mℓ *OBSTRUCTO 250 SC/ha + *adjuvant	It is <b>CRITICALLY IMPORTANT</b> to apply the first application of the <b>Prothocol 480 SC</b> tank-mix before any disease symptoms are noticed, at the <b>5 – 6 leaf stage</b> .  It is recommended that a second application of the <b>Prothocol 480 SC</b> tank-mixture is <b>applied three (3) weeks later</b> .  Under conditions of continued high disease pressure, a third application <b>three (3) weeks later</b> , with an alternative registered fungicide*, is recommended.  In certain areas and under specific conditions, when <b>low disease</b> pressure is expected, a single application of the <b>Prothocol 480 SC</b> tank-mixture at the <b>5 – 6 leaf stage can be applied</b> . If conditions change to high disease pressure, it is recommended to change to the programme mentioned above.  <u>Ground application:</u> Apply as a full cover spray in 300 – 500 ℓ water per hectare. <u>Hand-held Spinning disk applicator:</u> Apply 50 – 70 ℓ water per hectare. <u>Aerial application:</u> Apply in 30 – 40 ℓ water per hectare. Refer to <b>Aerial application instructions</b> above.
	<u>Row application:</u> 50 mℓ Prothocol 480 SC/100 ℓ water + 135 mℓ *PicoFlo 250 SC/100 ℓ water + *adjuvant  <b>OR</b>  50 mℓ Prothocol 480 SC/100 ℓ water + 135 mℓ *OBSTRUCTO 250 SC/100 ℓ water + *adjuvant	<u>Row application:</u> <b>For low density plantings e.g., in the Free State and western parts of RSA.</b>  <b>This dosage is based on an overall ground application of 300 ℓ water per hectare.</b> Apply using a tandem fitting with two solid- or hollow cone nozzles, mounted on the boom above each row. Apply using not less than 100 ℓ water per hectare, to ensure total coverage of the plants.

**WARNING**

**Maize applications:** The risk of Arrested Ear Syndrome (Blunt Ear Syndrome) increases dramatically when any applications (crop protection products, fertilisers, foliar feeds, adjuvants, etc) are made between the V10 – VT (10<sup>th</sup> leaf collar – cob tassel emergence) growth stages of maize plants. Applications between the V10 – VT growth stages of the crop must be avoided as far as possible.

<p><b>SOYA BEANS</b>  <b>Soya bean rust</b>  <i>(Phakopsora pachyrhizi)</i></p>	<p>100 mℓ <b>Prothocol 480 SC</b>/ha  +  300 mℓ <b>*PicoFlo 250 SC</b>/ha  +  <b>*adjuvant</b></p>	<p>It is <b>CRITICALLY IMPORTANT</b> that the first application of the <b>Prothocol 480 SC</b> tank-mix before any disease symptoms are noticed, at the onset of flowering.</p> <p>It is recommended that a second application of the tank-mixture must be applied <b>3 – 4 weeks later</b>. When conditions of continued high disease pressure are expected, a 3-weekly spray interval is recommended.</p> <p><u>Ground application:</u>  Apply as a full cover spray in 300 – 500 ℓ water per hectare.</p> <p><u>Aerial application:</u>  Apply in 30 – 40 ℓ water per hectare.  Refer to <b>Aerial application instructions</b> above.</p>
<p><b>WHEAT</b>  <b>Brown rust</b>  <i>(Puccinia triticina)</i></p> <p><b>Powdery mildew</b>  <i>(Blumeria graminis tritici)</i></p> <p><b>Speckled leaf and Glume blotch</b>  <i>(Septoria spp.)</i></p> <p><b>Stem rust</b>  <i>(Puccinia graminis)</i></p>	<p>150 mℓ <b>Prothocol 480 SC</b>/ha  +  400 mℓ <b>*PicoFlo 250 SC</b>/ha  +  <b>*adjuvant</b></p>	<p>It is <b>CRITICALLY IMPORTANT</b> that the first fungicide product must be applied <b>STRICTLY PREVENTATIVE</b>, before any symptoms are observed, and <b>NOT LATER</b> than the <b>7-leaf stage</b>.</p> <p>Under conditions conducive for disease development, apply a second application <b>3 – 4 weeks later</b>, normally at the flag leaf stage, before the head appear.</p> <p><u>Ground application:</u>  Apply in 200 – 300 ℓ of water per hectare.</p> <p><u>Aerial application:</u>  Apply in 30 – 40 ℓ of water per hectare.  Refer to <b>Aerial application instructions</b> above.</p>
<p><b>NOTE:</b> Disease control can be achieved when <b>Prothocol 480 SC</b> is applied at 150 mℓ per hectare together with an adjuvant, without <b>*PicoFlo 250 SC</b>, if the application is part of a disease control spray programme.</p> <p>Under conditions conducive for disease development, it is not recommended to spray <b>Prothocol 480 SC</b> + adjuvant without the addition of <b>*PicoFlo 250 SC</b> as the first application in a disease management programme.</p>		

\* **PicoFlo 250 SC** (L-PENDING, Act 36 of 1947) – (Picoxystrobin 250 g/ℓ) and **OBSTRUCTO 250 SC** (L9323, Act 36 of 1947) – (Azoxystrobin 250 g/ℓ) are registered products of ICA International Chemicals.

\* Only use registered products in spray programmes.

Consult the product labels for **USE RESTRICTIONS, WARNINGS** (including **RESISTANCE WARNINGS**), **PRECAUTIONS** and **DIRECTIONS FOR USE**.

PT-001

# Prothocol 480 SC

Wet Nr. 36 van 1947  
SA Reg. Nr. L11462

'n Suspensie konsentraat, sistemiese swamdoder vir die voorkomende beheer van siektes op gewasse soos gelys.

## AKTIEWE BESTANDEEL:

Protiokonasool (triasool) ..... 480 g/ℓ

## GEREGISTREER DEUR:

ICA International Chemicals (Pty) Ltd., Reg. Nr. 2001/013319/07  
Plankenstraat 28 • Plankenbrug Industrieël • Stellenbosch • 7600 • Suid-Afrika  
Tel. +27-21 886-9812 • www.icaonline.co.za

## WAARSKUWINGS

Baie giftig vir waterlewende organismes met langdurige gevolge

**ONTHOUDINGS PERIODES** (Minimum aantal dae tussen laaste toediening en oes of beweiding):

- ▶ Gars ..... 77 Dae
- ▶ Koring ..... 77 Dae
- ▶ Koring & Gars (Weiding) ..... 77 Dae
- ▶ Mielies & Suikermielies ..... 28 Dae
- ▶ Mielies & Suikermielies (Weiding) ..... 28 Dae
- ▶ Sojabone ..... 28 Dae
- ▶ Sojabone (Weiding) ..... 28 Dae

Nakoming van hierdie onthoudingsperiodes en toedieningsmetodes sal verseker dat die plaaslike maksimum residu limiete (MRL) nie oorskry word nie, maar mag dalk nie voldoen aan die invoereis van ander lande nie. Indien die gewas wat behandel gaan word, bestem is vir uitvoer, raadpleeg die betrokke in- of uitvoerder rakende die gebruik van hierdie produk, die MRL en aanbevole onthoudingsperiodes. Alhoewel **Prothocol 480 SC** as gewasveilig beskou word op meeste van die belangrike kultivars, beteken dit nie dat 'n meer sensitiewe kultivar in die toekoms op die mark kan kom nie. **Prothocol 480 SC** moet eers op nuwe kultivars getoets word voordat dit oor groot areas aangewend word.

**HERBETREDINGSINTERVAL:** Moenie behandelde gebied betree alvorens die spuitneerslag droog is nie, tensy beskermende oorklere gedra word. Beskermende oorklere moet gewas word na gebruik.

Alhoewel hierdie middel omvattend onder 'n groot verskeidenheid toestande getoets is, waarborg die registrasiehouer nie dat dit onder alle toestande doeltreffend sal wees nie, aangesien die werking en effek daarvan beïnvloed kan word deur faktore soos abnormale grond-, klimaats- en bergingstoestande, kwaliteit van verdunningswater, verenigbaarheid met ander produkte wat nie op die etiket aangedui is nie en die voorkoms van weerstand teen die betrokke middel, sowel as die metode, tyd en akkuraatheid van toediening. Verder aanvaar die registrasiehouer nie verantwoordelikheid vir skade aan gewasse, plantegroei, die omgewing of vir nadelige effekte op mens of dier of vir 'n gebrek aan doeltreffendheid, as gevolg van die versuim van die gebruiker om die etiketaanwysings na te kom of as gevolg van die ontstaan van toestande wat nie kragtens die registrasie voorsien kon word nie. Raadpleeg die verskaffer in geval van enige onsekerheid.

## VOORSORGMATREËLS

Indien mediese advies benodig word, hou die produkhouer of -etiket byderhand.  
Hou buite bereik van kinders.  
Lees sorgvuldig en volg alle instruksies.  
Vermy vrystelling in die omgewing.  
Dra beskermende handskoene, beskermende klere, oog- en gesigbeskerming.  
Maak stortsel bymekaar.  
Raak ontslae van inhoud en houer in ooreenstemming met nasionale regulasies.

**SPOEL DIE LEË HOUER DRIE MAAL SOOS VOLG:** Keer die leë houer om oor die spuit- of mengten en dreineer vir minstens 30 sekondes totdat die vloei tot 'n gedrup verminder het. Spoel daarna die leë houer drie keer uit met vars water, teen 'n kwart van die houer se volume, en giet die spoelwater in die spuit- of mengten. Kap gate in die drie keer gespoelde houer, waarna dit aan 'n goedgekeurde versamelaar of verwerker oorhandig moet word ([www.croplife.co.za](http://www.croplife.co.za)). Moenie die houer begrawe, verbrand of aan enige ander partye skenk wat dit as houer vir voedsel of drinkgoed mag gebruik nie.

## RELEVANTE STOWWE:

Protiokonasool (Cas no: 178928-70-6) Waterlewend Akueel Kategorie 1, H400; Waterlewend Kronies Kategorie 1, H410 (48 % m/v).

## NOODHULP BEHANDELING

In geval van 'n ongeluk of as jy onwel voel, verkry onmiddellik mediese advies en wys hierdie ETIKET waar moontlik

### INASEMING:

Neem die slagoffer weg van die onmiddellike bron van blootstelling. Verskuif die slagoffer na vars lug as dit veilig gedoen kan word en hou gemaklik. Indien die slagoffer ophou asemhaal, pas kunsmatige asemhaling toe. Dien suurstof toe as die slagoffer se asemhaling moeilik of onreëlmatig is. Verkry mediese hulp.

### VEL:

Verwyder en isoleer besmette klere, skoene en leergoedere dadelik en stort.

Spoel aangetaste areas (vel) onmiddellik met nieskurende seep of sagwerkende wasmiddel en groot hoeveelhede lopende water. Was besmette klere voor hergebruik. Kry mediese hulp indien irritasie ontwikkel en voortduur.

### OË:

Spoel oë versigtig met skoon lopende water vir ten minste 15 minute terwyl die ooglede vanmekaar gehou word. Verwyder kontaklense na 5 minute indien aanwesig en maklik om te doen. Hou aan met spoel terwyl ooglede vanmekaar gehou word. Kry mediese hulp indien irritasie voortduur.

<b>OPNEMING:</b>	Indien ingesluk, MOENIE vomering induseer nie, tensy 'n gifsentrum of dokter opdrag gee om dit te doen. Laat die persoon slukkies water neem indien dit moontlik is om te sluk. Moet nooit iets per mond aan 'n bewustelose persoon gee nie. Indien die persoon wel vomeer, hou aan om vloeistowwe te gee. Verkry mediese hulp.
<b>NOTA AAN GENEESHEER:</b>	Daar is nie 'n spesifieke teenmiddel nie. Alle behandeling moet gebaseer word op waargenome tekens en simptome van nood by die pasiënt.
<b>MOONTLIKE GESONDHEIDSGEVOLGE, AKUUT EN VERTRAAGD:</b>	Gevolge van blootstelling (inaseming, opneming of velkontak) aan stof kan vertraag wees.
<b>SIMPTOME VAN MENSLIKE VERGIFTIGING:</b>	Langdurige of herhaalde blootstelling kan skade aan oë, hoofpyn en duiseligheid veroorsaak. Sommige individue kan 'n allergiese reaksie ontwikkel.

## WEERSTANDSWAARSKUWING

**Vir weerstandsbestuur: Prothocol 480 SC** is 'n FRAC groepkode (3) triasool swamdoder. Enige swam populasie mag individue insluit wat 'n natuurlike weerstand teen **Prothocol 480 SC**, of enige ander FRAC groepkode (3) swamdoder het. Indien hierdie swamdoders herhaaldelik aangewend word, kan die weerstandbiedende individue uiteindelik die swam populasie oorheers. Hierdie weerstandbiedende swamme sal waarskynlik nie deur **Prothocol 480 SC** of enige ander FRAC groepkode (3) swamdoder beheer word nie.

### Om weerstand te vertraag:

- Vermoed die herhaaldelike gebruik van swamdoders met dieselfde groepkode. Wissel af met, of gebruik tenkmengsels van produkte in verskillende swamdoder groepkodes.
- Raadpleeg toepaslike individuele produkietiketette wanneer daar afgewissel word, of tenkmengsels gemaak word, met produkte in ander swamdoder groepkodes.
- Integreer ander beheermaatreëls (chemies, verbouing, biologies) in swamdoderprogramme.
- Waar weerstand bekend is of vermoed word, moet **Prothocol 480 SC** nie alleen toegedien word nie. Gebruik 'n tenkmengsel met 'n geregistreerde swamdoder van 'n ander swamdoder groepkode. Hierdie bestuurstrategie om weerstand te voorkom, moet egter nie swamdoder produkte insluit waar weerstand in die verlede aangemeld is nie, of dieselfde werkswyse het nie.
- Vir spesifieke inligting oor weerstandsbestuur kontak die registrasiehouer van hierdie produk of jou plaaslike verskaffer.
- Om die risiko van patogene weerstand teen kleingraan gewasse soos koring en gars te verlaag, word dit aanbeveel dat **Prothocol 480 SC** as 'n tenkmengsel met geregistreerde strobilurien swamdoders (wat 'n ander werkswyse het) soos **\*PicoFlo 250 SC** soos per registrasie, aangewend word.
- **MOENIE** meer as twee **Prothocol 480 SC** tenkmengsel behandelings per seisoen in koring of gars toedien nie.
- Gebruik slegs die aanbevole dosisse wat op die etiket aangedui word, **MOENIE** die dosisse verlaag nie.
- **MOENIE** enige ander triasool, of verwante chemikalieë in dieselfde beheerprogram as **Prothocol 480 SC** toedien nie.

## WERKINGSWYSE

Protiokonasool (triasool) is FRAC-groep 3, demetieleringsinhiberende swamdoders (DMI). Dit is sistemies met beskermende, genesende en uitwissende aksie. Protiokonasool werk deur die selwande van swamme te beïnvloed deur spoorontkieming en swamgroei te onderdruk.

## GEBRUIKSBEPERKINGS

**Prothocol 480 SC WORD IN 'N GEÏNTEGREERDE SIEKEBEHEERPROGRAM AANBEVEEL. VOORKOMENDE SWAMDODER TOEDIENINGS IS VAN UITERS BELANG, VIR KONSEKWENT EN BETROUBARE SIEKTEBEHEER.**

Raadpleeg die betrokke etikette vir **GEBRUIKSBEPERKINGS, WAARSKUWINGS (insluitend WEERSTANDSWAARSKUWING), VOORSORGMAATREËLS en GEBRUIKSAANWYSINGS.**

## GEBRUIKSAANWYSINGS – gebruik slegs soos aangedui

### VERENIGBAARHEID:

**Prothocol 480 SC** is verenigbaar met ander swamdoders en nie-ioniese bevorderingsmiddels (benatters) met verspreidings en penetrerende eienskappe. Die verenigbaarheid van **Prothocol 480 SC** met produkte hang af van die formulering van die betrokke produkte asook die kwaliteit van die water wat gebruik gaan word. Dit is moontlik dat formuleringe van tyd tot tyd kan verander, en dus word daar aanbeveel dat 'n kleinskaalse fisiese verenigbaarheidstoets (fles toets) uitgevoer word, voordat 'n tenkmengsel gemaak word. Raadpleeg altyd die individuele etikette van produkte wat in tenkmengsel saam met **Prothocol 480 SC** gemeng gaan word.

### MENGINSTRUKSIES:

**Skud die Prothocol 480 SC houër deeglik voor gebruik. Plaas prop terug op houër direk na gebruik.** Vul die spuittenk halfvol met skoon water, wat geskik is vir besproeiing en maak seker dat spuittenk deurentyd gemeng word. Vermoed die gebruik van water met 'n hoë chloor inhoud. Voeg die benodigde hoeveelheid **Prothocol 480 SC** by die spuittenk, terwyl dit deurentyd gemeng word.

### Meng Prothocol 480 SC vooraf as volg:

Let op die volgende mengvolgorde van die formulering indien ander produkte saam met **Prothocol 480 SC** in 'n tenkmengsel toegedien word: buffer/versuurder, benatbare poeiers, waterdispergeerbare korrels, suspensie konsentraat, emulgeerbare konsentrate en oplosbare konsentrate laaste.

- Meng elke produk afsonderlik met 'n klein hoeveelheid water voordat dit in die spuittenk gevoeg word.

Voeg die benodigde hoeveelheid **Prothocol 480 SC** by ongeveer 10 l water en meng goed. Voeg die mengsel by die tenk en vul met skoon water tot by finale volume. Maak seker dat die spuittenk voordurend gemeng word om vermenging te verseker voor en tydens toediening. **DIE TENKMENSGEL MOET ONMIDDELLIK UITGESPUIT WORD EN NIE TOEGELAAT WORD OM OORNAG IN DIE SPUITTENK TE STAAN NIE.** Spuittoerusting moet deeglik uitgespuite/skoongemaak word na afloop van toediening.

### TOEDIENING:

- Maak seker dat die spuittoerusting korrek gekalibreer is en gaan gereeld na om seker te maak dat die toediening egalig en akkuraat is. Herhaal toediening indien dit binne twee (2) ure na aanwending reën.

### Lugbespuiting:

**Prothocol 480 SC** mag slegs deur 'n geregistreerde lugbespuitingsoperateur toegedien word. Die geregistreerde vliegtuig moet aan die SANS Kode 10118 (Aerial Application of Agricultural Pesticides) vereistes voldoen en korrek gekalibreer wees. Vergewis uself en stel die vliegtuigloods in kennis van die Rentmeesterskap-vereistes wat verband hou met die lugbespuiting van **Prothocol 480 SC**. Dit is belangrik om te verseker dat die spuitmengsel eweredig oor die teikengebied versprei word en dat die verlies aan spuitmateriaal tydens toediening tot 'n minimum beperk word. Dit is dus belangrik om aan die volgende vereistes te voldoen:

- 'n Spuit volume van 30 – 40 liter per hektaar word aanbeveel. Hierdie produk is egter nie teen 'n verlaagde volume getoets nie, en die registrasiehouer kan nie effektiwiteit waarborg, of verantwoordelik gehou word vir enige nadelige gevolge indien die produk teen 'n laer volume toegedien word nie.
- 25 – 35 druppels per cm<sup>2</sup> moet op die teikenarea herwin word.
- 'n Druppelspektrum met 'n VMD van 280 – 300 mikron word aanbeveel. Druppels kleiner as 150 mikron (hoë drywing en verdampingspotensiaal) moet tot 'n minimum beperk word.
- Handhaaf die hoogte van die spuitbalk op 3 – 4 meter bo die teiken. Moet nie spuit as die vliegtuig duik, klim of draai nie.
- Atomiseringsapparaat moet die vereiste druppelgrootte en bedekking produseer en 'n druppelspektrum wat die kleinste moontlike relatiewe span bewerkstellig. Atomiseerders moet ook so geplaas word om te verhoed dat druppels binne-in die vlerkpuntvorteks beweeg. Hierdie aspekte sal die minste verlies van produk verseker.
- Plaas die atomiseerder in die binneste 60 – 75 % van die vlerkspan om te verhoed dat die druppels in die vlerkpuntvorteks beland.
- Indien temperatuur tussen die nat- en droëboltermometer van 'n swaaihgrometer, 8 °C oorskry, moet toediening gestaak word.
- As windspoed 15 km/u oorskry, moet toediening gestaak word.
- Droë toestande gedurende die hitte van die dag lei tot turbulente en onstabiele omstandighede en toediening moet gestaak word.
- Bespuiting onder temperatuur inversie toestande (deur bo of binne die inversie laag te spuit) en/of hoë lugvog toestande (relatiewe humiditeit 80 % en meer) mag tot die volgende probleme aanleiding gee:
  - a) verlaagde doeltreffendheid aangesien die druppels as 'n wolk in die lug bly hang en moontlik verdamp (onvoldoende bedekking op teiken).
  - b) skade aan nie-teiken gewasse of sensitiewe areas as gevolg van wegdrywing van die spuitwolk na nie-teiken area.
- Maak seker dat die Lugbespuitingsoperateur presies weet watter lande gespuit moet word.
- Stel alle inwoners in kennis in die onmiddellike omgewing van die gebied wat bespuit gaan word en reik die nodige waarskuwings uit. Moet nie oor water of aangrensende gebiede wat nie onder behandeling is spuit nie en voorkom dat die spuitnewel na hierdie gebiede oorwaai.
- Versekering van die Lugbespuitingsoperateur moet verkry word dat aan bogenoemde vereistes voldoen sal word en dat data vir toekomstige verwysing in 'n logboek saamgevat is.

TOEDIENINGSTABEL		
GEWAS en SIEKTE	DOSIS per hektaar of soos aangedui	AANBEVELINGS
<b>GARS</b> <b>Blaarvlek</b> <i>(Rhynchosporium secalis)</i>  <b>Blaarroes</b> <i>(Puccinia hordei)</i>  <b>Netvlek</b> <i>(Pyrenophora teres)</i>	150 mℓ <b>Prothocol 480 SC</b> /ha + 400 mℓ <b>*PicoFlo 250 SC</b> /ha + <b>*benatter</b>	Dit is <b>BAIE BELANGRIK</b> om die eerste toediening <b>STRENG VOORKOMEND</b> toe te dien, voordat enige simptome opgemerk word en <b>NIE LATER</b> as die <b>7-blaar stadium</b> nie. Dien 'n tweede bespuiting <b>3 – 4 weke later</b> onder toestande met hoë siektedruk toe, gewoonlik tydens <b>vlagblaarstadium</b> voordat die aar verskyn.  <u>Grondtoediening:</u> Dien toe in 200 – 400 ℓ water per hektaar. <u>Lugbespuiting:</u> Dien toe in 30 – 40 ℓ water per hektaar. Raadpleeg die <b>aanwysings vir Lugbespuiting hierbo</b> .
<b>Poeieragtige meeldou</b> <i>(Brumeria graminis)</i>		<b>NOTA:</b> Siektebeheer kan verkry word indien <b>Prothocol 480 SC</b> teen 150 mℓ per hektaar tesame met 'n benatter, toegedien word, sonder <b>*PicoFlo 250 SC</b> , indien die toediening deel van 'n siektebeheer spuitprogram is. Dit is nie raadsaam om <b>Prothocol 480 SC</b> + benatter sonder die toevoeging van <b>*PicoFlo 250 SC</b> , onder hoë siektedruk toestande as die eerste toediening in 'n siektebeheerprogram toe te dien nie.
<b>KORING</b> <b>Bruinroes</b> <i>(Puccinia triticina)</i>  <b>Poeieragtige meeldou</b> <i>(Blumeria graminis tritici)</i>  <b>Stamroes</b> <i>(Puccinia graminis)</i>	150 mℓ <b>Prothocol 480 SC</b> /ha + 400 mℓ <b>*PicoFlo 250 SC</b> /ha + <b>*benatter</b>	Dit is <b>BAIE BELANGRIK</b> om die eerste bespuiting <b>STRENG VOORKOMEND</b> toe te dien, voor enige simptome voorkom, en <b>NIE LATER</b> as die <b>7-blaar stadium</b> nie. Tydens hoë siektedruk moet 'n tweede bespuiting <b>3 – 4 weke later</b> toegedien word, gewoonlik teen vlagblaarstadium, voor aar verskyning.  <u>Grondtoediening:</u> Dien toe in 200 – 300 ℓ water per hektaar. <u>Lugbespuiting:</u> Dien toe in 30 – 40 ℓ water per hektaar. Raadpleeg die <b>aanwysings vir Lugbespuiting hierbo</b> .
<b>Vaalblaar en Bruinaarsiekte</b> <i>(Septoria spp.)</i>		<b>NOTA:</b> Siektebeheer kan verkry word indien <b>Prothocol 480 SC</b> teen 150 mℓ per hektaar tesame met 'n benatter, toegedien word, sonder <b>*PicoFlo 250 SC</b> , indien die toediening deel van 'n siektebeheer spuitprogram is. Dit is nie raadsaam om <b>Prothocol 480 SC</b> + benatter sonder die toevoeging van <b>*PicoFlo 250 SC</b> , onder hoë siektedruk toestande as die eerste toediening in 'n siektebeheerprogram toe te dien nie.



<p><b>MIELIES &amp; SUIKERMIELIES</b></p> <p><b>Grysblaarvlek</b> (<i>Cercospora zeae-maydis</i>)</p> <p><b>Noordelike blaarskroei</b> (<i>Exserohilum turcicum</i>)</p> <p><b>Roes</b> (<i>Puccinia sorghi</i>)</p>	<p>140 mℓ <b>Prothocol 480 SC</b>/ha + 400 mℓ *<b>PicoFlo 250 SC</b>/ha + *<b>benatter</b></p> <p><b>OF</b></p> <p>140 mℓ <b>Prothocol 480 SC</b>/ha + 400 mℓ *<b>OBSTRUCTO 250 SC</b>/ha + *<b>benatter</b></p> <hr/> <p><u>Ry-toediening:</u> 50 mℓ <b>Prothocol 480 SC</b>/100 ℓ water + 135 mℓ *<b>PicoFlo 250 SC</b> /100 ℓ water + *<b>benatter</b></p> <p><b>OF</b></p> <p>50 mℓ <b>Prothocol 480 SC</b>/100 ℓ water + 135 mℓ *<b>OBSTRUCTO 250 SC</b>/100 ℓ water + *<b>benatter</b></p>	<p>Dit is <b>BAIE BELANGRIK</b> om die eerste toediening van die <b>Prothocol 480 SC</b> tenkmengsel toe te dien, voordat enige siekte simptome opgemerk word, tydens die <b>5 – 6 blaarstadium</b>.</p> <p>’n Tweede toediening van die <b>Prothocol 480 SC</b> tenkmengsel word <b>3 weke later aanbeveel</b>.</p> <p>Onder toestande met voortgesette hoë siektedruk, word ’n derde toediening <b>3 weke</b> later met ’n alternatiewe geregistreerde swamdoder * aanbeveel.</p> <p>In sekere areas onder spesifieke toestande, waar lae siektedruk verwag word, kan ’n enkele <b>Prothocol 480 SC</b> tenkmengsel op die <b>5 – 6 blaarstadium</b> toegedien word. Indien verlengde siektebeheer egter benodig word, moet die bogenoemde opvolgtoedienings gemaak word.</p> <p><u>Grondtoediening:</u> Dien toe as ’n voldekbepuiting in 300 – 500 ℓ water per hektaar.</p> <p><u>Handgedraagte roterende skyf toediener:</u> Dien toe in 50 – 70 ℓ water per hektaar.</p> <p><u>Lugbespuiting:</u> Dien toe in 30 – 40 ℓ water per hektaar.</p> <p>Raadpleeg die <b>aanwysings vir Lugbespuiting</b> hierbo.</p> <hr/> <p><u>Ry-toediening:</u> <b>Vir lae digtheid aanplantings soos byvoorbeeld in die Vrystaat en westelike dele van RSA.</b></p> <p><b>Hierdie dosis is gebaseer op ’n algehele grondtoediening van 300 ℓ water per hektaar.</b> Wend aan met behulp van ’n tandem koppelstuk met twee soliede spuitpunte of twee holkeel spuitpunte, gemonteer op die spuitbalk bo elke ry. Gebruik genoegsame water (nie minder nie as 100 ℓ per hektaar) om totale bedekking van al die plante te verseker.</p>
<p><b>WAARSKUWING</b></p> <p><b>Mielietoediening:</b> Die risiko van gestremde kopontwikkeling of “Arrested Ear Syndrome” (AES) op mielies neem dramaties toe wanneer enige toedienings (gewasbeskermingsprodukte, kunsmis, blaarvoeding, byvoegmiddels, ens.) tussen die V10 – VT (10<sup>de</sup> blaar tot pluim verskyning) stadiums toegedien word. Toedienings tussen die V10 – VT groeistadiums van die gewas moet sover moontlik vermy word.</p>		
<p><b>SOJABONE</b></p> <p><b>Sojaboon roes</b> (<i>Phakopsora pachyrhizi</i>)</p>	<p>100 mℓ <b>Prothocol 480 SC</b>/ha + 300 mℓ *<b>PicoFlo 250 SC</b>/ha + *<b>benatter</b></p>	<p>Dit is <b>BAIE BELANGRIK</b> dat die eerste toediening van die <b>Prothocol 480 SC</b> tenkmengsel toegedien word, voordat enige simptome opgemerk word, met die <b>aanvang van blom</b>.</p> <p>’n Tweede toediening van die tenkmengsel word <b>3 – 4 weke later</b> aanbeveel. Onder verwagte hoë siektedruk toestande word ’n 3-weeklikse spuitinterval aanbeveel.</p> <p><u>Grondtoediening:</u> Dien toe as ’n voldekbepuiting in 300 – 500 ℓ water per hektaar.</p> <p><u>Lugbespuiting:</u> Dien toe in 30 – 40 ℓ water per hektaar.</p> <p>Raadpleeg die <b>aanwysings vir lugbespuiting</b> hierbo.</p>

\* **PicoFlo 250 SC** (L-PENDING, Wet 36 van 1947) – (Pikokisstroben 250 g/ℓ) en **OBSTRUCTO 250 SC** (L9323, Wet 36 van 1947) – (Asokisstroben 250 g/ℓ) is geregistreerde produkte van ICA International Chemicals.

\* Gebruik slegs geregistreerde produkte in spuitprogram.

Raadpleeg die bogenoemde etikette vir **GBRUIKSBEPERKINGS, WAARSKUWINGS** (insluitend **WEERSTANDSWAARSKUWINGS**), **VOORSORGMATREËLS** en **GBRUIKSAANWYSINGS**.

PT-001