Pakua 450 EC

Reg. No. L7933 Act No. 36 of 1947

FUNGICIDE

FRAC FUNGICIDE GROUP CODE 3

An emulsifiable concentrate fungicide for the control of diseases on crops as indicated.

Active Ingredient

Prochloraz (imidazole) 450 g/ℓ

UN No. 1993

agchem Member of Rolfes GROUP

Registered and Distributed by:
Ag-Chem Africa (Pty) Ltd (Reg. No. 1998/013411/07)
P.O.Box 589, Silverton, 0127, Gauteng, RSA.
Tel: (012) 803-0145 • Fax: (012) 803-8418
www.agchem.co.za

Content • Batch number • Manufacture date

PAKUA 450 EC: 01-2013/08

SHAKE WELL Shake well before use • Store at room temperature
Keep out of direct sunlight • Keep container closed when not in use

HARMFUL

LIFT HERE

WARNINGS:

- Withholding periods: Minimum number of days between last application and harvest or grazing: Wheat and barley 42 days
- Handle with care.
- Poisonous by contact, swallowing and inhalation.
- Toxic to fish and wild life.
- Store in a cool place away from food and feed.
- Keep out of reach of children, uninformed persons and animals.
- **FLAMMABLE** – Do not handle near open fires and sparks.
- **NOTE:** If **PAKUA 450 EC** is used in accordance with label recommendations, the local maximum residue limits (MRL's) will not be exceeded. However, MRL's for foreign countries may differ from local MRL's. It is of utmost importance that the exporter ascertains himself of the MRL's of these countries so that import tolerances are not exceeded. For further information contact local export marketing bodies, i.e. CAPESPAN.
- **RE-ENTRY INTERVAL**: Do not enter treated area within 1 day after treatment unless wearing protective clothing.
- **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 adjacent areas, rivers, dams or other areas not under treatment.

Although this remedy has been extensively tested under a large variety of conditions, the registration holder does not warrant that it will be efficacious under all conditions because the action and effect thereof may be affected by factors such as abnormal climatic and storage conditions; quality of dilution water, compatibility with other substances not indicated on the label and the occurrence of resistance of the disease against the remedy concerned, as well as by the method, time and accuracy of application. The registration holder furthermore does not accept responsibility for damage to crops, vegetation, the environment, or harm to man or animal or for lack of performance of the remedy concerned due to failure of the user to follow the label instructions or to the occurrence of conditions which could not have been foreseen in terms of the registration. Consult the supplier in the event of any uncertainty.

PRECAUTIONS:

- Avoid inhalation of fumes or spray mist.
- Wear protective clothing, eyewear (face-shield), gloves and rubber boots when handling both the concentrated and diluted product.
- In case of accidental contact with the concentrate or diluted product, wash skin and eyes immediately with copious quantities of cold water.
- Wash contaminated clothing daily.
- Do not eat, drink or smoke whilst applying or before washing hands and face.
- Prevent contamination of food, feed, drinking water and eating utensils.
- Clean dipping/spraying equipment thoroughly after use and dispose of wash water where it will not contaminate crops, grazing, rivers or dams.
- Invert empty container over dipping/spraying tank and allow to drain for at least 30 seconds after the flow has slowed down to a drip. Thereafter rinse the empty container three times with a volume of water equal to a minimum of 10 % of that of the container. Add the rinsings to the contents of the spray tank before destroying the container in the prescribed manner.
- Destroy empty container by perforation and flattening and do NOT use for any other purpose.

Symptoms of human poisoning:

Skin irritation may be aggravated in people with existing skin lesions. Breathing spray mist or vapour may aggravate acute or chronic asthma and inflammatory or fibrotic pulmonary disease. The following symptoms may appear: headache, dizziness and unconsciousness.

First aid treatment:

Inhalation:
Remove patient to fresh air. If not breathing give artificial respiration. Keep patient warm and at rest. Seek medical attention if necessary.
Ingestion:
Rinse mouth. Do not induce vomiting because of risk of aspiration. Have patient drink plenty of water. Seek medical attention immediately.
Skin Contact:
Remove any contaminated clothing and shoes. Wash skin immediately with mild soap and water after wiping off excess chemical. Seek medical attention if necessary.
Eye Contact:
Immediately flush eyes with water or saline solution for at least 15 minutes, lifting lower and upper eyelids occasionally. Get medical attention if necessary.

Note to physician:

There is no specific antidote. Treat symptomatically and give supportive therapy. If swallowed, gastric irrigation with added activated charcoal. Give oxygen if necessary. Medical supervision for at least 48 hours is recommended.

RESISTANCE WARNING:

For resistance management, **PAKUA 450 EC** is a group code 3 fungicide. Any fungus population may contain individuals naturally resistant to **PAKUA 450 EC** and other group code 3 fungicides. The resistant individuals can eventually dominate the fungus population if these fungicides are used repeatedly. These resistant fungi may not be controlled by **PAKUA 450 EC** or any other group code 3 fungicide.
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.
- For tank mixing or alternation with products in fungicide group code X or Y, refer to applicable individual product labels.
- Integrate other control methods (chemical, cultural, biological) into disease control programmes.

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

DIRECTIONS FOR USE: Use only as indicated.
COMPATIBILITY:
PAKUA 450 EC is compatible with 2,4 D (sodium salt) and thiabendazole. It is however advisable to do a miscibility test before mixing with chemicals in the spray tank.

MIXING INSTRUCTIONS:

- Half fill the spray or dip tank with clean water.
- Thoroughly shake the container before adding **PAKUA 450 EC** to the tank.
- Pre-mix the required volume of **PAKUA 450 EC** with a minimum of 10 litre water.
- Add the diluted product to the spray or dip tank while agitating the water.
- Fill the spray or dip tank with the required volume of clean water.
- Maintain agitation to ensure thorough mixing of the dilution before spraying or dipping commences. Ensure continuous agitation while spraying or dipping.
- Do not leave the dilution in the spray or dip tank overnight, or for any length of time. After normal stops, e.g. lunch break, start agitating the mixture a few minutes before spraying or dipping.

AERIAL APPLICATION:

Aerial application of **PAKUA 450 EC** may only be done by a registered Aerial Application Operator using a correctly calibrated, registered aircraft according to the instructions of SABS Code 0118 (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 ℓ 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: 25 to 35 droplets per cm^2 must be recovered at the target area.
- Droplet size: A droplet spectrum with a VMD of 280 to 300 microns is recommended. Limit the production of fine droplets less than 150 microns (high drift and evaporation potential) to a minimum.
- Flying height: Maintain the height of the spray boom at 3 to 4 metres above the target. Do not spray when aircraft dives, is in a climb or when banking.
- Use suitable atomising 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 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/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.
- 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.

CROP/DISEASE	DOSAGE RATE	REMARKS
Avocados Post-harvest control of *Dothiorella / Colletotrichum* complex fruit rot, stem-end rot and anthracnose	1 100 mℓ/100 ℓ water (5 000 ppm a.i.) as a spray application	Apply ± 1,6 ℓ spray emulsion per ton fruit as a low volume application. Apply on a conveyor belt system so that all exposed surface areas are treated, or where brushing takes place. Apply **PAKUA 450 EC** before the wax is applied.
Bananas Post-harvest control of Collar rot	30 mℓ/100 ℓ water (135 ppm a.i.) as a dip treatment	After cutting the banana bunch into hands, dip each hand into the **PAKUA 450 EC** emulsion for 5 seconds. Note: Top the dip up with the recommended emulsion dilution (30 mℓ/100 ℓ water) to ensure that the concentration of the dip remains constant. Regularly stir the emulsion.
Barley Eye spot *(Pseudocercosporella herpotrichoides)*	900 mℓ/ha (Ground application) 1,1 ℓ/ha (Aerial application)	Apply between the 4-leaf stage and the appearance of the first node in 400 ℓ spray water/ha. Generally only one application will be sufficient. Good spray coverage is essential; therefore use solid or hollow cone nozzles. Apply in 30 ℓ spray water/ha, ONLY if it is impossible to access lands with ground spraying equipment.
Leaf spot *(Rhyncosporium secalis)* Net blotch *(Pyrenophora teres)*	900 mℓ/ha (Ground application) 1 ℓ/ha (Aerial application)	Apply between onset of stem elongation and as soon as awns become visible, when first signs of disease are noticed. Apply in 300 ℓ water/ha. Repeat 3 – 4 weeks later under conditions of high disease pressure. Apply in 30 ℓ spray water/ha.
Powdery mildew *(Erysiphe graminis)*	900 mℓ/ha (Ground application) 1 ℓ/ha (Aerial application)	Apply in 300 ℓ spray water/ha as soon as disease is noticed or under conditions favouring mildew development. Apply in 30 ℓ spray water/ha.
Mangoes Post harvest control of anthracnose *(Colletotrichum gloeosporioides)* and the suppression of soft brown rot *(Hendersonia creberrima)*	180 mℓ/100 ℓ water (for the EXPORT market) 90 mℓ/100 ℓ water (for the LOCAL market)	Dip mangoes in the **PAKUA 450 EC** emulsion for 20 seconds at room temperature. Important: Pre-dip the mangoes in hot water for 5 minutes. Do not exceed a water temperature of 50 °C, particularly with Zill and Irwin cultivars and particularly early in the season. Dip treatment with hot water alone can lead to phytotoxicity during certain seasons. Dip mangoes in a hot **PAKUA 450 EC** emulsion for 2 minutes at a water temperature not exceeding 50 °C. Water temperatures below 50 °C should be observed particularly with Zill and Irwin cultivars and particularly early in the season. Hot water alone can lead to phytotoxicity during certain seasons.
Wheat Eye spot *(Pseudocercosporella herpotrichoides)*	900 mℓ/ha (Ground application) 1,1 ℓ/ha (Aerial application)	Apply in 400 ℓ spray water/ha between the 5-leaf stage and the appearance of the first node. Generally only one application will be sufficient. Good spray coverage is essential; therefore use solid or hollow cone nozzles. Apply between the 4 and 6 leaf stage of wheat in 30 ℓ spray water/ha ONLY if it is impossible to access lands with ground spraying equipment.
Speckled leaf blotch *(Septoria tritici)* and Glume blotch *(Septoria nodorum)*	900 mℓ/ha (Ground application) 1 ℓ/ha (Aerial application)	Apply in 300 ℓ spray water/ha. Speckled leaf blotch: Apply from early tillering stage. Glume blotch: Apply from early flagleaf stage to when the ears are just visible. Apply in 30 ℓ spray water/ha.

NOTE:
1. **PAKUA 450 EC** on Wheat and Barley to be used only in the Western Cape.
2. For aerial application of Wheat and Barley add a suitable drift retardant to improve deposition of the spray and to reduce drift.
3. Add **Aqua-Right 5*** to the spray water first to buffer the spray water at a pH 5 when applying to Wheat and Barley.