HARVEST
PROFOS 500

Distributed by: Harvest Chemicals
Registration Holder/Registrasiehouer Cura-Chem cc.
Reg.No. 2000/037398/23
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HARVEST CHEMICALS

An emulsifiable concentrate insecticide with contact stomach and translaminar action for control of various insects on citrus, table and wine grapes, potatoes and tomatoes as listed.

'n Emulgeerbare konsentraat insek- en mytdoder met kontak-, maag-en transaminere werking vir die beheer van verskillende insekte op sitrus, tafel- en wyndruiwe, aartappels en tamaties en tamaties soos aangedui.

Batch No	Reg. No. L 11004, Act No 36 of 1947.		Reg Nr L 11004, Wet Nr. 36 van 1947.	Lot Nr
	INSECTICIDE GROUP CODE	1B	INSEKDODER GROEPKODE	
Date of manufacture	Active Ingredient: Profenofos (Organophosphate) Refined Grade	500g/ℓ	AktieweBestandeel: Profenofos (Organofosfaat) Hoëgraad	Vervaardigings-datum
	Nett Volume	5 ℓ	Netto Volume	

WARNINGS

Withholding period – Allow the following number of days between last treatment and harvest for the crops listed below.

Citrus ..... 60 days
Potatoes ..... 14 days
Tomatoes 21days

- Handle with extreme care.
- Poisonous by swallowing.
- Can cause irritation to eyes, nose, throat and skin.
- Keep out of reach of children, uninformed persons and animals.
- Store in a cool place under lock and key, away from food, feed, fertiliser and seed.
- Flammable – keep away from heat, sparks and open flames.
- Do not treat drought stressed orchard trees.
- Use appropriate acidifier to adjust pH of water.
- Remove lemon fruit larger than golf ball size before application
- Toxic to fish, bees and wildlife.
- Flammable: Keep away from heat, sparks and open flames.
- Re-entry: Do not enter the treated field within 1 day of spraying 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 or water sources.

Although this insecticide 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 effected by factors such as abnormal soil, climatic and storage conditions; quality of dilution water, compatibility with other substances not indicated on the label and the occurrence of resistance of the weed against the herbicide concerned as well as by the method, time and accuracy of the 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 event of any uncertainty.

PRECAUTIONS:
- Do not inhale fumes or spray mist.
- Avoid contact with skin and eyes.
- Wear protective clothing when handling the concentrate (eye protection, rubber boots, gloves).
- Wash with soap and water after use.
- Wash contaminated clothing thoroughly before re-use.
- Do not eat, drink or smoke whilst mixing or applying or before washing hands and face and change of clothing.
- Prevent contamination of food, feedstuff, eating utensils and drinking water.
- Prevent drift of spray mist onto other crops, grazing, rivers, dams or areas not under treatment.
- Rinse 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 never use for any other purpose.

SYMPTOMS OF HUMAN POISONING
Typical of organophosphate pesticide poisoning – nausea, diarrhoea, excessive salivation, stomach cramps, excessive sweating, trembling, muscular twitches, confusion, blurred vision, breathing difficulties, rapid pulse, pinpoint pupils.
FIRST AID TREATMENT
Skin contact: Remove contaminated clothing and shoes. Wash thoroughly with soap and lots of water.
Eye contact: Flush eyes immediately with large amounts of clean water for approximately 15 minutes. Occasionally lift the upper and lower lids. If eye irritation persists, get medical attention.
Inhalation: Remove patient to a well ventilated area and loosen clothing around the neck. Do not give mouth to mouth Apply artificial respiration if necessary.
Ingestion: Do not induce vomiting. Give large quantities of water to drink.

NOTE TO PHYSICIAN
Treat as a cholinesterase inhibitor. Atropine sulphate is antidote.

RESISTANCE WARNING
For resistance management **Profos 500** is a group code 1B insecticide. Any insect population may contain individuals naturally resistant to **Profos 500** and other group code 1B insecticides. The resistant individuals can eventually dominate the insect population if these insecticides are used repeatedly. **Profos 500** or any other group code 1B insecticide may not control these resistant insects.
To delay insecticide resistance: Avoid exclusive repeated use of insecticides from the same insecticide group code. Alternate or tank mix with products from different insecticide group codes. Integrate other control methods (chemical, cultural, biological) into insect control programmes. For specific information on resistance management contact the registration holder of this product.

DIRECTIONS FOR USE **Use only as directed**

Mixing instructions
Fill the spray tank almost to capacity with clean water and adjust the pH of the water to 4.5 using RT Buff (Reg. No. L 5777, Act No. 36 of 1947) or a suitable buffer or acidifier. Add the recommended quantity of **Profos 500** into the spray tank with agitation. Continue agitating during filling-up and while spraying. After spraying thoroughly flush out the spraying equipment with clean water.

COMPATIBILITY
Profos 500 is compatible with most insecticides and fungicides of neutral reaction. It is however not compatible with copper based products, sulphur or captab. Compatibility of **Profos 500** may be influenced by the formulation of products involved as well as water quality. Since formulations may change and water quality may vary from farm to farm, a physical compatibility test should be carried out prior to applications.

APPLICATION INSTRUCTIONS.
Ground application – ensure the applicator is correctly calibrated.
On citrus use only high pressure, high volume applicators.

Aerial application:
Aerial application of **Profos 500** may only be done by a registered Aerial Application Operator using a correctly calibrated, registered aircraft according to the instructions of SABS 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 30ℓ 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 cm^2 must be recovered on the target area.
- Droplet size: A droplet spectrum with a VMD of 250 to 280 microns is recommended. Limit the production of fine droplets of 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.

APPLICATION RATES:

Crop/Pest	Profenofos 500 EC Dose	Remarks
CITRUS **African bollworm** (*Helicoverpa armigera*) **Citrus red mite** (*Panonychus citri)* **Black citrus aphid** *(Toxoptera citricidus)*	A winter oil application must never be followed by a Profenofos 500 EC application. 50mℓ / 100 ℓ water	• Apply at 20-90% petal drop. • Apply medium volume cover spray. • 6.0 -7.0ℓ spray mixture for every one metre tree diameter or one metre tree height above the skirt.
Thrips *(Scirtothrips aurantii)* **Psylla** *(Trioza erytreae)*	75mℓ / 100 ℓ water	When using a mist blower for the control of these pests, the concentration of the spray mixture must be increased according to the decrease in the spray volume. • Thrips must again be treated approximately three weeks later using a registered thripicide • Monitor the orchards and spray when the threshold level for thrips damage is surpassed.
Mealybugs *(Planococcus sp)* *(Pseudococcus sp)* *(Paracoccus sp)* **Citrus rust mite.** *(Phyllocoptruta oleivora)*	100mℓ /100ℓ water	• Apply at 20-90% petal drop • Apply full cover spray: 10-12ℓ spray mixture for every one metre tree diameter or one metre tree height above the skirt.
WINE GRAPES Grapevine mealybug *(Planococcus ficus)*	100mℓ / 100ℓ water	Dormant spray - apply twice with a 14 day interval prior to bud burst. Do not apply after bud burst, especially not after bloom to avoid any risk of wine tainting. Apply as a high volume complete cover spray directed at the vine trunk and branches. (Use 1.5-2.0 ℓ spray mixture per vine)
TABLE GRAPES Grapevine mealybug *(Planococcus ficus)*	100-125mℓ / 100ℓ water	Early spring spray **ONLY.** Apply twice with a 14 day interval prior to the beginning of flowering. The second spray must be applied just before flowering starts. NOTE: 1. Use the lower rates for maintenance or low pest pressure and the higher rate for heavy infestation. 2. Use handgun type high volume spray equipment and drench vines individually to ground level. 3. Use a minimum of 4.0ℓ spray mixture per vine. 4. For follow–up sprays after flowering use another suitable registered insecticide.
POTATOES Aphids *(Macrosiphum euphorbiae)* *(Myzus persicae)* Tuber moth *(Phthorimaea operculella)*	750 mℓ/ha 1.0ℓ/ha	Apply as a full cover spray when aphids are noticed. Repeat as necessary at 7 to 10 day intervals. Do not use in the Western Cape. Apply when 10% of growth points are infested. Aerial application: apply in 30ℓ/ha.
TOMATOES African bollworm Potato tuber moth *(Phthorimaea Operculella)* Plusia-looper *(Plusia acuta)* Thrips and Aphids *(Thrips tabaci)* Leaf miner *(Liriomyza trifolii)* Red spider mite *(Tetranychus spp)*	750- 1000mℓ /ha 500- 750mℓ /ha 1.0 -1.5 ℓ /ha	Not for use in greenhouses and tunnels. Apply a suitable volume depending on plant size. Apply at the first sign of infestation and repeat at 7 -10 day intervals as long as pest remains active. High volume spray: Ensure thorough wetting. Use lower rate for plants up to 600mm in up to 500ℓ water /ha and the higher rate for plants larger than 600mm in up to 1500mℓ water / ha. Low volume spray (mist blower): Ensure thorough coverage of plants. Use lower rate in up to 250 ℓ water / ha for plants up to 600mm high and the higher rate in up to 500ℓ water / ha for plants higher than 600mm.