

BEFORE USING THIS PRODUCT, READ THE LABEL CAREFULLY. KEEP OUT OF REACH OF CHILDREN AND ANIMALS.

Insecticide



# PROFENFOS

Reg. No. L 7032 Act No. 36 of 1947  
N-AR 2243

4: 7/7/2022 – Jan2023

A contact and stomach insecticide and acaricide with translaminar action as an emulsifiable concentrate for the control of pests as indicated.

## ACTIVE INGREDIENT

profenofos (organophosphate) 500 g/l

GROUP

1B

INSECTICIDE

### Hazard Statements:

Flammable liquid and vapour.

Harmful if swallowed.

Toxic in contact with skin.

Causes mild skin irritation.

Very toxic to aquatic life with long lasting effects.

### Precautionary Statements:

Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.

Wear impervious rubber gloves and boots, protective clothing and chemical safety goggles.

Avoid release into the environment.



## WARNING



**villa**

UN Number: 3017

Registration holder: UNIVERSAL CROP PROTECTION (PTY) LTD

Co. Reg. No.: 1983/008184/07

PO Box 801 Kempton Park, 1620

Tel. (011) 396 2233

Website: [www.villacrop.co.za](http://www.villacrop.co.za)

**24 HR EMERGENCY NUMBERS:**

Griffon Poison Centre: +27 82 446 8946

24 HR Transport / Spill Emergency no: (Hazcall24) +27 86 044 4411

(Client: Villa Crop Protection)

REFER TO DETAILS AS PRINTED ON CONTAINER / BAG

DIRECTIONS FOR USE ENCLOSED

Batch Number:

Date of Manufacture:

**PROFENFOS**

Reg. No. L 7032 Act No. 36 of 1947

N-AR 2243

IRAC INSECTICIDE GROUP CODE: 1B

**ACTIVE INGREDIENT:**

profenofos (organophosphate) ..... 500 g/l

Registration holder:

**UNIVERSAL CROP PROTECTION (PTY) LTD.**

Co. Reg. No. 1983/008184/07

P.O. Box 801

KEMPTON PARK, 1620 Tel. (011) 396 2233

**WARNINGS****Withholding periods:**

Minimum time between the last application and harvest or grazing:	
Citrus	60 days
Cotton	21 days
Onions	14 days

**IN THE CASE OF CROPS INTENDED FOR EXPORT, CONFIRM WITHHOLDING PERIODS WITH THE RELEVANT EXPORT ORGANISATION. IF THIS PRODUCT IS USED ACCORDING TO THE RECOMMENDATIONS ON THIS LABEL, LOCAL MRL VALUES WILL NOT BE EXCEEDED. HOWEVER, UNIVERSAL CROP PROTECTION (PTY) LTD. CANNOT ACCEPT RESPONSIBILITY FOR EXPORTED CROPS EXCEEDING THE IMPORT TOLERANCES OF OTHER COUNTRIES.**

**Hazard statements:**

Flammable liquid and vapour.
Harmful if swallowed.
Toxic in contact with skin.
Causes mild skin irritation.
Very toxic to aquatic life with long lasting effects.

- **Follow the recommendations of this label in order to avoid undesirable flavour to the crop and fruits.**
- Handle with care.
- Toxic to bees and wildlife.
- Toxic to bees. Do not apply when bees are actively foraging. **DO NOT** apply **PROFENFOS** when crops and/or any weeds are flowering. Do not apply **PROFENFOS** if any honeydew is visible on plants or where high numbers of Aphids are present.
- Store under lock and key in a cool, dry place, away from food, feeds and fertilizers.
- Keep out of reach of children, uninformed persons and animals.
- Re-entry: Do not enter treated area within one (1) day after treatment unless wearing protective clothing.
- **In case of poisoning call a doctor and make this label available to him/her.**

**Aerial application:**

Notify all inhabitants in the immediate vicinity of the area to be sprayed and issue the necessary warnings. Do not spray over or allow drift of spray to contaminate adjacent areas or water.

**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 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 pests against the remedy concerned, as well as 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****Precautionary statements:**

Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
Keep container tightly closed.
Ground and bond container and receiving equipment.
Use explosion-proof equipment.
Use non-sparking tools.
Take action to prevent static discharges.
Wash hands and face thoroughly after handling.
Do not eat, drink or smoke when using this product.
Avoid release into the environment.
Wear impervious rubber gloves and boots, protective clothing and chemical safety goggles.
IF SWALLOWED: Get medical help.
IF ON SKIN: Wash with plenty of water and non-abrasive soap. Get emergency medical help immediately.
IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water [shower].
Rinse mouth.
Take off immediately all contaminated clothing and wash before reuse.
Collect spillage.
Store in a well-ventilated place. Keep cool.
Store locked up.
Dispose of content/container to suitable landfill in accordance with local regulations.

- Do not inhale the spray mist or fumes.
- Avoid eye and skin contact.
- Do not eat, drink or smoke while applying, mixing or before washing hands and face and change of clothing.
- Avoid drift of spray onto other crops, grazing, rivers, dams and areas not under treatment.
- Clean applicator after use.
- **TRIPLE RINSE THE EMPTY CONTAINER AS FOLLOWS:** Invert the empty container over the spray or mixing tank and drain for at least 30 seconds after the flow has slowed down to dripping. Thereafter rinse the empty container three times in succession with one quarter of the container volume 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.
- Prevent contamination of food, feeds, drinking water and eating utensils.
- **Never** re-use the empty container for any other purpose.

<b>Relevant hazardous components</b>	
<b>Profenofos</b>	500 g/l
Solvent	< 30 g/l

**SYMPTOMS OF POISONING**

Symptoms of **Profenofos** (a cholinesterase inhibitor) intoxication can include headache, dizziness, blurred vision, nausea, cramps, diarrhoea, discomfort in the chest, nervousness, sweating, tearing, salivation, pulmonary oedema, convulsion, coma. If swallowed and aspirated into the lungs, chemical pneumonia can occur.

Depending on severity of poisoning these symptoms become worse with the onset of vomiting, abdominal pain, diarrhoea, sweating and salivation.

**FIRST AID TREATMENT**

- In case poisoning is suspected: Remove the affected person from the danger zone to a well-ventilated room or to fresh air and keep him/her warm and at rest. **Call a physician immediately.**
- Keep the airway clear to maintain respiration, particularly when the patient is unconscious or has vomited. The mouth and pharynx should be cleared, and dentures removed. Treat respiratory difficulty with artificial mouth-to-nose respiration. Qualified medical personnel must perform administration of oxygen and lavage. Emergency personnel should wear gloves and avoid contamination.
- Skin contact: Remove contaminated clothing, shoes and leather goods immediately. Gently wipe off excess chemical. Wash skin gently and thoroughly with water and non-abrasive soap. **Obtain medical**

**attention immediately.** Persons who become sensitized may require specialized medical management with anti-inflammatory agents.

- **Eye contact:** Flush eyes with clean water for at least 15 to 20 minutes. Lift eyelids to facilitate irrigation. If present, remove contact lenses after five (5) minutes and continue rinsing. Seek medical attention if irritation persists.
- **Inhalation:** Remove person from contaminated area to fresh air and assist breathing as needed. **Seek medical attention if you feel unwell after inhalation.**
- **Ingestion:** Have victim rinse mouth thoroughly with water. Do not induce vomiting, due to the aromatic solvent. **Seek medical advice immediately.** If the person is alert and respiration is not depressed, administer medicinal charcoal in a large quantity of water. **Never** give anything by mouth to an unconscious person. Treat symptomatically and supportively.

#### **NOTE TO PHYSICIAN**

Administer atropine as early as possible in an adequate dosage until signs of atropinisation (dry, flushed skin, tachycardia and pulse rate over 120 per minute) occur. In moderately severe poisoning administer atropine sulfate, 0.4 to 2.0 mg repeated every 15 minutes until atropinisation is achieved. Maintain atropinisation by repeated doses for 2 to 12 hours, depending on the severity of poisoning. Toxogonin is a more recent cholinesterase reactivator and can be administered instead of 2PAM. Diazepam should be included in the therapy of severe cases and whenever convulsions appear. Morphine, phenothiazines, reserpine, theophylline and similar drugs are contra-indicated. Avoid aminoglycosides and succinylcholine, which have a blocking effect on the neuromuscular junction.

#### **RESISTANCE WARNING**

**PROFENFOS** is a group code 1B insecticide. Any insect population may contain individuals naturally resistant to **PROFENFOS** and other group code 1B insecticides. The resistant individuals can eventually dominate the insect population if these insecticides are used repeatedly. These resistant insects may not be controlled by **PROFENFOS** or any other group code 1B insecticide.

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.

#### **Mode of action:**

**Profenofos** is an organophosphate, acting by both contact and ingestion and belongs to IRAC mode of action group 1B. It is an acetylcholinesterase inhibitor which is non-systemic with translaminar mobility.

#### **DIRECTIONS FOR USE: Use only as directed.**

##### **Compatibility:**

- **PROFENFOS** is compatible with most neutral insecticides and fungicides. However, it is recommended to perform a compatibility test prior to the application of tank mixtures. In the case of uncertainty, contact the supplier or the registration holder.
- **PROFENFOS** is **not** compatible with alkaline products such as **Bordeaux mixture**, other **Copper based compounds**, **Sulphur** or **Captab**.

##### **Mixing instructions:**

- Use clean water in the spray tank.
- Use **Commodobuff/Aquabuff** buffer at the registered rate to adjust the pH of the water.
- **PROFENFOS** is pH sensitive. Ensure that **Commodobuff/Aquabuff** buffer is mixed with the water prior to the addition of **PROFENFOS**.
- Half fill the spray tank with clean water. Add **Commodobuff/Aquabuff** buffer to correct the pH. Add the required quantity of **PROFENFOS** to the spray tank water while maintaining agitation, to ensure thorough mixing of the spray mixture. Fill the spray tank to the required level with rest of water. Maintain agitation during the entire spraying operation.
- Prepared spray mixture must not be left in the spray tank for any length of time, e.g., overnight. Only mix as much as is required immediately.
- The stability and efficacy of **PROFENFOS** is pH dependant.

## APPLICATION

All applications must be performed with suitable equipment that is in good working order and correctly calibrated, to ensure the correct dosage rate and desired coverage for that particular method of application.

### Ground application:

- Use correctly calibrated and suitable equipment, to ensure thorough wetting of all plant parts.
- Use hollow cone nozzles, to ensure medium to fine droplets.
- On **cotton** and **potatoes**, a mistblower and conventional high volume spraying equipment may be used. On **citrus**, high volume, high-pressure handguns or high-volume mechanical sprayers may be used.
- In certain instances, mistblowers may be used.

### Aerial application:

Aerial application of **PROFENFOS** 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 cm<sup>2</sup> must be recovered at the target area.
- Droplet size: A droplet spectrum with a VMD of 250 to 280 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 metres above the target. Do not spray when the 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 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:
  - a) reduced efficacy due to suspension and evaporation of small droplets in the air (inadequate coverage),
  - b) 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

<b>Crop / Pest</b>	<b>Dosage Rate</b>	<b>Remarks</b>
<b>Onions</b> Onion thrips	1.0 ℓ / ha	<p><b>High volume:</b> Apply in 300 to 500 litres water per hectare, depending on the plant size.</p> <p><b>Low volume &amp; Mistblower:</b> Apply in 200 to 300 litres water per hectare, depending on the plant size. Commence applications as soon as the pest is noticed and repeat the application with weekly intervals, for as long as necessary. The use of an appropriate wetting agent is recommended, to ensure thorough wetting of the plants.</p>

Crop / Pest	Dosage Rate	Remarks
<p><b>Cotton</b>  <b>PROFENFOS</b> applications are based on a weekly scouting programme, or on a regular 7-day spray programme.</p> <p style="text-align: center;"><b><u>Scouting Methods:</u></b></p> <p><b>Weekly Scouting Method:</b>  Scout 24 randomly selected plants in a land up to 15 hectares for insects.</p> <p><b>African Bollworm:</b>  Spray when count reads 12 eggs or 2 larvae per 24 plants.</p> <p><b>Semi-looper:</b>  <u>1 to 12 weeks after plant emergence:</u> Spray as soon as 50 % of leaf surface is damaged.  <u>12 Weeks onwards:</u> Spray as soon as 2 larvae per 24 plants are found.</p> <p><b>Aphids:</b>  <u>Dry land cultivation:</u> Spray as soon as Aphid colonies are found on 6 or more plants out of 24 plants.  <u>Irrigation:</u> Spray as soon as the first signs of honeydew are observed.</p> <p><b>Leaf hoppers (Jassids):</b>  Spray as soon as 2 or more insects are found per leaf out of 24 plants.</p> <p><b>Thrips:</b>  Spray only when high levels of infestations occur.</p> <p><b>Red spider mites:</b></p> <ol style="list-style-type: none"> <li>Select 48 plants on a random basis for areas up to 15 hectares.</li> <li>Examine one leaf in the middle region and two leaves in the top region of each of the 48 plants.</li> <li>Allocate one of four code letters (A, B, C &amp; D) to each plant according to the number of Mites found on the three leaves:  A = 0 Mites,  B = 1 to 10 Mites,  C = 11 to 30 Mites &amp;  D = more than 30 Mites.</li> <li>Allocate a score to each plant based on the above-mentioned code letters (A = 0, B = 1, C = 2 &amp; D = 3).</li> <li>Calculate the total for all 48 plants and determine the average per plant. This value is the population index per plant.</li> <li>It is important to keep the population (mean score per plant as calculated above) below the economic threshold, which is a value of 2, to prevent economic damage to the crop.</li> </ol>		
African bollworm, Semi-looper, Aphids, Leaf hoppers, Thrips & Red spider mites	<p><b><u>Weekly Spray programme:</u></b>  Apply <b>PROFENFOS</b> in a weekly spraying programme for as long as necessary. Ensure thorough wetting of the plants.</p> <p><b><u>Ground Application:</u></b>  <u>For plants smaller than 600 mm in height:</u>  1.1 litres per 100 litres water per hectare. Apply 100 litres spray mixture per hectare.  <u>For plants smaller than 600 mm in height, but older than 12 weeks:</u>  1.5 litres per 100 litres water per hectare. Apply 100 litres spray mixture per hectare.  <u>For plants higher than 600 mm in height:</u>  0.75 litre per 100 litres water. Apply 200 litres spray mixture per hectare (1.5 litres <b>PROFENFOS</b> per hectare).</p> <p><b><u>Aerial Application:</u></b>  All sizes: 1.65 litres per hectare. Apply in 30 litres water per hectare.</p>	
African bollworm, Semi-looper, Aphids, Leaf hoppers & Thrips	<p><b><u>Spraying on a scouting basis:</u></b>  Follow the scouting methods as recommended for the different pests. For the appropriate scouting method refer to "<b>Scouting Methods</b>" above.</p> <p>Refer to recommendations and dosage rates as for "<b>Weekly Spray Programme</b>" above.</p>	

Crop / Pest	Dosage Rate	Remarks
<p><b>Cotton</b> (continue) Red spider mites</p>		<p><b><u>Spraying on a scouting basis:</u></b> When a Spider mite infestation is noticed or the population index is below 0.5, use the lower recommended rates. As soon as the infestation exceeds the 0.5 level or when the population increased dramatically after two consecutive scoutings, use the higher recommended rates. Repeat applications within 7 days, when the mean score per plant increases on subsequent scoutings.</p> <p><b><u>NOTE</u></b> <b>Small white scorch marks on the cotton leaves will be the result, when low volume applications of less than 80 litres per hectare spray mixture (aerial application) is used. However, the yield will not be affected.</b></p> <p><b><u>Ground Application:</u></b> <b><u>For plants smaller than 600 mm in height:</u></b> 0.75 to 1.0 litre per 100 litres water per hectare. Apply 100 litres spray mixture per hectare. <b><u>For plants smaller than 600 mm in height, but older than 12 weeks:</u></b> 1.0 to 1.5 litres per 100 litres water per hectare. Apply 100 litres spray mixture per hectare. <b><u>For plants higher than 600 mm in height:</u></b> 0.5 to 0.75 litre per 100 litres water. Apply 200 litres spray mixture per hectare (1.1 to 1.5 litres <b>PROFENFOS</b> per hectare).</p> <p><b><u>Aerial Application:</u></b> <b>All sizes:</b> 1.1 to 1.65 litres per hectare. Apply in 30 litres water per hectare.</p>
<p><b>Citrus</b> Navels, Valencias, Mid-seasons &amp; Lemons <b>only</b></p>		<p><b><u>IMPORTANT</u></b></p> <ul style="list-style-type: none"> <li>• Do not exceed 2 litres <b>Profenfos 500 EC</b> per hectare per growing season, irrespective of the water volume or target.</li> <li>• Do not use <b>PROFENFOS</b> on grapefruit and easy peel citrus cultivars.</li> <li>• When <b>PROFENFOS</b> is intended to be applied after a winter oil application, ensure all conditions favour this decision.</li> <li>• Do not apply <b>PROFENFOS</b> after a winter oil application (Mid-season cultivars).</li> <li>• Do not apply to trees under drought stress and/or affected with root diseases, as leaf drop could occur.</li> <li>• Do not use <b>PROFENFOS</b> in tank mixtures with any other product.</li> <li>• Do not apply <b>PROFENFOS</b> sprays within short periods of each other (3 weeks).</li> <li>• Do not apply <b>PROFENFOS</b> at night.</li> <li>• <b>Lemons:</b> Remove all the fruit larger than golf ball size from the trees prior to application.</li> <li>• <b>Mid-season cultivars:</b> Do not apply at all on fruitlets larger than pea size. The leaves will be speckled by this treatment. However, this will not affect the yield.</li> </ul>
<p>African bollworm &amp; Aphids</p>	<p>50 ml / 100 l water</p>	<p><b><u>Medium cover application:</u></b> Apply at 20 to 90 % petal drop. Apply 6 to 7 litres spray mixture for every one metre tree diameter or one metre tree height above the skirt.</p>
<p>Thrips &amp; Psylla</p>	<p>75 ml / 100 l water</p>	<p><b><u>Apply as a full cover application.</u></b> <b><u>Mistblower:</u></b> Increase the concentration of the spray mixture according to the decrease in the spray volume. <b><u>Thrips:</u></b> To control Thrips successfully, apply a registered Thripicide approximately three (3) weeks after the <b>PROFENFOS</b> application. Monitor the orchards and when the threshold for Thrip damage is surpassed, a second <b>PROFENFOS</b> application can be sprayed.</p>

<b>Crop / Pest</b>	<b>Dosage Rate</b>	<b>Remarks</b>
<b>Citrus</b> (continue) Mealybug ( <i>Planococcus</i> spp.) & Citrus rust mite	100 ml / 100 l water	<p><b>Full cover spray:</b> Apply at 20 to 90 % petal drop. This treatment will, in addition to the pests mentioned above, also suppress Red scale and Red spider mite. 50 % Control of Rust mite can be expected.</p> <p><b>Red scale:</b> As Red scale poses a danger to South African citrus orchards, the orchards should be monitored carefully. Depending on the level of infestation, a registered Red scale treatment must be applied after harvest. Alternatively apply a registered product, for example <b>Methidathion</b>, during summer to control Red scale.</p>

The following product(s) mentioned in this label may be replaced with an equivalent product:

- **COMMODOBUFF** (L 5390 / N-AR 1107) = **AQUBUFF** (L 5451 / W 130060).

**COMMODOBUFF** and **AQUABUFF** are registered products of **VILLA CROP PROTECTION (PTY) LTD.**