

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

Insecticide



THURICIDE WP

Reg. No. L 1204 Act No. 36 of 1947
N-AR 1888 / W 1301635

S: 24/1/2023 – Oct2023

A wettable powder biological insecticide for the control of specific caterpillar pests as indicated.

GROUP 11A INSECTICIDE

ACTIVE INGREDIENT

Bacillus thuringiensis var. kurstaki 16000 IU/mg



DANGER

Hazards Statements:

May cause an allergic skin reaction.
Causes serious eye irritation.
May cause allergy or asthma symptoms or difficulty breathing difficulties if inhaled.
May cause respiratory irritation.

Precautionary Statements:

Wash hands and face thoroughly after handling. Do not touch eyes.
Wear impervious rubber gloves and chemical safety goggles.

kg

villa

UN Number: Not Regulated

Registration holder: VILLA CROP PROTECTION (PTY) LTD.
Co. Reg. No. 1992/002474/07
PO Box 10413, Aston Manor, 1630
Tel. (011) 396 2233
Website: 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:

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PO Box 10413, KEMPTON PARK, 1620

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WARNINGS**Hazard Statements**

May cause an allergic skin reaction.
Causes serious eye irritation.
May cause allergy or asthma symptoms or breathing difficulties if inhaled.
May cause respiratory irritation.

- Handle product with care.
- Store in a cool, dry, well-ventilated place away from food, feeds, drinking water and eating utensils.
- Do not expose **THURICIDE WP** to high temperatures or direct sunlight, as this may adversely affect the product.
- Keep out of reach of children, uniformed persons and animals.
- **THURICIDE WP** is non-toxic to birds, fish, mammals, honeybees and beneficial insects.

Aerial Application:

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

Although this remedy has been extensively tested under a large variety of conditions, the registration holder does not guarantee that it will be effective under all conditions. The activity 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 pest against the remedy, 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 by 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.

Precautionary Statements

Avoid breathing dust, fume, gas, mist, vapours and spray.
Wash hands and face thoroughly after handling. Do not touch eyes.
Use only outdoors in a well-ventilated area.
Contaminated work clothing should not be allowed out of the workplace.
Wear impervious rubber gloves and chemical safety goggles.
In case of inadequate ventilation wear respiratory protection.
IF ON SKIN: Wash with plenty of water and soap.
IF INHALED: Remove person to fresh air and keep comfortable for breathing.
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
Get medical help if you feel unwell.
If skin irritation or rash occurs: Get medical help.
If eye irritation persists: Get medical help.
If experiencing respiratory symptoms: Get emergency medical help immediately.
Collect spillage.

Store in a well-ventilated place. Keep container tightly closed.
Store locked up.
Dispose of contents/container in accordance with local regulations.

- Do not eat, drink or smoke while applying or mixing, or before washing hands and face.
- Clean working equipment and wash clothes after use.
- In the case of accidental skin contact, remove contaminated clothing and wash gently with water and soap.
- In case of contact with eyes, flush eyes with clean water for at least 15 minutes.
- After accidental ingestion, immediately drink a lot of water to induce vomiting. Obtain medical advice.
- **TRIPLE RINSE THE EMPTY BAG AS FOLLOWS:** Turn the bag inside out. Hold the bag over the spray or mixing tank and rinse the bag with running water for thirty seconds. Shake the rinsate off into the tank. Repeat the rinsing twice. Cut the bag into pieces and dispose of via an approved collector or recycler (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 hazardous components	
<i>Bacillus thuringiensis var. kurstaki</i>	75 %

FIRST AID TREATMENT

- **In case poisoning is suspected:** Remove the patient from the source of poisoning to a well-ventilated area and keep him/her calm and at rest. **Call a physician immediately.** Keep the airway clear to maintain respiration, particularly when the patient is unconscious or has vomited. Do not apply direct mouth-to-mouth respiration.
- **Skin contact:** Remove contaminated clothing and shoes. Gently wipe off excess chemical. Wash skin gently and thoroughly with water and non-abrasive soap. Obtain medical attention if irritation persists.
- **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 5 minutes and continue rinsing. Obtain medical attention if irritation persists.
- **Inhalation:** Remove person from contaminated area to fresh air and assist breathing as needed. Seek medical attention if irritation occurs.
- **Ingestion:** Seek medical attention or call a poison control centre for treatment advice. Do not induce vomiting unless instructed to do so by a poison control centre or doctor. Do not give anything by mouth to an unconscious person. If the person is alert, rinse mouth thoroughly with water.

RESISTANCE WARNING

THURICIDE WP is a group code 11A insecticide. Any insecticide population may contain individuals naturally resistant to **THURICIDE WP** and other group code 11A insecticides. The resistant individuals can eventually dominate the insecticide population if these insecticides are used repeatedly. These resistant insects may not be controlled by **THURICIDE WP** or any other group code 11A 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.

PRODUCT CHARACTERISTICS

- **THURICIDE WP** is a specific insect pathogen with excellent stomach action. It has no contact, vapour or translaminar activity. The delta-endotoxins are activated in the alkaline midgut of the target caterpillars and destroy the gut wall. Gut paralysis (starvation) and septicaemia follow.
- It is a biological insecticide specifically for use against the Lepidopterous larvae listed on this label. **THURICIDE WP** must be ingested by larvae to be effective. Since the product is most effective against small larvae (L1 + L2), a scouting programme to determine early infestations is recommended.
- After consuming a lethal dose of **THURICIDE WP** larvae stop feeding, usually within an hour, but may remain on the foliage until they die within several days. Affected larvae move slowly and tend to become shrivelled and discoloured before dying.

INTEGRATED PEST MANAGEMENT

- When **THURICIDE WP** is used in a spray programme, beneficial insects are allowed to build up useful populations.
- When replacing as chemical product shortly before harvest, this will result in a much-alleviated residue situation.
- When used in a spray programme alternating with chemical insecticides, resistance development can be delayed.

DIRECTIONS FOR USE: Use only as directed.

Mixing Instructions:

- Half fill the spray tank with water and add the correct amount of **THURICIDE WP** while maintaining agitation.
- Fill the spray tank to the final volume required.
- Maintain agitation while application is in progress.
- Do not allow diluted spray mixture to stand for more than 12 hours. Use the mixture on the same day it was prepared.

APPLICATION TECHNIQUES

Equipment and Spray Volume:

Ensure that the equipment is properly calibrated to give even distribution at the correct volume.

- Tractor sprayers with booms and nozzles: Use hollow cone or flat fan nozzles with a pressure setting of 3 to 4 bar and volumes of 300 to 1500 litres water per hectare.
- Tractorized mistblowers: Use hollow cone nozzles and a pressure setting of 5 to 10 bar. For trellised crops use 150 to 500 litres water per hectare. The concentration of the spray mixture must be increased in accordance with the decrease in spray volume.
- Knapsack sprayers: Use hollow cone nozzles and a pressure setting of 1 to 3 bar. Always spray downwind moving the spray lance in large circles at a spray volume of 300 to 800 litres water per hectare.
- Motorized knapsack sprayers: Always run engine at full speed for best droplet formation. Keep a steady walking speed. Use at least 100 litres water per hectare. The concentration of the spray mixture must be increased in accordance with the decrease in spray volume.
- Handgun spraying: Apply 300 to 1000 litres water per hectare according to foliage density.
- For trellised tomatoes, use vertical booms to improve treatment on both sides of the row. Wet the entire plant thoroughly. Avoid excessive run-off.

Compatibility:

THURICIDE WP is not compatible with alkaline materials (spray mixture pH > 10.5). Several miticides, insecticides and adjuvants are compatible with **THURICIDE WP**, but a physical compatibility test prior to application is recommended. Tank mixtures with non-specified products are being used at own risk. Tank mixtures containing several products should be used promptly after mixing.

APPLICATION RATES

<i>Crop / Pest</i>	<i>Dosage rate</i>	<i>Remarks</i>
<u>Pine Plantations and Proteas</u> Pine Emperor moth larvae (<i>Imbracia cytheria</i>)	45 g / 10 ℓ water	<u>Knapsack application:</u> Apply as a cover spray to young trees and shrubs.
	500 g / ha	<u>Aerial application:</u> Apply in not less than 30 litres of water per hectare.
<u>Brusselsprouts and Cabbage</u> Diamond back moth larvae (<i>Plutella xylostella</i>)	250 g / ha	Apply in sufficient water to thoroughly wet the plants. Repeat at 7-to-10-day intervals. Refer " REMARKS " below.

Crop / Pest	Dosage rate	Remarks
Tomatoes African bollworm larvae (<i>Helicoverpa armigera</i>)	1000 g / ha	Apply as soon as the pest is noticed. Thorough coverage of the plants is essential. Repeat every seven (7) days. Will also suppress Semi-(Plusia) looper.
Lucerne Caterpillar (<i>Colias electo</i>)	250 g / ha	Apply in sufficient water, to ensure thorough coverage of the crop. Repeat after 7 to 10 days if necessary.
Citrus Tortrix leafroller & Orange Dog larvae (<i>Papilio demodocus</i>)	25 g / 100 ℓ water	Apply as a cover spray as soon as the pest is noticed. A second application 7 to 10 days later may be necessary.

REMARKS

- Treat when small, newly hatched larvae are present, and the first feeding damage is observed.
- Since **THURICIDE WP** must be ingested to obtain control, treat when larvae are actively feeding and before extensive damage occurs.
- Thorough spray coverage is essential for good control of the pest. Nozzles on ground application equipment should be arranged in such a way, as to provide the best coverage. Increased water volume and spray pressure will improve coverage.
- To maintain control, applications may be repeated, if necessary, at 3-to-7-day intervals, depending on the rate of growth of the crop, weather conditions and severity of insect infestation.
- If insect infestation becomes high, increased water volume and shortened spray intervals may be necessary to achieve acceptable control.
- To improve coverage and residual effectiveness of **THURICIDE WP**, the addition of a spreader/sticker to the spray tank, is recommended.
- **Do not exceed four (4) successive applications.**