

VILLA THURICIDE WP

MATERIAL SAFETY DATA SHEET

1. IDENTIFICATION OF PRODUCT AND COMPANY

Product Name: THURICIDE WP
 Microbial Insecticide

UN Number: Not regulated.

Supplier: Villa Crop Protection (Pty) Ltd.
 PO Box 10413
 Aston Manor, 1630, South Africa

Telephone: (011) 3962233
Fax: (011) 3964666
Website: www.villacrop.co.za

Emergency telephone numbers:
24 Hr Transport / Spill emergency no:
 Bateleur: +27 86 199 9071
 (Client: Villa Crop Protection)

Poisoning:
 Griffon Poison Information Centre +27 82 446 8946
 Western Cape Poisons +27 861 555 777
 Tygerberg Hospital +27 21 931 6129

2. COMPOSITION/INFORMATION ON INGREDIENTS

Scientific Name: *Bacillus thuringiensis* Berliner, variety *kurstaki*

Chemical Name: Not Applicable.

Other Names: Bt

CAS No.: 68038-71-1

Chemical Family: Not applicable – Biological (bacterium)

Chemical Formula: Not applicable - Biological

EPA Reg. No.: 55947-50

Use: A biological insecticide with stomach action for the control of specific Lepidoptera larvae in agriculture.

Formulation: *Bacillus thuringiensis* var. *kurstaki*:
 16 000 IU/mg
 Wettable Powder

Component: *Bacillus thuringiensis* var. *kurstaki*:
Risk phrases: R 36, R 43

3. HAZARD IDENTIFICATION

Toxicity class:
 EPA III, WHO class III
 THURICIDE WP is unlikely to present any acute hazard in normal use.

Precautionary Statement:
CAUTION: Active ingredient is practically non-toxic to all but specific insect pests and has shown no mammalian toxicity. Avoid inhalation or contact with eyes or open wounds.

Likely routes of exposure:
 Skin and eye contact, oral and inhalation.

Skin contact: Non-irritating (guinea pig).
Eye contact: Slightly irritant.
Sensitizer: Potential in some individuals. An allergic reaction may occur in sensitive individuals.

4. FIRST AID MEASURES AND PRECAUTIONS:

There have been no reports of adverse effects to humans resulting from overexposure to *Bacillus thuringiensis*. The microbial active ingredient *Bacillus thuringiensis* has shown no mammalian systemic toxicity. May cause skin sensitization in certain individuals.

First Aid: If poisoning is suspected, stop work immediately and consult a physician, the nearest hospital or the nearest Poison Centre. Remove the affected person from the danger zone to a well-ventilated area or to fresh air and protect from under cooling.

Eye contact: Rinse eyes with clear water for several minutes and immediately call a physician. Hold eye lids apart to rinse the entire surface of the eyes and lids. Do not apply any medicating agents except on the advice of a physician.

Skin contact: Remove contaminated clothing and thoroughly wash affected area with soap and water. Do not apply any medicating agents except on the advice of a physician.

Ingestion: If person is fully conscious, immediately give large quantities of water to drink and get medical help. Never give anything by mouth to an unconscious person and do not induce vomiting.

Inhalation: Remove patient to a well-ventilated area or to a clear fresh air area and consult a physician. Apply artificial respiration if necessary.

Advice to physician: No specific antidote is known. Treat symptomatically.

5. FIRE FIGHTING MEASURES

NFPA Rating: Health: 0
 Fire: 0
 Reactivity: 0

Flammability Class: Combustible solid

Flash point: Not applicable

Explosive Limits: Not applicable

Extinguishing Media: Water, foam, dry chemical, CO₂

Special Protective Equipment: Fire fighters should wear protective clothing and self-contained breathing apparatus.

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Fire Fighting Procedures: Normal procedures. Remove spectators from surrounding area. Remove container from fire area if possible. Fight fire from maximum distance. Contain fire control agents for later disposal. Water can be

VILLA THURICIDE WP

MATERIAL SAFETY DATA SHEET

used to cool unaffected containers but must be contained for later disposal. Avoid inhalation of fumes. Keep upwind. Do not allow fire fighting water to escape into waterways or sewers.

Combustion Products: Not determined
Unusual fire: None
Explosion Hazard: None

6. ACCIDENTAL RELEASE MEASURES (SPILLAGE)

Personal precautions: Do not inhale fumes. Ventilate area of spill or leak, especially confined areas. Avoid contact with skin, eyes or clothes. For personal protection see section 8.

Environmental precautions: Do not allow entering drains or watercourses. When the product contaminates public waters, inform appropriate authorities immediately according with local regulations.

Occupational spill: For spilled stored product, carefully sweep up the material, place into container for subsequent disposal. Spilt product must not be re-use. For spilled spray solution, control the source and confine the spill. Absorb small spills with sand, soil or binding agent, place into containers for subsequent disposal. Avoid runoff to sewer. Do not allow the product to come in contact with water systems. Keep spectators away and upwind. Remove heavily contaminated soil layer and bury in a safe place away from water supplies. Use a landfill site approved for pesticides.

Absorbents: Clay granules, dirt or equivalent.
Incompatibles: None.

7. HANDLING AND STORAGE REQUIREMENTS

Handling: Avoid contact with skin, eyes or clothing. Handle as for any other pesticide. Wash hands before eating, drinking, chewing gum, smoking, or using the toilet. Remove clothing immediately if the product gets inside. Then wash skin thoroughly using a non-abrasive soap and put on clean clothing. Do not apply directly to areas where surface water is present, or to intertidal areas below the mean high water mark. Water used to clean equipment must be disposed of correctly to avoid contamination.

Storage: Store in original container in a cool, dry and well-ventilated area separated from food products or flammables. Protect from freezing and store below 32 °C to protect activity. Keep out of reach of unauthorized persons, children and animals. Local regulations should be complied with.

8. EXPOSURE CONTROL/PERSONAL PROTECTION

Exposure Limits: Not established.

It is essential to provide adequate ventilation. The measures appropriate for a particular work site depend on how this material is used and on the extent of exposure. Ensure that control systems are properly designed and maintained. Comply with occupational safety, environmental, fire, and other applicable regulations.

PERSONAL PROTECTIVE EQUIPMENT:

If engineering controls and work practices are not effective in controlling exposure to this material, then wear suitable personal protective equipment including approved respiratory protection.

Respirator: An approved respirator suitable for protection from dusts and mists of pesticides is adequate. Limitations of respirator use specified by the approved agency and the manufacturer must be observed.

Clothing: Employee must wear appropriate protective (impervious) clothing and equipment to prevent repeated or prolonged skin contact with this substance.

Gloves: Employee must wear protective rubber gloves to prevent contact with this substance.

Eye protection: The use of safety goggles is recommended.

Emergency eye wash: Where there is any possibility that an employee's eyes may be exposed to this substance; the employer should provide an eye wash fountain or appropriate alternative within the immediate work area for emergency use.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance and Odour: Powder with slight fishy odour.

Boiling Point: Not applicable.

Melting Point: Not applicable.

Vapour Pressure (mm Hg): Not applicable.

Specific gravity: Not applicable.

Bulk Density: 0.32 to 0.48 kg/l

Solubility: Suspendable in water.

Evaporation Rate: Not applicable.

pH: 5.5 to 6.5

Compatibility: Compatible with a number of acaricides, insecticides, fungicides, spreaders, stickers and wetters. Not compatible with alkaline products.

10. STABILITY AND REACTIVITY

Stability: Stable. Shelf life of formulation is up to 2 years. Store in dry area and protect from temperatures below 0°C and above 32°C to protect activity.

Reactivity: Not reactive.

Incompatibility with Other Materials: None known.

Decomposition Products: None known.

Hazardous Polymerization: Will not occur.

VILLA THURICIDE WP

MATERIAL SAFETY DATA SHEET

11. TOXICOLOGICAL INFORMATION

Acute Oral LD₅₀: > 7.2 x 10¹⁰ CFU/kg body weight in rats (highest dose level tested).

Acute dermal LD₅₀: 1.8 x 10⁷ CFU/guinea pig (highest dose level tested).

Acute inhalation LC₅₀: > 3.3 x 10⁹ CFU/l in rats.

Skin contact: Non-irritating (guinea pig).

Eye contact: Slightly irritant.

Sensitizer: Potential in some individuals.

Chronic Toxicity (specific to active ingredient(s)):

No evidence of infectivity or persistence of pathogenicity was found in 13 week rat study.

No evidence of infectivity or pathogenicity at 500 mg/kg/day was found in 20 week sheep study.

Developmental / Productive toxicity (specific to active ingredient(s)): Not tested.

Mutagenicity (specific to active ingredient(s)):

Negative in chromosomal aberration, UDS (unscheduled DNA synthesis) and reverse mutation.

U.S.EPA has evaluated this product's toxicity as part of the U.S. registration process. EPA requires extensive toxicity tests be performed before any crop protection chemical is approved for use. Based on their review of test results, they have determined that no significant risk to user, the public, or the environment exists when this product is used as indicated on the product label.

12. ECOLOGICAL INFORMATION

Bacillus thuringiensis subsp. *kurstaki* spores have a very short persistence in the environment (DT₅₀ = 10 hours), mainly due to their U.V.-light sensitivity.

Hydrolysis: Not applicable.

Photolysis: Not applicable.

Soil half-life: Not applicable.

Water solubility: Dispersible in water.

ECOTOXICITY (active ingredients only):

Fish: LC₅₀ (trout): > 41 mg/l (30 day)

Daphnia: EC₅₀: >41.6 mg/l (48 hour)

13. DISPOSAL CONSIDERATION

Wastes resulting from use of this product may be disposed of on site or at an approved waste disposal facility in accordance with any local legislation applying to waste disposal for pesticides.

Wastes are not classified as hazardous under RCRA.

Do not reuse product containers.

14. TRANSPORT INFORMATION

UN NUMBER: Not regulated.

DOT49CFR Description: Not regulated as hazardous.

Freight classification: Insecticides NOI other than poison, NMFC item: 102120, Class 60

15. REGULATORY INFORMATION

CERCLA (Superfund): Not regulated.

RCRA: Not regulated as hazardous.

SARA 311/312 HAZARD CATEGORIES:

Immediate health: Yes (irritation)

Delayed health: No

Fire: No

Sudden Pressure: No

Reactivity: No

Risk phrases:

R 36 Irritating to eyes.

R 43 May cause skin sensitization by skin contact.

Safety phrases:

S 1/2 **Keep locked up and out of reach of children.**

S 24/25 Avoid contact with skin and eyes.

S 36/37/39 Wear suitable protective clothing, gloves and eye/face protection.

16. PACKING AND LABELLING

Packed and labelled according to South African regulations and guidelines.

17. OTHER INFORMATION

All information and instructions provided in this Material Safety Data Sheet (MSDS) are based on the current state of scientific and technical knowledge at the date indicated on the present MSDS and are presented in good faith and believed to be correct. This information applies to the PRODUCT AS SUCH. In case of new formulations or mixes, it is necessary to ascertain that a new danger will not appear.

It is the responsibility of persons in receipt of this MSDS to ensure that the information contained herein is properly read and understood by all people who may use, handle, dispose or in any way come in contact with the product. If the recipient subsequently produces formulations(s) containing this product, it is the recipient's sole responsibility to ensure the transfer of all relevant information from this MSDS to their own MSDS.

18. REFERENCES

- Applicable physical and chemical, toxicity and ecotoxicity research studies as supplied by Sandoz/Novartis and AgriSence/Thermo Trilogly.

VILLA THURICIDE WP

MATERIAL SAFETY DATA SHEET

- *The Pesticide Manual*; Eleventh Edition; Editor Clive Tomlin; Crop Protection Publications, 1997.

END OF DOCUMENT

Compiled: March 2000
Reviewed: January 2019
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For detailed information on revisions, contact the Registration holder.