

Infosafe No™ 3NUB8	Issue Date : May 2017	APPROVED by NUFARMNZ
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 Product Name **VectoBac® WG**

1. Identification

GHS Product Identifier	VectoBac® WG
Product Code	03849
Product Type	Biological insecticide
Company Name	Nufarm NZ
Address	6 Manu Street, Otahuhu Auckland 2024 New Zealand
Telephone/Fax Number	Tel: 0-9-270 4150 Fax: 0-9-270 4159
Emergency phone number	0800 651 911
Recommended use of the chemical and restrictions on use	A biological insecticide containing <i>Bacillus thuringiensis</i> subspecies <i>israelensis</i> for the control of mosquito larvae.
Other Information	This SDS describes, to the best of our knowledge, the properties of the concentrated product. The physical properties and some of the assessments do not apply to the properties of the product once it has been diluted for application. Acute health effects of the diluted product are likely to be much less severe.

2. Hazard Identification

Other Information	9.1D aquatic toxicant, ECOTOXIC Has biocidal action against mosquito larvae. Do not apply this substance in a way that adversely affects native mosquitoes of a species found only in the region of application.
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3. Composition/information on ingredients

Chemical Characterization	Solid		
Ingredients	<u>Name</u>	<u>CAS</u>	<u>Proportion</u>
	Other ingredients not disclosed by supplier	N/A	Balance
	<i>Bacillus thuringiensis</i> subsp. <i>israelensis</i> (serotype H14)	68038-71-1	3000 International Toxic Units/mg

4. First-aid measures

First Aid Measures	For advice contact the National Poisons Centre 0800 POISON (0800 764 766) or a doctor immediately. Begin artificial respiration if the victim is not breathing. Use mouth-to-nose rather than mouth-to-mouth. Obtain medical attention.
Inhalation	Remove patient to fresh air. Lay down and keep warm and rested. If breathing is shallow or has stopped ensure airway is clear and apply resuscitation. Seek medical assistance immediately.
Ingestion	Never give anything by mouth to an unconscious person. If swallowed do NOT induce vomiting. For advice, contact the National Poisons Centre (0800 764 766). Seek medical assistance immediately.
Skin	Immediately flush body and clothes with large amounts of water. Remove contaminated clothing and footwear. Wash affected areas with soap and water. If a large area is affected seek medical assistance.
Eye contact	Flush eyes with plenty of water for 15 minutes holding eyelids open if necessary. Remove contact lenses, if present and easy to do. Seek medical assistance even if there are no immediate symptoms.
First Aid Facilities	Facilities storing or utilizing this material should be equipped with an eyewash facility and safety shower.
Advice to Doctor	Treat symptomatically.

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5. Fire-fighting measures

Suitable extinguishing media	Choose extinguishing media to suit the burning material. Water fog, foam, carbon dioxide or dry chemical.
Hazards from Combustion	Thermal decomposition may evolve toxic and irritating vapours.
Special Protective Equipment for fire fighters	Full protective clothing and self-contained breathing apparatus.
Specific Methods	Keep up wind. Do not allow washings to reach sewage or effluent systems.
Other Information	Location Certificate: Not applicable Hazardous Atmosphere Zone: Not applicable Number of Fire Extinguishers: Not applicable

6. Accidental release measures

Spills & Disposal	Wear protective clothing. Clear area of unprotected personnel. Sweep up solids without generating dust (use water to dampen). Contain and absorb liquid spills with inert material and place in waste containers. If spill does enter waterways contact the local authority. Collect in an appropriate sealable container for disposal in an approved landfill.
Personal Protection	For appropriate personal protective equipment (PPE), refer Section 8.
Environmental Precautions	Prevent from entering drains, waterways or sewers.

7. Handling and storage

Precautions for Safe Handling	Keep out of reach of children. Avoid skin and eye contact and inhalation of spray mist or dust. APPROVED HANDLER: This product must be under the control of an Approved Handler when applied directly onto or into water. TRACKING: Is not required RECORD KEEPING: Not applicable
Conditions for safe storage, including any incompatibilities	High temperatures will damage the bacterial spores contained in VectoBac WG . Store in original container tightly closed and in a locked, dry, cool area away from foodstuffs. Storage must be in accordance with NZS 8409 Management of Agrichemicals. Stores containing 10,000kg of VECTOBACK WG are subject to signage, and more than 10,000kg require emergency response plans. Store below 25°C. Avoid exposure to direct sunlight and ignition sources.
Other Information	Always read the label and any attached leaflet before use. Aggregate Storage Volume Thresholds: When stored with substances of the same hazard classification the aggregate quantity must be considered. For full details refer to the current NZS8409 Management of Agrichemicals and the HSNO Regulations.

8. Exposure controls/personal protection

Occupational exposure limit values	No exposure limits (WES, TEL or EEL's) have been specifically assigned for this product. As with all dusts the WES for particulates not otherwise classified = 10mg/m ³ .
Appropriate engineering controls	Handle in well ventilated areas, generally natural ventilation is adequate.
Personal Protective Equipment	When opening the container, preparing spray and using the prepared spray wear safety goggles, impervious gloves, cotton overalls buttoned to the neck and wrist, and boots. If risk of inhalation of dust or spray mist exists, wear combined organic vapour/particulate respirator. If using a respirator ensure that the cartridges are correct for the potential air contamination and are in good working order.
Hygiene Measures	Do not eat, drink or smoke while using. Remove protective clothing and wash hands and face thoroughly before meals and after work. Wash protective clothing daily after work.

9. Physical and chemical properties

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Form	Solid
Appearance	Brown fine granules
Odour	Faint organic/malt odour
Solubility in Water	Suspends readily in water
pH	4.5-6.5 as an aqueous solution
Density	0.4g/mL
Flash Point	Not applicable.
Other Information	(WG) Water Dispersible Granule

10. Stability and reactivity

Chemical Stability	Stable under recommended storage and handling conditions.
Conditions to Avoid	Activity can be impaired unless protected from high temperatures at all times.
Incompatible Materials	High temperatures. Alkaline products. Oxidisers and reducing agents.
Hazardous Decomposition Products	Thermal decomposition may evolve toxic and irritant vapours.
Hazardous Polymerization	Hazardous polymerisation will not occur.

11. Toxicological Information

Acute Toxicity - Oral	LD50 (rat) >5000 mg/kg
Acute Toxicity - Dermal	LD50 (rabbit) >5000 mg/kg
Acute Toxicity - Inhalation	LC50 (rat) 8.0 x 10(7) spores/rat No lethality was observed in rats after a 4 hour exposure at the highest obtainable inhalation exposure chamber concentration.
Skin	Direct contact with skin may cause mild irritation.
Eye	Direct contact with eyes may cause mild irritation.
Skin Sensitisation	Not sensitizing.
Carcinogenicity	None of the components are classified as carcinogens.
Serious eye damage/irritation	Transient, redness and conjunctival irritation observed in test animals in a study with this product. No positive ocular effects were observed. Classified as a non-irritant.
Skin corrosion/irritation	Transient, slight or mild irritation noted in a dermal toxicity study with this product.

12. Ecological information

Persistence and degradability	Rapid loss of activity in response to UV light.
Environmental Fate	For <i>Bacillus thuringiensis</i> : In clay loam of low nutrient status (pH 7.3, pF2, 25°C) insecticidal activity declined rapidly in 20d due to deterioration of the crystals; at pF3, it declined slowly for 500d; at higher nutrient status, there was a brief 10-fold increase of inoculum applied to soil. As a natural part of the ecosystem, it decays to complex and non-toxic organic compounds.
Bioaccumulative Potential	Not pathogenic to non-target organisms and has not been seen to reproduce in non-target organisms.
Basis for Assessment	Data below is for the active ingredient unless otherwise stated.
Acute Toxicity - Fish	LC50 (96hr) for <i>Oncorhynchus mykiss</i> is >370 mg/l. LC50 (96hr) for <i>Lepomis macrochirus</i> is >600 mg/l.
Acute Toxicity - Daphnia	Chronic toxicity, 10-d (<i>Daphnia magna</i>): LC50 > 50mg/L Reproductive toxicity, 21-d (<i>Daphnia magna</i>): NOEL = 5mg/L
Acute Toxicity - Other Organisms	14d-LD50 oral (<i>Apis mellifera</i>): >1737µg/bee (>10x the field rate) 5d-LC50 (bobwhite quail): >3077mg/kg b.w./d, (mallard duck): >3077mg/kg/b.w./d Earthworm - 14d-LC50: no data, <i>Bacillus thuringiensis</i> is naturally present in

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the soil.

13. Disposal considerations

Product Disposal Dispose of product only by using according to the label, or at an approved landfill.

Container Disposal Triple rinse empty container and add rinsate to spray tank. Recycle empty container. Otherwise crush and bury in a suitable landfill.

14. Transport information

Transport Information It is good practice not to transport agricultural chemical products with food, food related materials and animal feedstuffs.

Storage and Transport Not classified as Dangerous Goods for transport in New Zealand.

15. Regulatory information

National and or International Regulatory Information Approved pursuant to the HSNO Act 1996, Approval Code HSR000702
See www.epa.govt.nz for approval controls.
This product does not require registration under the ACVM Act.

Hazard Rating Systems NFPA/HMIS: 1-1-0

16. Other Information

Contact Person/Point IN AN EMERGENCY, DIAL 111 - FIRE OR POLICE
24Hr Tollfree Emergency No: 0800 651 911
24Hr Emergency No: National Poisons Centre Phone: 0800 764 766
5 yearly review carried out. Minor changes and updates made to the document.

Revisions Highlighted Other Information Supersedes SDS issued May 2012
...End Of MSDS...

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