



Material Safety Data Sheet

Page: 1 of 4

Infosafe No. 3NUB8 Issue Date : April 2007 ISSUED by NUFARMNZ

Product Name : **VectoBac® WG**

1. IDENTIFICATION OF THE MATERIAL AND SUPPLIER

Product Name VectoBac® WG
Product Code 03849
Product Type Biological insecticide
Company Name Nufarm NZ
Address 6 Manu Street, Otahuhu
Auckland 2024 New Zealand
Emergency Tel. 0800 651 911
Telephone/Fax Number Tel:
0-9-270 4157
Fax:
0-9-270 4159
Email www.nufarm.co.nz
Recommended Use A biological insecticide containing *Bacillus thuringiensis* subspecies *israelensis* 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. HAZARDS IDENTIFICATION

Hazard Classification Not classified as Dangerous Goods according to the LTSA New Zealand.
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.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Characterization Solid

Ingredients	Name	CAS	Proportion
	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

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 Flush eyes with plenty of water for 15 minutes holding eyelids open if necessary. Seek medical assistance.

First Aid Facilities Facilities storing or utilizing this material should be equipped with an eyewash facility and safety shower.

Advice to Doctor Treat symptomatically.

5. FIRE FIGHTING MEASURES



Material Safety Data Sheet

Page: 2 of 4

Infosafe No. 3NUB8 Issue Date : April 2007 ISSUED by NUFARMNZ

Product Name : **VectoBac® WG**

Suitable Extinguishing Media Choose extinguishing media to suit the burning material.
Water fog, foam, carbon dioxide or dry chemical.

Hazards from Combustion Products 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.

Hazchem Code None Allocated

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. 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.
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 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 VectoBac WG are subject to signage, and more than 10,000kg require emergency response plans.

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

National Exposure Standards 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/m³.

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.

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

Form Solid

Appearance Brown fine granules

Odour Musty odour

Solubility in Water Suspends readily in water



Material Safety Data Sheet

Page: 3 of 4

Infosafe No. 3NUB8 Issue Date : April 2007 ISSUED by NUFARMNZ

Product Name : **VectoBac® WG**

pH Value 5.85 (1% suspension in water, 20°C)
Density 0.37g/mL
Flash Point Not applicable.
Other Information (WG) Water Dispersible Granule

10. STABILITY AND REACTIVITY

Chemical Stability Stable under recommended storage and handling conditions.
Incompatible Materials High temperatures. Alkaline products. Oxidisers.
Hazardous Decomposition Products Thermal decomposition may evolve toxic and irritant vapours.
Hazardous Polymerization Hazardous polymerisation will not occur.

11. TOXICOLOGICAL INFORMATION

Carcinogenicity No data to support a positive result.
Acute Toxicity - Oral LD50 (rat) >5000 mg/kg
Acute Toxicity - Dermal LD50 (rabbit) >5000 mg/kg
Acute Toxicity - Inhalation LC50 (rat) (4hr) >0.014 mg/l (nose-only; maximum feasible concentration)
Eye Irritation Weak irritant (not irritant in the sense of 2001/59/EC)
Skin Irritation Mild irritant (not irritant in the sense of 2001/59/EC)
Skin Sensitisation Not sensitizing (Maximisation test)

12. ECOLOGICAL INFORMATION

Persistence / Degradability Rapid loss of activity in response to UV light.
Environmental Fate For *Bacillus thuringiensis*: 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 (96 hr) for *Oncorhynchus mykiss* is >370 mg/l.
LC50 (96 hr) for *Lepomis macrochirus* is >600 mg/l.
Acute Toxicity - Daphnia Chronic toxicity, 10-d (*daphnia magna*): LC50 > 50mg/L
Reproductive toxicity, 21-d (*Daphnia magna*): NOEL = 5mg/L
Acute Toxicity - Other Organisms 14d-LD50 oral (*Apis mellifera*): >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, *Bacillus thuringiensis* is naturally present in 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. Burn in an appropriate incinerator if circumstances such as wind direction permit. Otherwise crush and bury in a suitable landfill.

14. TRANSPORT INFORMATION

Transport Information It is good practice to separate this product from food, food related materials, animal feedstuffs, seed or fertilisers during transport.
U.N. Number None Allocated



Material Safety Data Sheet

Page: 4 of 4

Infosafe No.	3NUB8	Issue Date : April 2007	ISSUED by NUFARMNZ
--------------	-------	-------------------------	--------------------

Product Name : **VectoBac® WG**

DG Class	None Allocated
Hazchem Code	None Allocated
Packing Group	None Allocated
Storage and Transport	Not considered 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.ermanz.govt.nz for approval controls Does not require registration under the ACVM Act.
Hazard Rating Systems	NFPA/HMIS: 1-1-0
Other Information	Agriquality Certified Full Organic No. NZ1234

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
Revisions Highlighted	The SDS was reviewed. Minor changes were made to the information.
Other Information	Supersedes SDS issued May 2006 ...End Of MSDS...