

Infosafe No™ 3NUB9	Issue Date : May 2017	APPROVED by NUFARMNZ
--------------------	-----------------------	----------------------

 Product Name **VectoBac® 12AS**

1. Identification

GHS Product Identifier	VectoBac® 12AS
Product Code	03852
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	6.4A eye irritant, 6.5B sensitiser, 9.1D aquatic toxicant, TOXICITY Harmful - may cause eye irritation. May cause sensitisation from prolonged skin contact. 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	Liquid		
Ingredients	<u>Name</u>	<u>CAS</u>	<u>Proportion</u>
	Other ingredients not disclosed by supplier	N/A	98.8%
	<i>Bacillus thuringiensis</i> subsp. <i>israelensis</i> (serotype H14)	68038-71-1	1200 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.

Infosafe No™ 3NUB9	Issue Date : May 2017	APPROVED by NUFARMNZ
--------------------	-----------------------	----------------------

Product Name **VectoBac® 12AS**

Advice to Doctor Treat symptomatically.

5. Fire-fighting measures

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

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. Contain spill and absorb with sand, soil or absorbent granules. 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 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, including any incompatibilities Keep out of reach of children. 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 10,000L are subject to signage, 1,000L of VECTOBACK 12AS require secondary containment and more than 1,000L require emergency response plans.
Store below 25°C. Avoid exposure to direct sunlight or leaving containers in vehicles or other similar enclosed places on sunny days.

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.

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, waterproof hat, 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

Form Liquid

Appearance Light brown suspension

Solubility in Water Disperses in water.

Infosafe No™ 3NUB9	Issue Date : May 2017	APPROVED by NUFARMNZ
--------------------	-----------------------	----------------------

 Product Name **VectoBac® 12AS**

Specific Gravity	1.06 - 1.1g/mL
pH	4.6 - 5.0
Viscosity	250-1000cps @ 25°C
Flammability	Not flammable
Other Information	(SC) Suspension Concentrate

10. Stability and reactivity

Chemical Stability	VectoBac 12AS has a shelf life in a sealed container of at least 2 years if stored below 25°C, or 3 years if stored under refrigeration.
Conditions to Avoid	Vectobac 12AS is a biological larvicide containing protein crystals and bacterial spores. Activity can be impaired unless protected from high temperatures at all times.
Hazardous Decomposition Products	None known.
Hazardous Polymerization	Hazardous polymerisation will not occur.
Other Information	Diluted or undiluted product can cause corrosion if left in prolonged contact with aluminum surfaces (eg spray equipment, aircraft components).

11. Toxicological Information

Acute Toxicity - Oral	LD50 (rat) >5000 mg/kg
Acute Toxicity - Dermal	LD50 (rabbit) >5000 mg/kg
Acute Toxicity - Inhalation	Not lethal in a inhalation study with rats at an aerosol concentration of 5.34mg/L/4 hours.
Inhalation	Not lethal in a inhalation study with rats at an aerosol concentration of 5.34mg/L/4 hours.
Skin	Direct contact with skin may cause mild irritation.
Eye	Direct contact with eyes may cause mild irritation.
Skin Sensitisation	Not determined. Eight of ten animals tested positive in a dermal sensitization study in guinea pigs with a similar formulation.
Carcinogenicity	None of the components are classified as carcinogens.
Serious eye damage/irritation	Transient redness and conjunctival irritation.
Skin corrosion/irritation	Transient, mild to moderate redness noted in a dermal irritation study with this product.
Subchronic/Chronic Toxicity	Not determined. A minor ingredient produced Heinze body formation or erythrocyte distruption in animals at repeated dosages of 500mg/kg or more.
Other Information	Not expected to have any corrosive properties.

12. Ecological information

Basis for Assessment	Data below is for the active ingredient unless otherwise stated.
Acute Toxicity - Fish	LC50 (96h) for rainbow trout >370mg/L, bluegill sunfish >600mg/L
Acute Toxicity - Daphnia	LC50 (96h) >25mg/L
Acute Toxicity - Other Organisms	Not pathogenic to birds, fish, honey bees or earthworms.

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



Safety Data Sheet

infosafe
CS: 1.7.2

Page: 4 of 4

Infosafe No™ 3NUB9	Issue Date : May 2017	APPROVED by NUFARMNZ
--------------------	-----------------------	----------------------

Product Name **VectoBac® 12AS**

Transport Information	It is good practice not to transport agricultural chemical products with food, food related materials and animal feedstuffs.
Other Information	Do not carry this product on a passenger service vehicle. Segregation: Check the latest Land Transport Rule Dangerous Goods Rule 45001 for additional information. Sea transport may require additional segregation. Refer NZS5433 sea segregation for details.

15. Regulatory information

National and or International Regulatory Information	Approved pursuant to the HSNO Act 1996, Approval Code HSR000701 See www.epa.govt.nz for approval controls. This product does not require registration under the ACVM Act.
Hazard Rating Systems	NFPA/HMIS: 1-1-1

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	5 yearly review carried out. Various changes and updates made to document.
Other Information	Supersedes SDS issued May 2012 ...End Of MSDS...

© Copyright ACOHS Pty Ltd

Copyright in the source code of the HTML, PDF, XML, XPO and any other electronic files rendered by an Infosafe system for Infosafe MSDS displayed is the intellectual property of Acohs Pty Ltd.

Copyright in the layout, presentation and appearance of each Infosafe MSDS displayed is the intellectual property of Acohs Pty Ltd. The compilation of MSDS's displayed is the intellectual property of Acohs Pty Ltd.

Copying of any MSDS displayed is permitted for personal use only and otherwise is not permitted. In particular the MSDS's displayed cannot be copied for the purpose of sale or licence or for inclusion as part of a collection of MSDS without the express written consent of Acohs Pty Ltd.