

Net 10 litres

VectoBac[®] 12AS



A biological insecticide
containing *Bacillus*
thuringiensis subspecies
israelensis for the control
of mosquito larvae.



VectoBac[®] 12AS

Active Ingredient: Contains 1200 International Toxic Units/mg *Bacillus thuringiensis* subsp. *israelensis* (serotype H14), fermentation solids and solubles, ATCC-1276, strain AM65-52 in the form of a suspension concentrate.

HAZARD CLASSIFICATION: 6.4A, 6.5B, 9.1D
APPROVED HANDLER: This product must be under the control of an approved handler when it is applied directly into or over water. This product must not be used for any purpose, or in any manner, contrary to this label unless authorised under appropriate legislation.

TOXICITY: Harmful – may cause eye irritation. May cause sensitisation from prolonged skin contact.

ECOTOXIC: Do not apply this substance in a way that adversely affects native mosquitoes of a species found only in the region of application. Avoid contamination of any water supply with product or empty container.

HANDLING PRECAUTIONS

STORAGE: Keep out of reach of children. Store in original container, tightly closed, in a cool dry place away from foodstuffs. Vectobac 12AS is a biological larvicide containing protein crystals and bacterial spores. Activity can be impaired unless protected from high temperatures at all times. Store below 25°C. Avoid exposure to direct sunlight or leaving container in vehicles or other similar enclosed places on sunny days. Store in accordance with NZS 8409 Management of Agrichemicals. Stores containing 1000L of Vectobac 12AS require secondary containment, 10,000L require signage, and more than 1000L require emergency response plans.

PERSONAL PROTECTION: Avoid skin and eye contact, and inhalation of spray or spray mist. Do not eat, drink or smoke while using. Wash hands and exposed skin before meals and after work.

EQUIPMENT: Apply using accurately calibrated and well-maintained spray equipment.

DISPOSAL: Ensure container is completely empty. Burn empty container if wind direction permits, otherwise crush and bury in a suitable landfill. Dispose of product by using according to label or dilute unused product and pour onto fallow land.

First Aid: If swallowed do NOT induce vomiting. For advice, contact the National Poisons Centre 0800 POISON (0800 764 766) or a doctor immediately. If skin or hair contact occurs, remove contaminated clothing and flush skin and hair with running water. If splashed in eyes, wash out immediately with water.

Spillage: Wear appropriate protective clothing and prevent material from entering waterways. Contain liquid spills and absorb with inert material. Collect in sealable container for disposal.

Transport: Do not carry this product on a passenger service vehicle.

MIXING AND APPLICATION:

Shake or stir VectoBac 12AS thoroughly before using.

VectoBac 12AS may be applied by calibrated ground or aerial equipment either undiluted, or diluted with clean water. The application volume must be sufficient to provide uniform coverage of the target area and will be influenced by the weather, the application equipment and the mosquito habitat. Do not mix more VectoBac 12AS with water than can be used within 48 hours.

Ground Application: For diluted application, half fill the spray tank with water and with the agitation system running, add the required amount of VectoBac 12AS. Mild agitation should be maintained during use and after a stoppage before recommencing spraying. Normal volumes of application will range from 2-150 litres/ha. For undiluted applications, apply the correct amount of VectoBac 12AS by mist blower etc.

Aerial Application: For undiluted applications apply 0.6 - 2.4 litres/ha VectoBac 12AS through fixed wing or helicopter aircraft equipped with conventional boom and nozzle systems, or rotary atomisers. Avoid excessive recirculation of undiluted product as this may change its physical properties.

For diluted aerial application fill the mixing tank with the desired quantity of water. Start the agitation to provide moderate circulation before adding the VectoBac 12AS. VectoBac 12AS readily suspends in water and will stay suspended over normal application periods. Brief recirculation may be necessary if the spray mixture has sat for several hours. Avoid continuous agitation of the spray mixture during spraying.

Where spray sites are uniform with low vegetation cover, fine spray droplets (25-75 microns VMD) can be used. Where vegetation is more dense, larger droplets of 100-300 microns VMD may be more effective.

VectoBac 12AS solution is corrosive to aluminium spray system components if left in prolonged contact. Rinse spray system with plenty of clean water after use.

SHELF LIFE: 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.

Directions For Use: VectoBac 12AS is effective against 1st to early 4th instar mosquito larvae. Larvicidal activity due to destruction of the midgut lining occurs within 12 hours of ingestion. Because 4th instar larvae do not feed prior to pupation, application must be made during the early stages of the life cycle. The use of VectoBac 12AS is not recommended if more than 50% of the larval population is in the late 4th instar stage.

PEST	HABITAT	RATE L/ha	NOTES
Mosquitoes including the following: <i>Culex pervigilans</i> <i>Culex quinquefasciatus</i>	Irrigation ditches, stagnant standing ponds	0.3 – 0.6	Use the low rate when populations are low and larvae are mainly 1st - 3rd instar.
<i>Culiseta tonnoiri</i> <i>Opifex fuscus</i>	Tidal water, salt marshes, storm water retention areas	0.6 – 1.2	Use the higher rate when populations are high, if larvae are mainly late 3rd to early 4th instar, or if water is polluted.
<i>Ochlerotatus antipodeus</i> <i>Ochlerotatus australis</i> <i>Ochlerotatus camptorhynchus</i> <i>Ochlerotatus notoscriptus</i> <i>Stegomyia aegyptia</i> <i>Stegomyia albopicta</i>	Polluted or highly organic water, sewage ponds, animal waste areas	1.2 – 2.4	Reapply as needed. A 7 day spray interval should be maintained in most situations.

Approved pursuant to the HSN0 Act 1996, Approval Code HSR000701.
See www.ermanz.govt.nz for approval controls.

CONDITIONS OF SALE:

CAUTION: READ THIS NOTICE BEFORE OPENING THE CONTAINER

If you open this container you will be deemed to have accepted the conditions below.

The results from use of this product may be affected by factors beyond Nufarm's control, including mixing, use, climatic conditions, time of application, crop or crop stage and the possible development of resistance to the active ingredient, even though the product is reasonably fit for the purposes stated in this label, and even though label directions are followed. Nufarm will replace, free of charge, any product which is found to have a manufacturing defect. To the extent permitted by law, all other warranties, guarantees, representations and conditions, whether expressed or implied by law, trade, custom or otherwise are expressly excluded.

When you use this product, you agree that neither Nufarm Limited nor any manufacturer of any component of the product will be liable for any damage, injury or loss including consequential loss which arises in any way from the storage, handling, or use of the product. This exclusion of liability includes loss caused by negligent acts or omissions of Nufarm Limited or any supplier or manufacturer of the product or any of their employees and agents.

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