For control of mosquito larvae using ULV application

PREVENTS EMERGENCE OF ADULT FLOODWATER MOSQUITOES
MOSQUITO GROWTH REGULATOR
LIQUID LARVICIDE
TREATMENT EVALUATION. SEE GUIDE TO PRODUCT APPLICATION
FAMILIARITY WITH SPECIAL TECHNIQUES FOR APPLICATION TIMING AND FORMULATION.

Formulation contains 0.43 lb/gal (51.3 g/liter) active ingredient.
TOTAL: ...........................................................................100%
OTHER INGREDIENTS: .....................................................95%
(S)-Methoprene (CAS #65733-16-6) ..................................5%
ACTIVE INGREDIENT:

NET CONTENTS: 1 GAL (128 FL OZ) 3.8 L

KEEP OUT OF REACH OF CHILDREN OR CONSULT

STORAGE & DISPOSAL –
Storage:
Store in cool place. Store product away from other pesticides, food, and feed. In case of

B.t.i.
A.L.L.
to 12.5 gallons of water. This tank mix can be applied to sites listed above at rates of 2 –16 fluid ounces/acre
formulations. The ratio of A.L.L. israeliensis (B.t.i.) Bacillus thuringienses

Examples of such sites are: vineyards, rice fields (including wild rice), date palm orchards, fruit and nut orchards, and berry fields and bogs. Irrigated pastures may be treated after each flooding

Ground:

Mix

A.L.L.

CHEMIGATION –

ENVIRONMENTAL HAZARDS –

FIRST AID

If in eyes – rinse eyes open and irrigation from above with cool water for 15 to 30 minutes. • Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye. • Call a poison control center or doctor for treatment advice.

If on skin – wash skin thoroughly with soap and water after handling and before eating, drinking, smoking, chewing gum, using tobacco, or using the toilet.

PRECAUTIONARY STATEMENTS – HAZARDS TO HUMANS – CAUTION: Causes moderate eye irritation. Avoid contact with eyes or clothing. Wash thoroughly with soap and water after handling and before eating, drinking, smoking, chewing gum, using tobacco, or using the toilet.

FIRST AID

If on skin – wash skin thoroughly with soap and water after handling or disposal. Prevent re-introduction of product by washing hands before eating, drinking, smoking, chewing gum, using tobacco, or using the toilet.

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IF EXPOSED OR SUSPECTED EXPOSURE:

Pesticide Disposal:
Wastes resulting from the use of this product may be disposed of on site or at an approved waste disposal facility. Intermittently Flooded Noncrop Areas:
A.L.L. Apply at 3-4 ounces per acre.

A.L.L.

Rice:

Limited Environmental Benefits

Reapply as breeding sites become reinfested or when monitoring indicates an increase in adult populations.

Apply at the rate of 3-4 ounces of product per acre to water-holding containers and small bodies of water that breed mosquitoes. Use equipment capable of applying a fine dust or ULV. Follow equipment manufacturer’s recommendations when making applications. Direct spray applications to sites where mosquito breeding is known. These sites include fountains, ponds, pools, ditches, irrigation equipment, wells, fountains, ponds, pools, ditches, irrigation equipment, wells, tree holes, garbage bins, cans, birdbaths, rain barrels, and other water-holding containers and small bodies of water.

APPLICATION RATE – Apply 3 to 4 fluid ounces of A.L.L. per acre (200 to 2000 microliters) in water as directed. For control of Mosquito Larvae using ULV Application, Apply at 340 microliters per acre.

Rice: Apply an

the removal of grazing livestock.

A.L.L.

Apply an

A.L.L.

A.L.L. may be applied as directed above when flooding may result in floodwater mosquito habitats. Typical sites include: freshwater swamps and marshes, salt marshes, woodland pools and meadows, dredging spoil sites, drainage areas, waste disposal sites, irrigation ditches, and livestock trails. Irrigated pastures may be treated after each flooding

A.L.L.

Determine the average spray volume used per acre by individual operators and/or specific equipment. This tank mix can be applied to water-holding containers and small bodies of water that breed mosquitoes. Use equipment capable of applying a fine dust or ULV. Follow equipment manufacturer’s recommendations when making applications. Direct spray applications to sites where mosquito breeding is known. These sites include fountains, ponds, pools, ditches, irrigation equipment, wells, tree holes, garbage bins, cans, birdbaths, rain barrels, and other water-holding containers and small bodies of water.

APPLICATION EQUIPMENT – Use aerial, ground, or chemigation equipment capable of applying a fine dust or ULV. A.L.L. may be applied as directed above when flooding may result in floodwater mosquito habitats. Typical sites include: freshwater swamps and marshes, salt marshes, woodland pools and meadows, dredging spoil sites, drainage areas, waste disposal sites, irrigation ditches, and livestock trails. Irrigated pastures may be treated after each flooding

A.L.L.

Please see mixing and handling instructions for additional information.

The product container or label with you when calling a poison control center or doctor, or going for treatment. You may also contact 1-800-248-7763 for emergency medical treatment

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FOR THE FIRST TIME USER

Zoëcon® Altosid® Liquid Larvicide Mosquito Growth Regulator (A.L.L.) is the result of extensive research into the intricacies of natural biochemical and physiological development of insects. New chemical technology and biological findings were combined to develop a unique mosquito larvicide.

A.L.L., an insect growth regulator (IGR), acts by inducing morphological changes which interfere with normal development. These effects, not immediately apparent, result in the failure of adult mosquitoes to emerge from pupae. A.L.L. is not a conventional pesticide. It does not produce the nondiscriminatory rapid, directly toxic effects that are associated with traditional larvicides. A.L.L. differs from other larvicides you may have used only in the manner and time course of its action after application.

A.L.L. is applied to second, third, or fourth instar larvae using standard larviciding equipment in a manner similar to other larvicides. After application to second, third, or fourth instar larvae at the appropriate rates, absolutely no effects on larvae will be observed. They will continue developing normally and will pupate. Pupae will appear unaffected, but will eventually die. Adults will not emerge. Infrequently, a few adults may be seen at the water surface but they will have abnormalities preventing flight and will not survive. Because the effect of A.L.L. is neither larval death nor widespread mortality immediately following pupation, the number of adults which emerge is the only criterion for accurately assessing control. Checks by dip counts during larval and pupal stages will give no measure of effectiveness.

Refer to the following diagram and checklist, in addition to label instructions for guidance in timing of application and performance evaluation. They will assist you in obtaining the best possible results with this unique product.

The information presented herein, while not guaranteed, is to the best of our knowledge true and accurate. No warranty or guarantee, expressed or implied, is made regarding the performance or stability of any product, since the manner of use and conditions of storage and handling are beyond our control.
Preparation of ALTOSAND® Granular Formulation

An “On-Site” Method of Preparing a Granular Formulation of A.L.L.

INTRODUCTION

A method of application of A.L.L., using sand as a carrier, has been developed for use in floodwater mosquito breeding areas with dense vegetation or canopy. The characteristics of ALTOSAND® provide excellent foliage penetration, ensuring that the active ingredient reaches the water where it is released from the sand. ALTOSAND® will prevent the emergence of species of the floodwater mosquito complex when applied to second, third, or fourth larval instars at a rate of 10 to 13 pounds per acre.

PREPARATION INSTRUCTIONS

The following materials are required to prepare a 100 lb batch of ALTOSAND®:

- 96 lb washed, dry sand (20 to 45 mesh)
- 2 lb A.L.L. (15 ft oz/lb)
- 2 lb Higlo 233 (silicon dioxide)
- Small funnel
- Cemex Mixer

1. Measure the time required for a level funnel full of sand to empty.
2. Into a rotating-type mixer, place 96 lb of dry sand (20 to 45 mesh) sand. While the mixer is rotating, slowly pour 2 lb (30 ft oz) of A.L.L. onto the sand. (If better wetting is required, A.L.L. may be diluted in up to an equal volume of water.)
3. Mix until the sand is uniformly coated with A.L.L. (usually 5 to 10 minutes).
4. Stop the mixer and add 2 lb of Higlo 233. Cover the mixer to reduce dust. Start the mixer and run for approximately 5 minutes. (The quantity of Higlo 233 necessary to achieve a dry, free-flowing mixture will vary depending on the particle size distribution and moisture of the sand.)
5. Compare the flow rate of the ALTOSAND® mixture with that of untreated sand in Step No. 1. Add more Higlo if it flows significantly slower and reduce the amount of Higlo in subsequent batches if the mixture flows at the same or a faster rate and is excessively dusty.

APPLICATION RATE AND METHODS

Apply at a rate of 10 to 13 lb of the final mixture per acre, using standard granular dispersal equipment.

Preparation of Altodac™ Granular Formulation

An “On-Site” Method of Preparing a Granular Formulation of A.L.L.

INTRODUCTION

A method of A.L.L. application, using BIODAC® as carrier, has been developed for use in mosquito breeding areas in floodwater and intermittently flooded noncrop areas including freshwater and saltwater marshes. The characteristics of A.L.L. using BIODAC® carrier provide excellent coverage, ensuring that the active ingredient reaches the water and is released from the BIODAC®. A.L.L. will prevent the emergence of adult mosquitoes when applied to second, third, or fourth larval instars at a rate of 10 to 13 pounds per acre.

PREPARATION INSTRUCTIONS

The following materials are required to prepare a 100 lb batch of Altodac™ using BIODAC® carrier:

- 96 lb BIODAC® 12/20
- 30 oz A.L.L.
- 32 oz water

1. Weigh the required amounts of A.L.L. into a tared container suitable for mixing.
2. Weigh the water into the vessel containing the A.L.L. Stir the contents in the vessel until a uniform mixture is achieved.
3. Add the appropriate amount of BIODAC® 12/20 to a blending device, e.g., a cement mixer with lifters, a munson blender, or any other device that will allow the granules to tumble through a spray.
4. Add the water/A.L.L. mixture to a spray unit or any pressurized device capable of delivering a cone-shaped, fine particle size spray to the contents in the blender.
5. Spray the mixture of A.L.L. and water onto the BIODAC® while the blender is tumbling the granules. Once the mixture has been applied to the BIODAC®, continue to blend until the granules appear to be dry (usually 5 to 10 minutes).
6. Remove the granules and screen over a 12 mesh screen to remove agglomerates.

APPLICATION RATE AND METHODS

Apply at a rate of 10 to 13 lb of the final mixture per acre using granular dispersal equipment.