



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, DC 20460

OFFICE OF CHEMICAL SAFETY
AND POLLUTION PREVENTION

March 31, 2015

Jonathan D. Ostrowski
Regulatory Affairs Specialist
Clarke Mosquito Control Products, Inc.
675 Sidwell Ct.
St. Charles, IL 60174

Subject: Label Amendment – Directions for Use
Product Name: Natular 2EC
EPA Registration Number: 8329-82
Application Date: 12/17/2014
Decision Number: 498593

Dear Mr. Ostrowski:

The amended label referred to above, submitted in connection with registration under the Federal Insecticide, Fungicide and Rodenticide Act, as amended, is acceptable. This approval does not affect any conditions that were previously imposed on this registration. You continue to be subject to existing conditions on your registration and any deadlines connected with them.

A stamped copy of your labeling is enclosed for your records. This labeling supersedes all previously accepted labeling. You must submit one copy of the final printed labeling before you release the product for shipment with the new labeling. In accordance with 40 CFR 152.130(c), you may distribute or sell this product under the previously approved labeling for 18 months from the date of this letter. After 18 months, you may only distribute or sell this product if it bears this new revised labeling or subsequently approved labeling. "To distribute or sell" is defined under FIFRA section 2(gg) and its implementing regulation at 40 CFR 152.3.

Should you wish to add/retain a reference to the company's website on your label, then please be aware that the website becomes labeling under the Federal Insecticide Fungicide and Rodenticide Act and is subject to review by the Agency. If the website is false or misleading, the product would be misbranded and unlawful to sell or distribute under FIFRA section 12(a)(1)(E). 40 CFR 156.10(a)(5) list examples of statements EPA may consider false or misleading. In addition, regardless of whether a website is referenced on your product's label, claims made on the website may not substantially differ from those claims approved through the registration process. Therefore, should the Agency find or if it is brought to our attention that a website contains false or misleading statements or claims substantially differing from the EPA approved registration, the website will be referred to the EPA's Office of Enforcement and Compliance.

Your release for shipment of the product constitutes acceptance of these conditions. If these conditions are not complied with, the registration will be subject to cancellation in accordance with FIFRA section 6. If you have any questions, please contact Olga Odiott by phone at 703-308-9369, or via email at odiott.olga@epa.gov.

Sincerely,

A handwritten signature in dark ink, appearing to read 'Gebken', with a long horizontal flourish extending to the right.

Richard Gebken
Product Manager 10
Invertebrate & Vertebrate Branch 2
Office of Pesticide Programs

Enclosure

Text in [brackets] indicates optional text.

Natular™ 2EC

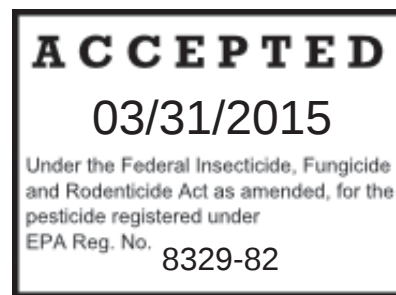
(Alternate Brand Name: Natular™ 20EC)

(Alternate Brand Name: Novus™ 20EC)

[Mosquito Larvicide]

[Liquid Emulsifiable Concentrate]

[An insecticide for the control of mosquito larvae]



To be used in governmental mosquito control programs, by professional pest control operators, or in other mosquito or midge control operations.

Active Ingredient:	
Spinosad (a mixture of spinosyn A and spinosyn D)*	20.6%

Other ingredients:	<u>79.4%</u>
Total	100.0%

U.S. Patent No. 5,362,634 and 5,496,931

[* Naturalyte® Insect Control]

Contains 2 lb of active ingredient per gallon.

Group

5

INSECTICIDE

Keep Out of Reach of Children
CAUTION

Precautionary Statements

Hazards to Humans and Domestic Animals

Causes moderate eye irritation. Harmful if swallowed. Avoid contact with eyes or clothing. Wear protective eyewear. Remove and wash contaminated clothing before reuse. Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum, or using tobacco.

First Aid	
If in eyes:	• Hold eye open and rinse slowly and gently with warm water for 15-20 minutes. • Remove contact lenses, if present, after the first 5 minutes, then continue rinsing. • Call a poison control center or doctor for treatment advice.
If swallowed:	• Call a poison control center or doctor immediately for treatment advice. • Have person sip a glass of water if able to swallow. • Do not induce vomiting unless told to do so by a poison control center or doctor. • Do not give anything to an unconscious person.
Have the product container or label with you when calling a poison control center or doctor or going for treatment. You may also contact 1-800-214-7753 for emergency medical treatment information.	

Environmental Hazards

This product is toxic to aquatic invertebrates. Non-target aquatic invertebrates may be killed in water where this pesticide is used. Do not contaminate water when cleaning equipment or disposing of equipment washwaters. Do not apply when weather conditions favor drift from treated areas. Drift from

treated areas may be hazardous to aquatic organisms in neighboring areas. Apply this product only as specified on the label.

This product is toxic to bees exposed to treatment and for 3 hours following treatment. Do not apply this product to blooming, pollen-shedding or nectar-producing parts of plants if bees may forage on the plants during this time period unless the application is made in response to a public health emergency declared by appropriate state or federal authorities.

Directions for Use

It is a violation of Federal law to use this product in a manner inconsistent with its labeling.

Read all Directions for Use carefully before applying.

General Information

NATULAR 2EC is a [Naturalyte®] product for killing mosquito and midge larvae. This product's active ingredient, spinosad, is biologically derived from the fermentation of *Saccharopolyspora spinosa*, a naturally occurring soil organism. NATULAR 2EC may be applied with suitable ground or aerial application equipment.

General Use Precautions

Integrated Pest Management (IPM) Programs

NATULAR 2EC is intended to kill mosquito and midge larvae. Mosquitoes are best controlled when an IPM program is followed. Larval control efforts should be managed through habitat mapping, active adult and larval surveillance, and integrated with other control strategies such as source reduction, public education programs, harborage or barrier adult mosquito control applications, and targeted adulticide applications.

Insecticide Resistance Management (IRM)

NATULAR 2EC contains a Group 5 insecticide. Insect biotypes with acquired resistance to Group 5 insecticides may eventually dominate the insect population if appropriate resistance management strategies are not followed. Currently, only spinetoram and spinosad active ingredients are classified as Group 5 insecticides. Resistance to other insecticide groups is not likely to impact the effectiveness of this product. Spinosad may be used in rotation with all other labeled products in a comprehensive IRM program.

To minimize the potential for resistance development, the following practices are recommended:

- Base insecticide use on comprehensive IPM and IRM programs.
- Routinely evaluate applications for loss of effectiveness.
- Rotate with other labeled effective mosquito larvicides that have a different mode of action.
- In dormant rice fields, standing water within agricultural/crop sites, and permanent marine and freshwater sites, do not make more than 20 applications per year.
- Use insecticides with a different mode of action (different insecticide group) on adult mosquitoes so that both larvae and adults are not exposed to products with the same mode of action.
- Contact your local extension specialist, technical advisor, and/or Clarke representative for insecticide resistance management and/or IPM recommendations for the specific site and resistant pest problems.
- For further information or to report suspected resistance, you may contact your local Clarke representative by calling 800-323-5727.

Mixing

NATULAR 2EC should be diluted with water. Shake well before using as NATULAR 2EC may separate on standing and must be thoroughly agitated prior to dilution. Partially fill spray tank with water. Start agitation and add the required amount of NATULAR 2EC. Continue agitation while mixing and filling the spray tank to the required spray volume. Maintain sufficient agitation during application to ensure uniformity of the spray mix. Do not allow water or spray mixture to back-siphon into the water source. Do not mix more NATULAR 2EC than can be used in a single application.

Mixing Formula: If an application rate of X fl oz of NATULAR 2EC per acre is desired, the spray equipment is calibrated to deliver Y gallons per acre, and a total of Z acres is being treated, the following formula would apply:

X fl oz of NATULAR 2EC per acre x Z acres to be treated =
W total fl oz of NATULAR 2EC required

Y gallons per acre x Z acres to be treated = V total volume of water required

To treat Z acres, mix W fl oz of NATULAR 2EC in V gallons of water and apply at a rate of Y gallons per acre.

For example, to treat 10 acres at 2 fl oz of NATULAR 2EC per acre with equipment calibrated at 2 gallons per acre, mix 20 fl oz of NATULAR 2EC into 20 gallons of water and apply at a rate of 2 gallons of finished spray per acre. The addition of NATULAR 2EC to the total volume of water will not significantly affect the total targeted volume of spray mixture.

Spray Drift Management

Avoiding spray drift at the application site is the responsibility of the applicator. The interaction of many equipment and weather-related factors determine the potential for spray drift. The applicator is responsible for considering all of these factors when making the decision to apply this product.

The following spray drift management requirements must be followed to avoid off-target drift movement from applications.

1. The boom width must not exceed 75% of the wingspan or 90% of the rotor blade. Nozzle placement may be extended to 100% of rotor blade diameter when very coarse droplets of VMD 400-500 microns (ASABE Standard 572) are used.
2. Nozzles must always point backward, parallel with the air stream, and never be pointed downward more than 45 degrees.
3. Making applications at the lowest height that is safe reduces exposure of droplets to evaporation and wind.
4. Do not apply when wind speed favors drift beyond the treatment area.

Where states have more stringent regulations, they must be observed.

Application

Proper application techniques help ensure adequate coverage and correct dosage necessary to obtain optimum kill of mosquito and midge larvae. The following recommendations are provided for ground and aerial application of NATULAR 2EC.

Ground Application

Use conventional ground application equipment with enough water to provide uniform coverage of the target area. Use hand-pump, airblast, mist blower, etc. spray equipment. Apply at the designated rate for the targeted site.

Spot Treatment

Apply NATULAR 2EC as a spot treatment to areas where mosquitoes are breeding at rates appropriate for the treatment site habitat and conditions.

Aerial Application

NATULAR 2EC may be aerially applied either undiluted or diluted with water through fixed wing aircraft or helicopter with either conventional boom and nozzle systems or rotary atomizers. Use a nozzle configuration that produces a droplet size distribution that ensures droplet deposition in the targeted area. Apply at the designated rates for the targeted site.

Application Sites and Rates

The rates listed are typical for efficaciously killing mosquito and midge larvae in the listed habitat sites. Within this range, use lower rates when water is shallow, vegetation and/or pollution are minimal, and mosquito populations are low. Do not use less than labeled rates. NATULAR 2EC may be applied at rates up to 6.4 fl oz per acre in waters high in organic content (such as polluted water, sewage lagoons, animal waste lagoons, and waters with high concentrations of leaf litter or other organic debris), deep-water mosquito habitats or those with dense surface cover, and where monitoring indicates a lack of kill at typical rates. Do not re-apply within 7 days of the initial application unless monitoring indicates that larval populations have reestablished or weather conditions have rendered initial treatments ineffective.

For killing mosquito larvae species in the following non-crop sites:

Non-Crop Site	NATULAR 2EC fl oz/acre (lb ai/acre)
Temporary Standing Water Woodland pools, snow pools, roadside ditches, retention ponds, freshwater dredge spoils, tire tracks and other natural or manmade depressions, rock holes, pot holes and similar areas subject to holding water	1.1 – 2 (0.018 – 0.033)
Other Freshwater Sites Natural and manmade aquatic sites, edges of lakes, ponds, canals, stream eddies, creek edges, detention ponds	
Freshwater Swamps and Marshes Mixed hardwood swamps, cattail marsh, common reed wetland, water hyacinth ponds, and similar freshwater areas with emergent vegetation	2.8 (0.045)
Marine/Coastal Areas Intertidal areas above the mean high water mark, mangroves, brackish water swamps and marshes, coastal impoundments and similar areas	
Stormwater/Drainage Systems Storm sewers, catch basins, drainage ditches, and similar areas	2 – 2.8 (0.033 – 0.045)
Wastewater Sewage effluent, sewers, sewage lagoons, cesspools, oxidation ponds, septic ditches and tanks, animal waste lagoons and settling ponds, livestock runoff lagoons, wastewater impoundments associated with fruit and vegetable processing, and similar areas	
Dormant Rice Fields Impounded water in dormant rice fields (for application only during the interval between harvest and preparation of the field for the next cropping cycle)	1.1 – 2 (0.018 – 0.033)
Natural and Artificial Containers Tree holes, bromeliads, leaf axils, and other similar natural water holding containers. Cemetery urns, bird baths, flower pots, rain barrels, buckets, single tires, tires stockpiled in dumps, landfills, recycling plants and other similar areas, abandoned swimming pools, ornamental ponds, flooded roof tops and similar water holding sites. Landfill containers, salvage yards, abandoned vehicles	1.1 – 2.8 (0.018 – 0.045)

Agricultural/Crop sites where mosquito breeding occurs:

Apply NATULAR™ 2EC at the rate of 1.1 to 2.8 fl.oz./acre in standing water within agricultural/crop sites where mosquito breeding occurs: pastures/hay fields, rangelands, orchards, vineyards and citrus groves. Do not apply to waters intended for irrigation.

[Blending Instructions and Directions for Use as a Custom Blend on Sand and application by standard ground and aerial granular dispersal equipment.]

[NATULAR 2EC may be blended on site following the preparation instructions below and applied as a sand mixture using standard granular dispersal equipment. Apply at a rate of 8.5 to 12 pounds of the blended sand per acre to areas with dense vegetation or heavy canopy or to other areas where a granular formulation will aid in insuring the active ingredient reaches the target water and is released from the sand.]

[BLENDING INSTRUCTIONS

The following materials are required to prepare a 100-lb batch of NATULAR 2EC blended sand:

96.5 lbs	Washed, dry sand (20-45 mesh)
23.8 fl.oz.	Natular 2EC
12.3 fl.oz.	Water
0.9 lbs	HiSil 233 (silicon dioxide)
	Tumbling mixer
	Spray apparatus (such as a hand pump or other low pressure sprayer)

HiSil 233 is added to achieve a dry, free-flowing mixture. The amount required for on-site blending may vary depending on the particle size distribution and moisture content on the sand.

1. Measure the time required for a level funnel of (unblended) sand to empty
2. Load the sand into a tumbling mixer such as a cement mixer
3. Shake or agitate NATULAR 2EC well
4. In a separate mix tank, add NATULAR 2EC to water and blend well
5. While the mixer is rotating, spray the mixed NATULAR 2EC solution onto the tumbling sand until all liquid is used
6. Mix (tumble) the sand until sand is uniformly wet (usually five to ten minutes). Turn off mixer.
7. Dig a hole in the center of the sand, and add HiSil. Cover the mixture with sand from the tumbler to minimize dusting. Start the mixer and tumble until free flowing (approximately 5 minutes).
8. Measure the time required for a level funnel of NATULAR 2EC blended sand to empty. If the flow rate is significantly slower than measured in Step No. 1, repeat step 6, adding incrementally more HiSil. If it flows at a faster rate or is excessively dusty, reduce the amount of HiSil in subsequent batches.

Do not allow NATULAR 2EC blended granules to drift.

Store unused NATULAR 2EC blended sand in a covered, secure, dry storage area away from wind and precipitation. Store in containers only (e.g., tumbler, hopper, tote, drum). Do not store for long periods. Avoid blending more material than may be used in 72 hours.]

{Storage & Disposal statement for rigid, non-refillable container, 5 gallons or less}

STORAGE AND DISPOSAL
Do not contaminate water, food or feed by storage or disposal. Pesticide Storage: Store in original container only. In case of leak or spill, contain material with absorbent materials and dispose as waste.

Pesticide Disposal: Wastes resulting from the use of this product may be disposed of on site according to label use directions or at an approved waste disposal facility.

Container Disposal: Non-refillable container. Do not reuse or refill this container. Offer for recycling, if available. Triple rinse or pressure rinse container (or equivalent) promptly after emptying. **Triple rinse** as follows: Empty the remaining contents into application equipment or a mix tank and drain for 10 seconds after the flow begins to drip. Fill the container ¼ full with water and recap. Shake for 10 seconds. Pour rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Drain for 10 seconds after the flow begins to drip. Repeat this procedure two more times. **Pressure rinse** as follows: Empty the remaining contents into application equipment or a mix tank and continue to drain for 10 seconds after the flow begins to drip. Hold container upside down over application equipment or mix tank or collect rinsate for later use or disposal. Insert pressure rinsing nozzle in the side of the container, and rinse at about 40 PSI for at least 30 seconds. Drain for 10 seconds after the flow begins to drip.

{Storage & Disposal statement for rigid, non-refillable container, greater than 5 gallons }

STORAGE AND DISPOSAL

Do not contaminate water, food or feed by storage or disposal.

Pesticide Storage: Store in original container only. In case of leak or spill, contain material with absorbent materials and dispose as waste.

Pesticide Disposal: Wastes resulting from the use of this product may be disposed of on site according to label use directions or at an approved waste disposal facility.

Container Disposal: Non-refillable container. Do not reuse or refill this container. Offer for recycling, if available. Triple rinse container (or equivalent) promptly after emptying. **Triple rinse** as follows: Empty the remaining contents into application equipment or a mix tank. Fill the container ¼ full with water. Replace and tighten closures. Tip container on its side and roll it back and forth, ensuring at least one complete revolution, for 30 seconds. Stand the container on its end and tip it back and forth several times. Turn the container over onto its other end and tip it back and forth several times. Empty the rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Repeat this procedure two more times.

{Storage & Disposal statement for rigid, refillable container}

STORAGE AND DISPOSAL

Do not contaminate water, food or feed by storage or disposal.

Pesticide Storage: Store in original container only. In case of leak or spill, contain material with absorbent materials and dispose as waste.

Pesticide Disposal: Wastes resulting from the use of this product may be disposed of on site according to label use directions or at an approved waste disposal facility.

Container Disposal: Refillable container. Refill this container with pesticide only. Do not reuse this container for any other purpose. Cleaning the container before final disposal is the responsibility of the person disposing of the container. Cleaning before refilling is the responsibility of the refiller. To clean the container before final disposal, empty the remaining contents from this container into application equipment or mix tank. Fill the container about 10% full with water and, if possible, spray all sides while adding water. If practical, agitate vigorously or Recirculate water with the pump for two minutes. Pour or pump rinsate into application equipment or rinsate collection system. Repeat this rinsing procedure two more times.

Warranty

To the extent consistent with applicable law CLARKE MOSQUITO CONTROL PRODUCTS, INC. makes no warranty, express or implied concerning the use of this product other than as indicated on the label. Buyer assumes all risk of use/handling of this material when use and/or handling is contrary to label instructions.

{Optional Market Label}

[ FOR ORGANIC PRODUCTION]

[Terms and Conditions of Use]

Clarke Mosquito Control Products, Inc. acknowledges that this product may be misbranded if one or more of its ingredients, active and/or inert, is reclassified as non-organic and/or removed from the United States Department of Agriculture (USDA) National List of approved substances for use in organic production and handling. If one or more of the ingredients in this pesticide product are so reclassified and/or removed (delisted) from the National List, Clarke Mosquito Control Products, Inc. will take appropriate remedial measures with respect to the labeling for this product.]

**Manufactured [for] [by]
Clarke Mosquito Control Products, Inc.
159 North Garden Avenue
Roselle, IL 60172
U.S.A.**

EPA Reg. No. 8329-82
EPA Est. No. 8329-IL-XX

Lot: _____
Net Contents: _____

[Naturalyte® is a Trademark of Dow AgroSciences LLC]
Natular™ is a Trademark of Clarke Mosquito Control Products, Inc.