

8329-43

4/9/2009

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UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

WASHINGTON, D.C. 20460

OFFICE OF  
PREVENTION, PESTICIDES

APR 9 2009

Ms. Karen J. Larsen  
Clarke Mosquito Control Products, Inc.  
159 N. Garden Avenue  
Roselle, Illinois 60172

Dear Ms. Larsen:

Subject: Amendment- label amendment per agency letter dated March  
18, 2009  
Biomist 31+66 ULV  
EPA Registration Number 8329-43  
Your submission dated March 24, 2009

The application referred to above, submitted in connection  
with registration under the Federal Insecticide, Fungicide, and  
Rodenticide Act, as amended, is acceptable.

A stamped copy of your label is enclosed for your records.

Sincerely yours,

A handwritten signature in dark ink, appearing to read "Richard Gebken".

Richard Gebken  
Product Manager (13)  
Insecticide Branch  
Registration Division (7505P)

Enclosure



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# BIOMIST® 31+66 ULV

{Alternate Brand Name: CLARKE BIOMIST 31+66 ULV"}

For Use Outdoors as an Ultra-Low Volume (ULV) Application to Control Adult Mosquitoes in Residential and Recreational Areas.

[For Aerial or Ground Application]

[For the control of adult mosquitoes within or adjacent to listed growing crops and range grasses]

## Active Ingredients

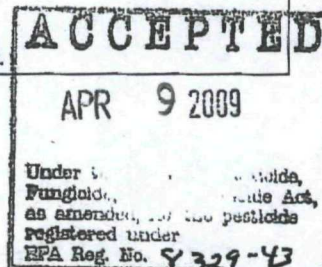
Permethrin (3-Phenoxyphenyl) methyl (+/-) cis, trans-3-(2,2-dichlorethenyl)-2,2-dimethyl cyclopropanecarboxylate .....	31.28%
Piperonyl Butoxide, Technical * .....	66.00%
Other Ingredients .....	2.72%
	100.00%

Contains 2.86 pounds of Permethrin and  
6.09 pounds of Piperonyl Butoxide per gallon.

\* Equivalent to 80% (butylcarbityl)(6-propylpiperonyl) ether and 20% related compounds.

**KEEP OUT OF REACH OF CHILDREN  
CAUTION**

Manufactured For  
**CLARKE MOSQUITO CONTROL PRODUCTS, INC.**  
159 N. GARDEN AVENUE  
ROSELLE, ILLINOIS 60172



EPA Reg. No.: 8329-43

EPA Est. No.: \_\_\_\_\_

NET CONTENTS: \_\_\_\_\_

BATCH/LOT NO.: \_\_\_\_\_

## FIRST AID

Have product container or label with you when calling a poison control center or doctor, or going for treatment. For Medical Emergencies, call the International Poison Control Center at 1-800-214-7753.

<b>IF SWALLOWED:</b>	Immediately call a poison control center or doctor. Do not induce vomiting unless told to do so by a poison control center or doctor. Have person sip a glass of water if able to swallow. Do not give anything by mouth to an unconscious person.
<b>IF INHALED:</b>	Move person to fresh air. If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably mouth-to-mouth. Call a poison control center or doctor for further treatment advice.
<b>IF ON SKIN OR CLOTHING:</b>	Take off contaminated clothing. Rinse skin immediately with plenty of water for 15-20 minutes. Call a poison control center or doctor for treatment advice.

## PRECAUTIONARY STATEMENTS

### HAZARDS TO HUMANS AND DOMESTIC ANIMALS

**Caution.** Harmful if swallowed. Harmful if absorbed through skin or inhaled. Avoid contact with skin, eyes, or clothing. Avoid breathing of spray mist. Prolonged or frequently repeated skin contact may cause allergic reactions in some individuals. Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum or using tobacco. Remove contaminated clothing and wash before use.



### ENVIRONMENTAL HAZARDS

This pesticide is extremely toxic to aquatic organisms, including fish and aquatic invertebrates. Runoff from treated areas or deposition of spray droplets into a body of water may be hazardous to fish and aquatic invertebrates. Do not apply over bodies of water (lakes, rivers, permanent streams, natural ponds, commercial fish ponds, swamps, marshes or estuaries), except when necessary to target areas where adult mosquitoes are present, and weather conditions will facilitate movement of applied material away from the water in order to minimize incidental deposition into the water body. Do not contaminate bodies of water when disposing of equipment rinsate or wash waters.

This product is highly toxic to bees exposed to direct treatment on blooming crops or weeds. Do not apply this product or allow it to drift to blooming crops or weeds while bees are actively visiting the treatment area, except when applications are made to prevent or control a threat to public and/or animal health determined by a state, tribal or local health or vector control agency on the basis of documented evidence of disease causing agents in vector mosquitoes, or the occurrence of mosquito-borne disease in animal or human populations, or if specifically approved by the state or tribe during a natural disaster recovery effort.

### PHYSICAL OR CHEMICAL HAZARDS

Do not use or store near heat or open flame.

### DIRECTIONS FOR USE

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

Before making the first application in a season, it is advisable to consult with the state or tribal agency with primary responsibility for pesticide regulation to determine if other regulatory requirements exist.

For use only by federal, state, tribal or local government officials responsible for public health or vector control, or by persons certified in the appropriate category or otherwise authorized by the state or tribal lead pesticide regulatory agency to perform adult mosquito control applications, or by persons under their direct supervision.

Do not allow spray treatment to drift on cropland (other than crops listed), or potable water supplies.

BIOMIST® 31+66 ULV is recommended for applications as an ultra low volume (ULV) nonthermal aerosol (cold fog) to control adult mosquitoes in residential and recreational areas and other areas these insects occur, such as but not limited to parks, campsites, woodlands, athletic fields, golf courses, residential areas and municipalities, gardens, playgrounds, recreational areas and overgrown waste areas.

BIOMIST® 31+66 ULV can be applied over specific growing crops and range grasses prior to harvest for the control of adult mosquitoes within or adjacent to these areas. Application can only be made where the following crops are present:

Alfalfa	Cauliflower	Range Grasses	Pepper, bell
Almonds	Cherries	Horseradish	Pistachio
Apples	Corn, fodder	Leafy Vegetables (except Brassica)	Potato
Artichoke, globe	Corn, forage	Lettuce, head	Soybeans
Asparagus	Corn, grain (field & pop)	Mushrooms	Squash
Avocado	Corn, stover	Onion, dry bulb	Tomatoes
Broccoli	Corn, sweet kernel + cob with husks removed	Peaches	Vegetable, cucurbits
Brussels Sprouts	Eggplant	Pears	Walnuts
Cabbage	Filbert		
Celery	Garlic		

In the treatment of corrals, feedlots, swine lots, poultry ranges and zoos cover any exposed drinking water, drinking fountains and animal feed before application.

For best results treat when mosquitoes are most active and weather conditions are conducive to keeping the spray cloud close to the ground. An inversion of air temperatures and a light breeze is preferable. Apply only when



ground wind speed is greater than 1 mph. Air temperatures should be greater than 50 °F when conducting all types of applications.

Do not treat a site with more than 0.007 pounds of permethrin per acre in a twenty-four hour period. Do not apply more than 0.18 pounds of permethrin per acre per year. More frequent applications may be made to prevent or control a threat to public and/or animal health determined by a state, tribal, or local health or vector control agency on the basis of documented evidence of disease causing agents in vector mosquitoes or the occurrence of mosquito-borne disease in animal or human populations, or if specifically approved by the state or tribe during a natural disaster recovery effort.

#### SPRAY DROPLET SIZE DETERMINATION

**Ground-based Application:** Spray equipment must be adjusted so that the volume median diameter (VMD) is between 8 and 30 microns ( $8 \leq D_v 0.5 \leq 30 \text{ um}$ ) and that 90% of the spray is contained in droplets smaller than 50 microns ( $D_v 0.9 < 50 \text{ um}$ ). Directions from the equipment manufacturer or vendor, pesticide registrant, or a test facility using a laser-based measurement instrument must be used to adjust equipment to produce acceptable droplet size spectra. Application equipment must be tested at least annually to confirm that pressure at the nozzle and nozzle flow rate(s) are properly calibrated.

**Aerial Application:** Spray equipment must be adjusted so that the volume median diameter produced is less than 60 microns ( $D_v 0.5 < 60 \text{ um}$ ) and that 90% of the spray is contained in droplets smaller than 115 microns ( $D_v 0.9 < 115 \text{ um}$ ). The effects of flight speed and, for non-rotary nozzles, nozzle angle on the droplet size spectrum must be considered. Directions from the equipment manufacturer or vendor, pesticide registrant, or a test facility using a wind tunnel and laser-based measurement instrument must be used to adjust equipment to produce acceptable droplet size spectra. Application equipment must be tested at least annually to confirm that pressure at the nozzle and nozzle flow rate(s) are properly calibrated.

#### GROUND ULV APPLICATION

Apply BIOMIST® 31+66 ULV through standard ULV cold aerosol or non-thermal aerosol (Cold Fog) generators undiluted at a flow rate of 0.9 to 3.8 fluid ounces per minute, and an average vehicle speed of 20 MPH. If a different vehicle speed is used, adjust rate accordingly. These rates are equivalent to 0.00175 to 0.007 pounds of permethrin per acre. BIOMIST® 31+66 ULV may also be applied by diluting with a suitable solvent such as mineral oil and applying so as not to exceed 0.007 pounds Permethrin per acre. The following charts represent suggested dilution and application rates for ground ULV applications. If an alternate dilution rate is used, adjust flow rate accordingly.

Vary flow rate according to vegetation density and mosquito population. Use higher flow rate in heavy vegetation or when populations are high.

#### CONDITIONS and RATES to USE for MOSQUITO CONTROL

Permethrin Pounds per Acre	Application Rates Fl. oz./Minute				Fl.oz. Biomist 31+66 ULV per Acre
	5 MPH	10 MPH	15 MPH	20 MPH	
0.007	0.9	1.9	2.8	3.8	0.31
0.0035	0.5	0.9	1.4	1.9	0.16
0.00175	0.2	0.5	0.7	0.9	0.08

#### FOR A 1:2 BIOMIST 31+66 ULV/SOLVENT DILUTION RATIO

Mix one (1) part BIOMIST® 31+66 with two (2) parts solvent and apply at the following rates.

Permethrin Pounds per Acre	Application Rates Fl. oz./Minute				Fl.oz. Finished Spray per Acre
	5 MPH	10 MPH	15 MPH	20 MPH	
0.007	2.8	5.7	8.5	11.4	0.94
0.0035	1.4	2.8	4.3	5.7	0.47
0.00175	0.7	1.4	2.1	2.8	0.23



**FOR A 1:4 BIOMIST 31+66 ULV/SOLVENT DILUTION RATIO**

Mix one (1) part BIOMIST® 31+66 with four (4) parts solvent and apply at the following rates.

Permethrin Pounds per Acre	Application Rates Fl. oz./Minute				Fl.oz. Finished Spray per Acre
	5 MPH	10 MPH	15 MPH	20 MPH	
0.007	4.7	9.5	14.2	19.0	1.57
0.0035	2.4	4.7	7.1	9.5	0.78
0.00175	1.2	2.4	3.6	4.7	0.39

**FOR A 1:8 BIOMIST 31+66 ULV/SOLVENT DILUTION RATIO**

Mix one (1) part BIOMIST® 31+66 with eight (8) parts solvent and apply at the following rates.

Permethrin Pounds per Acre	Application Rates Fl. oz./Minute				Fl.oz. Finished Spray per Acre
	5 MPH	10 MPH	15 MPH	20 MPH	
0.007	8.5	17.1	25.6	34.2	2.82
0.0035	4.3	8.5	12.8	17.1	1.41
0.00175	2.1	4.3	6.4	8.5	0.70

For proper application, mount the equipment so that the nozzle is at least 4 ½ feet above ground level and directed out the back of the vehicle. Failure to follow the above directions may result in reduced effectiveness.

**Urban ULV Mosquito Control Applications:** For control of resting or flying adult mosquitoes in areas such as utility tunnels, sewers, storm drains and catch basins, pipe chases, underground basements, underground passages, parking decks, crawl spaces or uninhabited buildings, apply BIOMIST® 31+66 ULV undiluted using mechanical foggers, hand-held or truck-mounted ULV equipment, or thermal foggers suitable for this application. Apply BIOMIST® 31+66 ULV at rates up to but not exceeding 0.007 lbs. permethrin per acre.

**AERIAL APPLICATION**

BIOMIST® 31+66 ULV may be applied undiluted at rates 0.16 to 0.31 fl.oz. BIOMIST® 31+66 ULV per acre by fixed wing or rotary aircraft equipped with suitable ULV application equipment. BIOMIST® 31+66 ULV may also be diluted with a suitable solvent such as mineral oil and applied by aerial ULV equipment so long as 0.31 fluid ounce per acre of BIOMIST® 31+66 ULV is not exceeded. Aerial application shall be made at altitudes ranging from 75 to 300 feet. Aerial applications shall only be made when recommended by public health officials and trained personnel of mosquito abatement districts and other mosquito control programs.

**IN FLORIDA:** Do not apply by aircraft unless approved by the Florida Department of Agriculture & Consumer Services.

*[Storage and Disposal for non-refillable containers, capacity 5 gallons or less]*

**STORAGE & DISPOSAL**

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

**PESTICIDE STORAGE AND SPILL PROCEDURES:** Store upright at room temperature. Avoid exposure to extreme temperatures. In case of spill or leakage, soak up with an absorbent material such as sand, sawdust, earth, fuller's earth, etc. Dispose of with chemical waste.

**PESTICIDE DISPOSAL:** Wastes resulting from the use of this product must be disposed of on site or at an approved waste disposal facility.

**CONTAINER HANDLING:** Nonrefillable container. Do not reuse or refill this container. Triple rinse (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 mineral oil 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. Then offer for recycling if available, or puncture and dispose of in a sanitary landfill, or by incineration, or, if allowed by state and local authorities, by burning. If burned, stay out of smoke.



*[Storage and Disposal for non-refillable containers, capacity greater than 5 gallons]***STORAGE & DISPOSAL**

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

**PESTICIDE STORAGE AND SPILL PROCEDURES:** Store upright at room temperature. Avoid exposure to extreme temperatures. In case of spill or leakage, soak up with an absorbent material such as sand, sawdust, earth, fuller's earth, etc. Dispose of with chemical waste.

**PESTICIDE DISPOSAL:** Wastes resulting from the use of this product must be disposed of on site or at an approved waste disposal facility.

**CONTAINER HANDLING:** Nonrefillable container. Do not reuse or refill this container. Triple rinse (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 mineral oil. 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 rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Repeat this procedure two more times. Then offer for recycling if available or reconditioning if appropriate, or puncture and dispose of in a sanitary landfill, or by other procedures approved by state and local authorities.

*[Storage and Disposal for refillable containers]***STORAGE & DISPOSAL**

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

**PESTICIDE STORAGE AND SPILL PROCEDURES:** Store upright at room temperature. Avoid exposure to extreme temperatures. In case of spill or leakage, soak up with an absorbent material such as sand, sawdust, earth, fuller's earth, etc. Dispose of with chemical waste.

**PESTICIDE DISPOSAL:** Wastes resulting from the use of this product must be disposed of on site or at an approved waste disposal facility.

**CONTAINER HANDLING:** 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 percent full with water. Agitate vigorously or recirculate water with the pump for 2 minutes. Pour or pump rinsate into rinsate collection system. Repeat this rinsing procedure two more times. Then offer for recycling if available or reconditioning if appropriate, or puncture and dispose of in a sanitary landfill, or by other procedures approved by state and local authorities.

IN CASE OF MEDICAL EMERGENCY, CALL THE INTERNATIONAL POISON CONTROL CENTER  
1-800-214-7753

IN CASE OF TRANSPORTATION EMERGENCY, CALL INFO-TRAC 1-800-553-5053

**FOR MORE INFORMATION CALL: 1-800-323-5727**

**NOTICE:** To the extent provided by law, seller makes no warranty, expressed 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.

BIOMIST® is a Registered Trademark of Clarke Mosquito Control Products, Inc.