



U.S. ENVIRONMENTAL PROTECTION AGENCY  
Office of Pesticide Programs  
Registration Division (7505P)  
1200 Pennsylvania Ave., N.W.  
Washington, D.C. 20460

EPA Reg. Number:

8329-108

Date of Issuance:

3/28/18

NOTICE OF PESTICIDE:

Registration  
 Reregistration  
(under FIFRA, as amended)

Term of Issuance:

Conditional

Name of Pesticide Product:

MERUS 3.0

Name and Address of Registrant (include ZIP Code):

Jonathan D. Ostrowski  
Regulatory Manager  
Clarke Mosquito Control Products, Inc.  
675 Sidwell Ct.  
S. Charles, IL 60174

**Note:** Changes in labeling differing in substance from that accepted in connection with this registration must be submitted to and accepted by the Registration Division prior to use of the label in commerce. In any correspondence on this product always refer to the above EPA registration number.

On the basis of information furnished by the registrant, the above named pesticide is hereby registered under the Federal Insecticide, Fungicide and Rodenticide Act.

Registration is in no way to be construed as an endorsement or recommendation of this product by the Agency. In order to protect health and the environment, the Administrator, on his motion, may at any time suspend or cancel the registration of a pesticide in accordance with the Act. The acceptance of any name in connection with the registration of a product under this Act is not to be construed as giving the registrant a right to exclusive use of the name or to its use if it has been covered by others.

This product is conditionally registered in accordance with FIFRA section 3(c)(7)(A). You must comply with the following conditions:

1. Submit and/or cite all data required for registration/reregistration/registration review of your product under FIFRA when the Agency requires all registrants of similar products to submit such data.

Signature of Approving Official:

Kable Bo Davis, Product Manager 03  
Invertebrate & Vertebrate Branch 1, Registration Division (7505P)

Date:

3/28/18

2. You are required to comply with the data requirements described in the DCIs identified below:

- a. Pyrethrins      GDCI-069001-1058  
                         GDCI-069001-1195  
                         GDCI-069001-1290  
                         PDCI-069001-26530

You must comply with all of the data requirements within the established deadlines. If you have questions about the DCIs listed above, you may contact the Chemical Review Manager in the Pesticide Reevaluation Division: <http://www.epa.gov/pesticide-contacts/contacts-office-pesticide-programs-pesticide-re-evaluation-division>

3. Make the following label changes before you release the product for shipment:

- Revise the EPA Registration Number to read, “EPA Reg. No. 8329-108.”

4. Submit one copy of the final printed label for the record before you release the product for shipment.

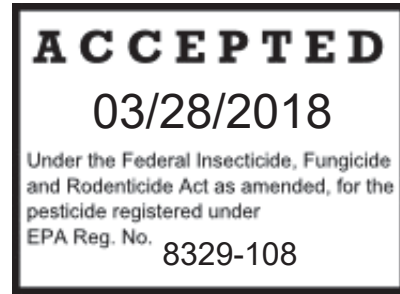
Should you wish to add/retain a reference to the company’s website on your label, then please be aware that the website becomes labeling under the Federal Insecticide Fungicide and Rodenticide Act and is subject to review by the Agency. If the website is false or misleading, the product would be misbranded 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.

If you fail to satisfy these data requirements, EPA will consider appropriate regulatory action including, among other things, cancellation under FIFRA section 6(e). Your release for shipment of the product constitutes acceptance of these conditions. A stamped copy of the label is enclosed for your records. Please also note that the record for this product currently contains the following CSF:

- Basic CSF dated 08/18/2017


If you have any questions, please contact Tim Ciarlo by phone at 703-347-8082, or via email at [Ciarlo.Timothy@epa.gov](mailto:Ciarlo.Timothy@epa.gov).

Text in [brackets] indicates optional labeling claims  
 [Alternate Brand Name: CMP119-019]



# MERUS™ 3.0

[[A][ULV] Mosquito Adulticide]  
 [For Ultra Low Volume (ULV) Application]  
 [For [Aerial] [or] [and] [Ground] ULV Application]  
 [Use Undiluted or Diluted]  
 [For control of adult mosquitoes in Outdoor [Residential,] [Recreational,] [Urban,] [Industrial,]  
 [and] [Agricultural] [Areas]  
 [For use over [agricultural crops] [, including those intended for human consumption,]  
 [pasture,] [and] [rangeland]  
 [Quick Knockdown]  
 [Contains pyrethrins – a botanical insecticide derived from chrysanthemums]  
 [Controls mosquitoes which may carry [West Nile Virus,] [St. Louis Encephalitis,] [Eastern  
 Equine Encephalitis,] [EEE,] [Zika,] [Zika Virus,] [Dengue,] [and] [Chikungunya][.]]

[  ] [For use in Organic Production]

<b>Active Ingredient:</b>	
Pyrethrins, a botanical insecticide .....	5.0%
<b>Other Ingredients</b> .....	<u>95.0%</u>
	100.0%
Contains 0.365 pounds Pyrethrins per gallon	

## KEEP OUT OF REACH OF CHILDREN

### PRECAUTIONARY STATEMENTS

#### HAZARDS TO HUMANS AND DOMESTIC ANIMALS

Prolonged or frequently repeated skin contact may cause allergic reactions in some individuals.

**Personal Protective Equipment (PPE):** Mixers, loaders, applicators and other handlers must wear the following: long-sleeve shirt, long pants, shoes and socks. See engineering controls for additional requirements.

**User Safety Requirements:** Follow manufacturer’s instructions for cleaning/maintaining PPE. If no such instructions for washables exist, use detergent and hot water. Keep and wash PPE separately from other laundry. Discard clothing and other absorbent materials that have been drenched or heavily contaminated with the product’s concentrate. Do not reuse them.

**User Safety Recommendations:** Users should wash hands before eating, drinking, chewing gum, tobacco, or using the toilet. Users should remove clothing/PPE immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing. Users should remove PPE immediately after handling this product. As soon as possible, wash thoroughly and change into clean clothing.

**Engineering Controls:** Pilots must use an enclosed cockpit that meets the requirements listed in the Worker Protection Standard (WPS) for agricultural pesticides [40 CFR 170.240(d)(6)]. Human flagging is prohibited. Flagging to support aerial application is limited to use of the Global Positioning System (GPS) or mechanical flaggers.

### **ENVIRONMENTAL HAZARDS**

This pesticide is 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. 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. 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 washwaters.

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 foraging 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.

### **DIRECTIONS FOR USE**

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

### **USE RESTRICTIONS**

This product is not for use in outdoor residential misting systems. Do not apply this product with thermal fogging equipment. Do not apply this product in enclosed spaces using hand-held or portable backpack spray equipment. Do not make applications during rain.

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.

IN CALIFORNIA: This product is to be applied by County Health Department, State Department of Health Services, Mosquito and Vector Control or Mosquito Abatement District personnel, or persons under contract to these entities only.

IN FLORIDA: Aerial applications of this product require trained personnel to perform industry accepted assays to monitor resistance formation in targeted mosquitoes.

The maximum application rate for wide-area mosquito adulticide applications is 0.0025 lb a.i./acre per day. When targeting *Aedes taeniorhynchus* and other difficult species, applications may be made up to 0.008 lb a.i./acre/day.

Do not apply more than 0.2 lb a.i./acre/year in any treated area. More frequent treatments 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 DRIFT MANAGEMENT for WIDE AREA MOSQUITO ABATEMENT

A variety of factors including weather conditions (e.g., wind direction, wind speed, temperature, relative humidity) and method of application (e.g., ground, aerial, airblast, chemigation) can influence pesticide drift. The applicator must evaluate all factors and make appropriate adjustments when applying this product.

WIND SPEED: Apply only when wind speed is greater than 1 mph.

#### USE INFORMATION

MERUS™ 3.0 is approved for application as an Ultra Low Volume (ULV) non-thermal aerosol (cold fog) in mosquito adulticiding programs involving outdoor residential, urban, industrial, and recreational areas where adult mosquitoes are present in annoying numbers, and in vegetation surrounding parks, woodlands, swamps, marshes, overgrown areas and golf courses.

MERUS™ 3.0 may be applied over crops or to areas favoring drift over crops, including row, tree, fruit, citrus, pasture and other areas where agricultural enterprises take place.

MERUS™ 3.0 may be used undiluted or diluted with suitable light mineral oil and applied as an ultralow volume (ULV) non-thermal aerosol (cold fog) or in suitable mechanical spray equipment. MERUS 3.0 cannot be diluted in water.

#### SPRAY DROPLET SIZE DETERMINATION

**Ground-based wide-area mosquito abatement application:**

Spray equipment must be adjusted so that the volume median diameter is less than 30 microns ( $Dv\ 0.5 < 30\ \mu m$ ) and that 90% of the spray is contained in droplets smaller than 50 microns ( $Dv\ 0.9 < 50\ \mu m$ ). 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 wide-area mosquito abatement application:**

Spray equipment must be adjusted so that the volume median diameter produced is less than 60 microns ( $Dv\ 0.5 < 60\ \mu m$ ) and that 90% of the spray is contained in droplets smaller than 80 microns ( $Dv\ 0.9 < 80\ \mu m$ ). 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**

To control Mosquitoes, apply MERUS™ 3.0 at a flow rate of 3.4 to 5.3 fluid ounces per minute at an average vehicle speed of 10 MPH using a swath width of 300 feet for acreage calculations (see chart below). These rates are equivalent to 0.0016 to 0.0025 lb a.i./acre. Within this range, vary flow rate according to vegetation density and mosquito population. Use higher rate in heavy vegetation or when pest population numbers are high. For best results, apply when mosquitoes are most active and meteorological conditions are conducive to keeping the spray cloud close to the ground. Application in calm air conditions is to be avoided. Apply only when ground wind speed is greater than or equal to 1 mph. All types of applications should be conducted at temperatures above 50°F.

Use the [following table][table below][table on the following panel] to calculate application rates:]

lb a.i. /acre	Application Rates (Fl.oz./Minute) at vehicle speeds of:				Fl. Oz. MERUS™ 3.0/acre
	5 MPH	10 MPH	15 MPH	20 MPH	
0.0025	2.7	5.3	8.0	10.6	0.88
0.0021	2.2	4.5	6.7	8.9	0.74
0.0018	1.9	3.8	5.7	7.7	0.63
0.0016	1.7	3.4	5.1	6.8	0.56

Applications up to 2.81 fl.oz. (0.008 lb a.i.)/ acre may be made when targeting *Aedes taeniorhynchus* or other difficult to control species.

lb a.i. /acre	Application Rates (Fl.oz./Minute) at vehicle speeds of:				Fl. Oz. MERUS™ 3.0/Acre
	5 MPH	10 MPH	15 MPH	20 MPH	
0.008	8.5	17.0	25.5	34.0	2.81

If dilution is preferred, adjust the flow rate accordingly to achieve 0.0016 to 0.0025 lb a.i./acre. Applicable flow rates for a 1 part concentrate to 1 part oil dilution are presented. If an alternate dilution rate is used, adjust the flow rate accordingly.

Rates to use a 2.5% pyrethrins dilution (1 to 1 dilution ratio) for mosquito control:

lb a.i. /acre	Application Rates (Fl.oz./Minute) at vehicle speeds of:				Fl. Oz. Finished Spray/acre
	5 MPH	10 MPH	15 MPH	20 MPH	
0.0025	5.3	10.6	15.9	21.3	1.75
0.0021	4.5	8.9	13.4	17.9	1.47
0.0018	3.8	7.7	11.5	15.3	1.26
0.0016	3.4	6.8	10.2	13.6	1.12

**Urban ULV Mosquito Control:** MERUS™ 3.0 may be applied for control of resting or flying adult mosquitoes in urban and industrial areas such as utility tunnels, pipe chases, underground basements, underground passages, parking decks, open parking garages, abandoned warehouses, crawl spaces, uninhabited buildings, rail yards, waste yards, junkyards, tire dumps, and other areas where adult mosquitoes might be found. Apply using handheld or truck-mounted ULV equipment, or other spray equipment suitable for this application. Apply at rates up to but not exceeding 0.0025 lb a.i./acre/day (0.88 fluid ounces of undiluted spray/acre/day). Do NOT use hand-held equipment for this type of application in enclosed spaces.

MERUS™ 3.0 may also be applied with non-thermal, portable, motorized backpack equipment adjusted to deliver ULV particles of less than 100 microns VMD. Use 0.56 to 0.88 fl.oz. of the undiluted spray per acre (equal to 0.0016 to 0.0025 lb.ai./acre) as a 50 ft (15.2 m) swath while walking at a speed of 2 mph (3.2 kph). Dilute with a suitable mineral oil if dilution is preferred. Do NOT use portable backpack equipment for application in enclosed spaces.

#### **AERIAL APPLICATION**

Apply using nozzle height of no less than 100 feet for fixed wing aircraft or 75 feet for rotary wing aircraft above the ground or canopy, unless specifically approved by the state or tribe based on public health needs.

Apply by suitable fixed wing or rotary aircraft equipped with nozzles capable of producing a non-thermal (cold fog) aerosol spray cloud with appropriately sized droplets. Flow rate and swath width should be set so as to achieve 0.56 to 0.88 fluid ounces of undiluted MERUS™ 3.0 per acre.

MERUS™ 3.0 may also be diluted with suitable diluent light mineral oil and applied by suitable aircraft at appropriate flow rates to achieve a dosage of 0.0016 to 0.0025 lb a.i./acre. Diluted or undiluted, applications up to 2.81 fl.oz. MERUS™ 3.0 (0.008 lb a.i.)/acre/day may be made when targeting *Aedes taeniorhynchus* or other difficult to control species.

## STORAGE AND DISPOSAL

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

**PESTICIDE STORAGE:** Store in a cool, dry place. Keep container closed.

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

### CONTAINER HANDLING:

[For Nonrefillable containers of 5 gallons or less] [Nonrefillable container. Do not reuse or refill this container. Triple 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 mineral oil and recap. Shake for 10 seconds. Pour rinsate into application equipment or a rinse 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. 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.]

[For Nonrefillable containers over 5 gallons:] [Nonrefillable container. Do not reuse or refill this container. Triple rinse container (or equivalent) promptly after emptying. Triple rinse as follows: Empty the remaining contents into the 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 the rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Repeat this procedure two more times.] 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.]

[For Refillable Containers] [Refillable container. Refill this container with pesticide only. Do not reuse this container for any other purpose. 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. 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.]

[Have the product container or label with you when calling a poison control center or doctor, or going for treatment. **For medical emergencies or information on health concerns for this product, you may call 1-800-214-7753.**] [For non-emergency information, on product usage for example, call 1-800-323-5727.]

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

[NOTICE: To the extent consistent with applicable law, [seller] [Clarke Mosquito Control Products, Inc.] makes no other warranties, express or implied, of merchantability or of fitness for a particular purpose or otherwise, that extend beyond the statements made on this label. To the extent consistent with applicable law, Buyer assumes all risk of use/handling of this material when use and/or handling is contrary to label instructions.]

[MERUS™ - Trademark of Clarke Mosquito Control Products, Inc.]

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

EPA Reg. No.: 8329-XXX  
EPA Est. No.:  
NET CONTENTS: \_\_\_\_\_  
LOT NO.: \_\_\_\_\_  
[DATE OF MANUFACTURE: ]