

8329-92

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UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

WASHINGTON, D.C. 20460

OFFICE OF
CHEMICAL SAFETY AND
POLLUTION PREVENTION

October 18, 2011

Karen J. Larson
Director, Global Registrations
Clarke Mosquito Control Products, Inc.
110 E. Irving Park Rd., 4th Floor
Roselle, IL 60172

Subject: Label Amendment—Reinstating ag use sites for mosquito adulticide applications, and amendment of primary brand name, with new CSF that lists the new product brand name

Product Name: Merus™ (formerly CMP119-003)

EPA Reg. No.: 8329-92

Application Dated: October 12, 2011

Decision Number: 456244

Dear Ms. Larson:

The labeling referred to above, submitted in connection with registration under the Federal Insecticide, Fungicide, and Rodenticide Act, as amended, is acceptable. A copy of the label stamped "Accepted" is enclosed for your records. Also, the revised basic confidential statement of formula (CSF) for the aforementioned product dated 12 October, 2011 is acceptable. The revised accepted basic CSF (dated 12 October, 2011) supersedes) the previous basic CSF (dated 18 August, 2011) and all other previous CSFs.

If you have any questions, you may contact Clayton Myers at (703) 347-8874 or myers.clayton@epa.gov.

Sincerely,

A handwritten signature in black ink, appearing to be "R. Gebken".

for Richard Gebken, Product Manager
Insecticide Branch
Registration Division, 7505P

Enclosure: Stamped Approved Label

Text in [brackets] indicates optional labeling claims

Merus™

[For control of adult mosquitoes in Outdoor Residential, Recreational and other outdoor areas]
 [Quick Knockdown]
 [Contains pyrethrins – a botanical insecticide derived from chrysanthemums]
 [For Aerial or Ground Application]
 [A PyGanic® Product; PyGanic® is a registered trademark of McLaughlin Gormley King Company]

Active Ingredient:	
Pyrethrins, a botanical insecticide.....	5.0%
Other Ingredients	95.0%
	100.0%
Contains 0.36 pounds Pyrethrins per gallon	

**KEEP OUT OF REACH OF CHILDREN
CAUTION**

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 1-800-214-7753.	
IF ON SKIN OR CLOTHING:	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.
NOTE TO PHYSICIAN: May pose an aspiration pneumonia hazard. Contains petroleum distillate.	

PRECAUTIONARY STATEMENTS

HAZARDS TO HUMANS AND DOMESTIC ANIMALS

Caution. Avoid contact with skin or clothing. Prolonged or frequently repeated skin contact may cause allergic reactions in some individuals. Contains petroleum distillate. Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum, or using tobacco. Remove and wash contaminated clothing before reuse.

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.

ACCEPTED
 OCT 18 2011
 Under the Federal Insecticide, Fungicide,
 and Rodenticide Act, as amended, for the
 pesticide registered under:

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.

Engineering Controls: Pilots must use an enclosed cockpit that meet 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.

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 recover effort..

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 wash waters.

DIRECTIONS FOR USE

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

GENERAL PRECAUTIONS AND RESTRICTIONS:

Not for use in outdoor residential misting systems.

Note: Merus cannot be diluted in water. Dilute this product with light mineral oil if dilution is preferred.

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: Do not apply by aircraft unless approved by the Florida Department of Agriculture and Consumer Services.

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

Do not apply more than 0.2 lbs ai/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) can influence pesticide drift. The applicator must evaluate all factors and make appropriate adjustments when applying this product.

Apply only when wind speed is greater than or equal to 1 mph.

Merus may be used undiluted or diluted with suitable light mineral oil and applied as an ultra-low volume (ULV) non-thermal aerosol (cold fog) or in suitable mechanical spray equipment. Do not apply this product with thermal fogging equipment.

Merus may be used to control adult mosquitoes, flies and gnats in mosquito control programs including residential, industrial, recreational, and agricultural areas, vegetation surrounding swamps, marshes, overgrown waste areas, roadsides and pastures and other areas adult mosquitoes occur. For best results, treat when mosquitoes are most active. Application during the cool hours of the night or early morning is usually preferable, with a minimum application temperature of 50°F.

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 um) and that 90% of the spray is contained in droplets smaller than 50 microns (Dv 0.9 < 50 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.

To control mosquitoes, flies and gnats, apply Merus using any standard ULV vehicle-mounted applicator capable of producing a non-thermal (cold fog) aerosol spray cloud with appropriately sized droplets. Apply undiluted at a flow rate of 3.2 to 5.4 fluid ounces per minute at an average vehicle speed of 10 mph. If a different vehicle speed is used, adjust rate accordingly. These rates are equivalent to 0.0015 to 0.0025 pounds active ingredient per 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.

Rates to use Merus Undiluted for mosquito control

Pounds a.i./Acre	Application Rates Fl.oz./Min.				Fl.oz. Merus per Acre
	5MPH	10MPH	15MPH	20MPH	
0.0025	2.7	5.4	8.0	10.7	0.88
0.0021	2.2	4.5	6.7	9.0	0.74
0.0018	1.9	3.9	5.8	7.7	0.64
0.0015	1.6	3.2	4.8	6.4	0.53

Applications up to 2.83 fl.oz. (0.008 lb ai) per acre/day may be made when targeting *Aedes taeniorhynchus* or other difficult species.

Pounds a.i./Acre	Application Rates Fl.oz./Min.				Fl.oz. Merus per Acre
	5MPH	10MPH	15MPH	20MPH	
0.008	8.6	17.1	25.7	34.2	2.83

If dilution is preferred, adjust the flow rate accordingly to achieve dosing up to 0.0025 lbs ai/acre. Applicable flow rates for a 1 part concentrate to 1 part diluent 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:

Pounds a.i./Acre	Application Rates Fl.oz./Min.				Fl.oz. Finished Spray per Acre
	5MPH	10MPH	15MPH	20MPH	
0.0025	5.4	10.7	16.1	21.4	1.77
0.0021	4.5	9.0	13.5	18.0	1.48
0.0018	3.9	7.7	11.6	15.4	1.27
0.0015	3.2	6.4	9.6	12.8	1.06

Urban ULV mosquito control: 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 using hand-held or truck-mounted ULV equipment, or other spray equipment suitable for this application. Apply at rates up to but not exceeding 0.0025 pounds pyrethrins per acre per day (0.88 fluid ounces of undiluted spray per acre per day). Do NOT use hand-held equipment for this type of application in enclosed spaces.

Aerial wide-area mosquito abatement 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 80 microns ($D_v 0.9 < 80 \text{ um}$). 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.

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 0.53 to 0.88 fluid ounces of undiluted Merus per acre.

Pounds a.i./Acre	Fl.oz. Merus per Acre
0.0025	0.88
0.0021	0.74
0.0018	0.64
0.0015	0.53

Merus may also be diluted with suitable diluent light mineral oil and applied so as not to exceed 0.0025 lb ai per acre. Diluted or undiluted, applications up to 2.83 fl.oz. Merus (0.008 lb ai) per acre/day may be made when targeting *Aedes taeniorhynchus* or other difficult species.

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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:

[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. Then offer for recycling, if appropriate, or puncture and dispose of in a sanitary landfill, or by other procedures approved by state and local authorities. 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.]

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

NOTICE: To the extent provided by law, [seller] [Clarke Mosquito Control Products, Inc.] 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.

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

EPA Reg. No.: 8329-92

EPA Est. No.: [8329-IL-01] [8329-IL-03]

NET CONTENTS: _____
LOT NO.: _____
[DATE OF MANUFACTURE: _____]