



ULV MOSQUITO MASTER 412

For Application Only By Public Health Officials and Trained Personnel of Mosquito Abatement Districts and Other Mosquito Control Programs. An All Temperature Quick Knockdown, Combination to Control Adult Mosquito Populations in Residential and Recreational Areas. Also for Use Against Black Flies, Biting and Non-Biting Midges.

Precautionary Statements

HAZARDS TO HUMANS AND DOMESTIC ANIMALS

CAUTION

Harmful if swallowed or absorbed through skin. Avoid contact with skin, eyes or clothing. Avoid breathing of mist. Do not contaminate food or feed products. Wash thoroughly with soap and water after handling.

STATEMENT OF PRACTICAL TREATMENT

If Swallowed: DO NOT INDUCE VOMITING. Vomiting may cause aspiration pneumonia. Call a physician or Poison Control Center immediately. Gastric lavage is indicated if material was taken internally. Do not give anything by mouth to an unconscious person.

If On Skin: Remove contaminated clothing and wash affected areas with soap and water.

NOTE TO PHYSICIAN: Chlorpyrifos is a cholinesterase inhibitor. Treat symptomatically. If exposed, plasma and red blood cell cholinesterase tests may indicate significance of exposure (baseline data are useful). Atropine, only by injection, is the preferable antidote. Oximes, such as 2-PAM protopam, may be therapeutic if used early; however, use only in conjunction with atropine. In case of severe acute poisoning use antidote immediately after establishing an open airway and respiration.

ENVIRONMENTAL HAZARDS

This product is toxic to birds and wildlife and is extremely toxic to fish and aquatic organisms. Do not apply directly to water or wetlands (swamps, bogs, marshes, and potholes). Drift and runoff from treated areas may be hazardous to aquatic organisms in adjacent areas. Cover or incorporate spills. Do not contaminate water when disposing of equipment washwaters. Apply this product only as specified on this label. 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.

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. Do not allow spray treatment to drift on pastureland, cropland, poultry ranges or water supplies. Do not use on crops used for human or animal consumption.

E.P.A. EST. No. 83291L01

E.P.A. Reg. No. 8329-36

FOR MORE INFORMATION CALL:

1-800-323-5727 (Outside Illinois)

1-800-942-2555 (Inside Illinois)

ACTIVE INGREDIENTS:

Chlorpyrifos [0,0-diethyl 0-(3, 5, 6-trichloro-2-pyridyl) phosphorothioate]	12.00%
*Permethrin (3-Phenoxyphenyl)methyl (±) cis, trans-3-(2,2-dichloroethyl)-2,2-dimethyl-cyclopropanecarboxylate	4.00%
INERT INGREDIENTS	84.00%
	100.00%

Cis/trans isomer ratio; min. 35% () cis; and max. 65% (*) trans.

Contains Petroleum Distillates.

Contains .90 pounds of Chlorpyrifos and .30 pounds of Permethrin per gallon.

KEEP OUT OF REACH OF CHILDREN CAUTION

CONDITIONS and RATES to USE for MOSQUITO CONTROL

ULV MOSQUITO MASTER 412 is recommended for application as an ultra low volume (U.L.V.) nonthermal aerosol (cold fog) to control adult mosquitoes in residential and recreational areas where these insects are a problem. For best results treat when mosquitoes are most active and weather conditions are conducive to keeping the fog close to the ground, e.g. cool temperatures and wind speed not greater than 5 mph. Application during the cool hours of the night or early in the morning is usually preferable. Repeat treatment as needed. Do not apply product within 100 feet (30 meters) of lakes and streams.

MANUFACTURED BY

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

Seller makes no warranty, expressed or implied concerning the use of this product other than indicated on the label. Buyer assumes all risk of use and/or handling of this material when use and/or handling is contrary to label instructions.

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U.L.V. Non-thermal Aerosol (Cold Fog) Application: To control mosquitoes apply ULV 412, using any standard ULV ground applicator capable of producing non-UITO MASTER thermal aerosol spray with droplets ranging in size from 5 to 30 microns and a Mass Median Diameter (MMD) of 10 to 20 microns. Apply the product undiluted at 4.5 to 18 fluid ounces per minute at an average speed of 10 mph. This is equivalent to .005 to .021 pounds of chlorpyrifos and .0017 to .007 pounds of permethrin per acre. If a different vehicle speed is used, adjust rate accordingly. Vary flow rate according to vegetation density and mosquito population. Use higher flow rate in heavy vegetation or when populations are high. An accurate flow meter must be used to ensure the proper flow rate. For proper application, mount the fog applicator so that the nozzle is at least 4 1/2 feet above ground level and directed out the back of the vehicle. Failure to follow the above directions may result in reduced effectiveness. Aerial applications should be done by suitable aerial U.L.V. equipment capable of producing droplets with an MMD of 50 microns or less with no more than 2.5% exceeding 100 microns. Flow rate and swath width should be set so as to achieve 3.0 fluid ounces of ULV MOSQUITO MASTER 412 per acre. Application should be made when wind is less than 5 MPH. Do not apply directly to lakes, ponds, or streams. This product may also be diluted with a suitable diluent such as a high grade mineral oil and applied accordingly by air or ground as long as the maximum rate of active ingredient per acre does not exceed rates specified on this label.

IN FLORIDA: Do not apply by aircraft except in emergency situations and with the approval of the Florida Department of Agriculture and Consumer Services.

Directions for Determining the Droplet Size and MMD of U.L.V. Nonthermal Aerosols Using CLARKE® U.L.V. MOSQUITO MASTER 412: Collect droplets for measurement using glass microscope slides (1 x 3 inches) coated with silicone (General Electric SC-87 Dri-Film). To prepare the slides, dip in a solution of one part silicone to 9 parts of acetone, allow to dry, polish with lint-free paper tissue, and store in a tight slide box. To collect droplets, wave the treated slides through the aerosol cloud at a distance of 6 feet from the point of discharge, holding the slides perpendicular to the path of aerosol movement. Collect droplets on at least 2 slides and store in a tight slide box until measurements can be made. Determine droplet size and calculate MMD by the following steps.

- Using a microscope with an eyepiece micrometer and 450x magnification, measure the diameter (D), in eyepiece divisions, of 100 impinged droplets on each slide.
- Tabulate the number of droplets (N) falling within each size category (as measured in eyepiece divisions).
- Multiply D x N for each size category.
- Divide D x N for each size category by the sum of the products of D x N, i.e. $\Sigma (D \times N)$. The obtained are the percent that each size category represents of the total.
- Determine the accumulative percentage for each size category by accumulative addition of the percentage values calculated in Step 4, starting with the smallest size category.
- Determine the size category that most closely corresponds to an accumulative percentage of 50%. This value is the approximate MMD in eyepiece divisions.
- Convert the above MMD to microns by determining the number of microns in one eyepiece division using a stage micrometer and multiplying this value by the estimated MMD in eyepiece divisions (Step 6).
- The MMD determined in Step 7 must then be corrected for spread of the droplets on the slides by multiplying by 0.49 (the spread factor). The value thus calculated is the true MMD in microns.

NOTE: Measure droplet size and determine MMD when the aerosol generator is first installed, after any modifications or adjustment, and after every 50 hours of application.

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 may be disposed of on site or at an approved waste disposal facility.
CONTAINER DISPOSAL: Triple rinse (or equivalent) then offer for recycling or reconditioning, or puncture and dispose of in a sanitary landfill, or by other approved state and local procedures.
CONTAINERS ONE GALLON AND SMALLER: Do not reuse container. Wrap containers in several layers of newspaper and discard in trash.
CONTAINERS LARGER THAN ONE GALLON: Metal Containers—Triple rinse or equivalent. Then offer for recycling or reconditioning, or puncture and dispose of in a sanitary landfill, or by other procedures approved by state and local authorities. Plastic Containers—Triple rinse or equivalent. Then offer for recycling or reconditioning, 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. Then dispose of in a sanitary landfill or by other approved state and local procedures.

ACCEPTED
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