

MasterLine®

By Univar

AQUA-KONTROL CONCENTRATE For Mosquitoes, Flies and Gnats

A Quick Knockdown, Low Odor, Non-Corrosive Synergized Synthetic Pyrethroid for the Control of Adult Mosquitoes, in Residential, Recreational and Other Areas. Also for Use Against Biting and Non-Biting Midge and Black Flies.

For use only by federal, state, tribal, or local governmental 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.

ACTIVE INGREDIENTS:

*Permethrin	20.0%
**Piperonyl Butoxide	20.0%
OTHER INGREDIENTS:	60.0%
TOTAL	100.0%

*(3-phenoxyphenyl)methyl(+/-)Cis/trans 3-(2,2-dichloroethenyl)2,2-Dimethyl cyclopropanecarboxylate.

Cis/trans ratio: min. 35% (+/-) cis and max. 65% (+/-) trans.

** (butylcarbityl)(6-propylpiperonyl) ether and related compounds.

Contains 1.75 pounds of Permethrin and 1.75 pounds of Piperonyl Butoxide per gallon.

**KEEP OUT OF REACH OF CHILDREN
CAUTION**

See Inside Attached Booklet For Additional Precautionary Statements

“PRECAUCION AL USUARIO: Si usted no lee ingles, no use este producto hasta que la etiqueta haya sido explicado ampliamente”

First Aid	
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 by mouth to an unconscious person.
If in Eyes:	Hold eye open and rinse slowly and gently with water for 15-20 minutes. Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye. Call a poison control center or doctor for treatment advice.
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.
HOTLINE NUMBER	
Have the product container or label with you when calling a poison control center or doctor, or going for treatment. For additional information on this pesticide product (including health concerns, medical emergencies, or pesticide concerns), you may call 1-800-222-1222, twenty-four (24) hours a day, seven (7) days per week.	

Manufactured by: **Univar Environmental Sciences**
11305 Four Points Drive, Building 1 Suite 210, Austin, TX 78726

EPA Registration No. 73748-1

PRECAUTIONARY STATEMENTS
HAZARDS TO HUMANS AND DOMESTIC ANIMALS

Harmful if swallowed. Causes moderate eye irritation. Avoid contact with skin, eyes or clothing. Wash hands thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco or using the toilet. Prolonged or frequently repeated skin contact may cause allergic reactions in some individuals. Wear long-sleeved shirt and long pants, socks and shoes, and chemical-resistant gloves (such as barrier laminate, nitrile rubber, neoprene rubber, or viton).

Personal Protective Equipment (PPE)

Some materials that are chemical-resistant to this product are barrier laminate, nitrile rubber greater or equal to 14 mils or neoprene rubber greater or equal to 14 mils. If you want more options, follow the instructions for category E on an EPA chemical-resistance category selection chart.

Mixers, loaders, applicators, and other handlers must wear: Long-sleeve shirt; Long pants; Shoes and socks; Chemical-resistant gloves for all handlers except for applicators using motorized ground equipment, pilots and flaggers; and Chemical-resistant apron for mixers/loaders, persons cleaning equipment, and persons exposed to the concentrate.

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 this product's concentrate. Do not reuse them.

User Safety Recommendations:

- Users should wash hands before eating, drinking, chewing gum, using 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. Wash the outside of gloves before removing. 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 pesticide [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 extremely toxic to aquatic organisms, including fish and aquatic invertebrates. To protect the environment, do not allow pesticide to enter or run-off into storm drains, drainage ditches, gutters, or surface waters. Applying this product in calm weather when rain is not predicted for the next 24 hours will help to ensure that wind or rain does not blow or wash pesticide off the treatment area. Rinsing application equipment over the treated area will help avoid run-off to water bodies or drainage systems.

This pesticide is highly toxic to bees exposed to direct treatment on blooming crops or weeds. Do not apply this product or allow it to drift on blooming crops or weeds while bees are actively visiting the treatment areas

ENVIRONMENTAL HAZARDS FOR WIDE AREA MOSQUITO ADULTICIDE APPLICATIONS

This pesticide is extremely toxic to aquatic organisms, including fish and aquatic invertebrates. Run-off from treated areas or deposition of spray droplets into a body of water may be hazardous to fish and aquatic invertebrates.

When applying as a wide area mosquito adulticide, 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.

When applying as a wide area mosquito adulticide, 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.

PHYSICAL AND CHEMICAL HAZARDS

Non-flammable

DIRECTIONS FOR USE

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

Use Restrictions:

- Apply this product only as specified on this label.
- Do not contaminate food or feedstuffs.
- Application of this product using hand-held cold or thermal fogging equipment is prohibited.
- This product is not for use in metered release misting devices.
- Do not apply as a broadcast or spot treatment to indoor surfaces at residential sites, including nurseries, day-care centers, schools, hospitals, and nursing homes.
- Except when applying for mosquito control, do not enter or allow others to enter treated area until sprays have dried.
- Except when applying for mosquito control, do not enter or allow others to enter until vapors, mists, and aerosols have dispersed, and the treated area has been thoroughly ventilated.
- Except when applying for mosquito control, do not apply this product in a way that will contact workers or other persons, either directly or through drift.
- Application of this product is prohibited directly into sewers or drains, or to any area like a gutter where drainage to storm sewers, storm drains, water bodies, or aquatic habitat can occur. Do not allow this product to enter any drain during or after application.
- Remove pets, birds, and cover fish aquariums and ornamental fish ponds before spraying, and turn aquarium systems off prior to use.
- Except when applying for mosquito control, only protected handlers may be in the area during application.
- **Aerial application of this product is prohibited in the State of Florida unless specifically authorized by the Bureau of Entomology and Pest Control, Florida Department of Agriculture and Consumer Services.**

NON-AGRICULTURAL USE REQUIREMENTS

The requirements in this box apply to uses of this product that are NOT within the scope of the Worker Protections Standards for agricultural pesticides (40 CFR Part 170). The WPS applies when this product is used to produce agricultural plants on farms, forests, nurseries and greenhouses.

Keep unprotected persons out of treated areas until sprays have dried. Wear protective clothing when using or handling this product to help avoid exposure to eyes and skin. Eye protection, gloves, a long-sleeved shirt and long pants are recommended.

Allow spray to dry before allowing adults, children or pets on treated areas.

For any requirements specific to your State or Tribe, consult the agency responsible for pesticide regulation.

CONDITIONS AND RATES TO USE FOR MOSQUITO CONTROL

AQUA-KONTROL CONCENTRATE may be used to control adult mosquitoes, flies and gnats in mosquito control programs including, residential, industrial, municipalities, parks, campsites, woodlands, athletic fields, golf courses, gardens, playground, recreational areas, waste areas and other places where mosquitoes occur. For best results, treat when insects are most active and conditions are conducive to keeping the fog close to the ground.

AQUA-KONTROL CONCENTRATE is designed to be either diluted with water, or used undiluted, and applied as a ULV or Barrier spray. **AQUA-KONTROL CONCENTRATE** stays fully in suspension and will not settle or separate under normal storage conditions. If, however, there are signs of separation, shake or agitate thoroughly to make a uniform mixture. **AQUA-KONTROL CONCENTRATE** does not contain aromatic or aliphatic petroleum distillates.

Do not mix this product with oil. Use only clean water. Do not exceed the maximum recommended # a.i. per acre.

Both ground and aerial applications should be made when meteorological conditions are conducive to keeping the spray cloud close to the ground, such as when an air temperature inversion is present. Applications during the cool hours of early morning or evening are preferable. Air temperatures should be greater than 50° F when conducting all types of applications. Application in calm air conditions is to be avoided. Apply when wind speed is greater than 1 mph. Do not apply when wind speed exceeds 10 mph. Applications cannot exceed the recommended rates.

For use 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 re-treat a site more than once in 3 days. Do not exceed 25 applications at 0.007 lbs. of permethrin per acre per application or 0.025 lbs. PBO per acre per application, or 0.18 lbs. of permethrin per acre per season or 2.0 lbs. PBO per acre per year. When targeting *Aedes Taeniorhynchus* and other difficult species, applications of PBO may be made up to 0.08 lbs. PBO per acre. 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 diseases in animal or human populations, or if specifically approved by the state or tribe during a natural disaster recovery effort.

AQUA-KONTROL CONCENTRATE can be applied over specific growing crops and range grasses prior to harvest for the control of adult mosquitoes and biting flies within or adjacent to these areas. Application can only be made where the following crops are present:

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

In the treatment of corrals, feedlots, animal confinements/houses, swine lots, poultry ranges and zoos, cover any exposed drinking water, drinking fountains and animal feed before application. Do not contaminate non-approved sites with spray drift.

GROUND-BASED APPLICATION INSTRUCTIONS (Non-Thermal Application) DROPLET SIZE CALIBRATION FOR GROUND-BASED APPLICATION EQUIPMENT

Ground-based application: Spray equipment must be adjusted so that the volume median diameter is less than 30 microns (Dv 0.5 < 30 µm) and that 90% of the spray is contained in droplets smaller than 50 microns (Dv 0.9 < 50 µm). 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.

NON-THERMAL AEROSOL FOGGER APPLICATION

AQUA-KONTROL CONCENTRATE ULV Non-Thermal Aerosol Fogger Application: To control mosquitoes, midges and blackflies, apply **AQUA-KONTROL CONCENTRATE** using any standard ULV ground applicator capable of producing a non-thermal aerosol spray. Vary flow rates accordingly to vegetation density and mosquito population. Use higher flow rates in heavy vegetation or when populations are high. An accurate flow control system must be used to ensure proper flow rate. **AQUA-KONTROL CONCENTRATE** may also be applied by diluting with water and applying so as not to exceed the maximum pounds of active ingredient per acre as shown in the first column of the ULV table shown below. That table represents some recommended application rates for ground ULV applications. If an alternative dilution rate is required, adjust the flow rate accordingly, provided the droplet size and spectrum remains within label specifications. May be applied at truck speeds of 5 to 20 mph.

Conditions and Rates to use AQUA-KONTROL CONCENTRATE Undiluted for Mosquito Control

PERMETHRIN/PBO LBS. A.I./ACRE	APPLICATION RATES /FLUID OUNCES TO USE PER MINUTE		
	5 mph	10 mph	20 mph
0.007/0.007	1.5	3.1	6.2
0.0035/0.0035	0.75	1.5	3.1
0.00175/0.00175	0.4	0.75	1.5

Suggested Dilution Rates for AQUA-KONTROL CONCENTRATE

% CONCENTRATION	Parts AQUA-KONTROL CONCENTRATE	Parts Water
2%	1	9
4%	1	4

Suggested Flow (oz/min) and Use Rates for a 2% (1 to 9 Dilution Ratio) Product

PERMETHRIN/PBO LBS. A.I./ACRE	APPLICATION RATES /FLUID OUNCES TO USE PER MINUTE		
	5 mph	10 mph	20 mph
0.007/0.007	15.5	Not Recommended	Not Recommended
0.0035/0.0035	7.8	15.5	Not Recommended
0.00175/0.00175	3.9	7.8	15.5

Suggested Flow (oz/min) and Use Rates for a 4% (1 to 4 Dilution Ratio) Product

PERMETHRIN/PBO LBS. A.I./ACRE	APPLICATION RATES /FLUID OUNCES TO USE PER MINUTE		
	5 mph	10 mph	20 mph
0.007/0.007	7.75	15.5	Not Recommended
0.0035/0.0035	3.9	7.75	15.5
0.00175/0.00175	2.0	3.9	7.75

AS A BARRIER SPRAY USING A MISTER TYPE UNIT: For use in non-thermal equipment, apply **AQUA-KONTROL CONCENTRATE** with a mist blower adjusted to deliver droplets with a volume median diameter of 50 – 120µm. Use undiluted or diluted to achieve an application of 0.00175 / 0.00175 # a.i./acre. Use a 50 ft (15.2m) swath while walking at a speed of 2 mph (3.2 kph). If using a different speed, swath or dilution, do not exceed the maximum a.i./acre. When this product is applied as a barrier treatment, do not apply within 100 feet (30 meters) of lakes and streams.

OUTDOOR RESIDENTIAL MISTING SYSTEMS

When using this product installers and service technicians must comply with the license, certification, or registration requirements of the state(s), tribe(s), or local authority(ies) where they are installed.

Use Restrictions:

- Do not apply this pesticide when people, pets, and/or food are present.
- Do not use in an evaporative cooling system.
- Direct nozzles to spray towards the target area and away from swimming pools, water bodies, or eating and cooking areas.
- Do not set nozzles to direct mist near outside air condition systems or other home air intakes.

If used in a system with a reservoir tank for the end use dilution, the system reservoir tank must be locked. Securely attach the end use pesticide label and a dilution statement to the system reservoir tank in a weather protected area or plastic sleeve. The dilution statement must be phrased as follows: **“This container holds 1 part Aqua-Kontrol Concentrate to 219 parts water”**

If used in a direct injection system, the pesticide container must be locked. Securely attach the end use label to the pesticide container in a weather protected area or plastic sleeve.

If the system works on an automatic timer, set the timing for application when people, pets, and/or food are unlikely to be present.

If the system works when a person operates a remote activation device, then application of this pesticide when people, pets, and/or food are present is prohibited.

Contact the system manufacturer for guidance or assistance to ensure compliance with the following requirement:

“This product may only be used in systems that have been calibrated to apply no more than the maximum application rate of 0.25 grams/0.00055 Lbs. permethrin and 0.26 grams/0.00058 lbs. PBO per 1000 cubic feet per day.”

AERIAL APPLICATION INSTRUCTIONS

The use of aircraft specially equipped and capable of applying ULTRA LOW VOLUMES of **AQUA-KONTROL CONCENTRATE** may be necessary.

DROPLET SIZE CALIBRATION FOR AERIAL APPLICATION EQUIPMENT

Aerial Application made at <200 above ground elevation: Spray equipment must be adjusted so that the volume median diameter produced is less than 60 microns (Dv 0.5 < 60 µm) and that 90% of the spray is contained in droplets smaller than 100 microns (Dv 0.9 < 100 µm). 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.

Aerial Application made at >200 above ground elevation: Spray equipment must be adjusted so that the volume median diameter produced is less than 70 microns (Dv 0.5 < 70 µm) and that 90% of the spray is contained in droplets smaller than 145 microns (Dv 0.9 < 145 µm). 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.

Aerial application must be made at altitudes ranging from 75 to 300 feet. Do not apply by fixed wing aircraft at a height less than 100 feet, or by helicopter at a height less than 75 feet unless specifically approved by the state or tribe based on public health needs.

Apply at a sufficient airspeed to deliver the appropriate amount of a.i./acre (from 0.00175 to 0.007 # a.i./acre) and to achieve the appropriate droplet range. Flight speed and nozzle orientation must be considered in determining droplet size. Apply when wind speed is greater than 1 mph.

The spray boom should be mounted on the aircraft as to minimize drift caused by wingtip or rotor vortices. The minimum practical boom length should be used and must not exceed 75% of the wing span or 90% rotor diameter.

STORAGE AND DISPOSAL

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

Pesticide Storage and Spill Procedures: Keep this product in its tightly closed original container when not in use. Store in a cool, dry (preferably locked) area that is designated for such insecticides and also inaccessible to children and animals. Avoid exposure to extreme temperatures. In case of spillage, soak up with absorbent material, such as sawdust or fullers' earth, sweep up and place in a labeled container and dispose of as follows.

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: Nonrefillable Container: Metal or Plastic Container. Do not reuse or refill container. Triple rinse or pressure rinse container (or equivalent) promptly after emptying. 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. Triple rinse as follows:

Containers 5 gallons or less: Empty the remaining contents into application equipment 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 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. Once cleaned, 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. Do not cut or weld metal containers.

Containers larger than 5 gallons: Empty the remaining contents into application equipment. Fill the container ¼ full with water. Replace and tighten closures. Tip container on its side and roll back and forth, ensuring at least one complete revolution, for 30 seconds. Stand the container on its end and tip 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. Once cleaned, 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.

Pressure rinse as follows (all sizes): 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.

NOTICE: Buyer and user assume all risks and liability of use, storage and/or handling of this product not in accordance with the terms of this label

BUYER GUARANTEE LIMITED TO LABEL CLAIMS

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