



# Aqualuer® 20-20

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.

**ACTIVE INGREDIENTS:**

*Permethrin .....	20.6%
**Piperonyl Butoxide Technical .....	20.6%
<b>INERT INGREDIENTS:</b> .....	<b>58.8%</b>
<b>TOTAL</b> .....	<b>100.0%</b>

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

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

\*\*Equivalent to 80% (butylcarbityl)(6-propylpiperonyl) ether and 20% related compounds Contains 1.75 pounds of Permethrin and 1.75 pounds of Piperonyl Butoxide per gallon.

EPA Registration No. 769-985

EPA Establishment No. 44616-MO-1

## KEEP OUT OF REACH OF CHILDREN CAUTION

**PRECAUCION AL USUARIO:** Si usted no lee ingles, no use este producto hasta que la etiqueta haya sido explicado ampliamente. (To the User: If you cannot read English, do not use this product until the label has been fully explained to you.)

FIRST AID	
<b>If Swallowed:</b>	<ul style="list-style-type: none"> <li>• Immediately call a poison control center or doctor.</li> <li>• Do not induce vomiting unless told to do so by a poison control center or doctor.</li> <li>• Have person sip a glass of water if able to swallow.</li> <li>• Do not give anything by mouth to an unconscious person</li> </ul>
<b>If on Skin or Clothing:</b>	<ul style="list-style-type: none"> <li>• Take off contaminated clothing.</li> <li>• Rinse skin immediately with plenty of water for 15 - 20 minutes.</li> <li>• Call a poison control center or doctor for treatment advice.</li> </ul>
Have the product container or label with you when calling a poison control center or doctor, or going for treatment.	

**PRECAUTIONARY STATEMENTS**

Hazards to Humans and Domestic Animals

**Caution:** Harmful if swallowed or absorbed through skin. Avoid contact with eyes, skin or clothing. Prolonged or frequently repeated skin contact may cause allergic reaction in some individuals. Wash hands before eating, drinking, chewing gum, using tobacco or using the toilet.

**ENVIRONMENTAL HAZARDS**

This product 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 washwaters.

**Bee Warning:** This product is highly toxic to bees exposed to direct treatment on blooming crops or weeds. Do not apply to blooming crops or weeds while bees are visiting the treatment areas, 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 AND CHEMICAL HAZARDS**

Combustible. 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.

**Note:** 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.

**HOW TO APPLY AND WHERE TO USE**

**Aqualuer 20-20** is designed for application as an Ultra-Low Volume (ULV) or thermal aerosol to control adult mosquitoes and flies of nuisance, public health or disease vector importance in areas such as but not limited to: residential areas, industrial areas, commercial areas, urban areas, parks, campgrounds, woodlands, athletic fields, golf courses, playgrounds, recreational areas, overgrown waste areas, roadsides, and other areas where adult mosquitoes and flies may be found.

**A Synergized Permethrin Formulation.**

- For Effective Control of Adult Mosquitoes (including organophosphate resistant mosquitoes), Midges (Biting and Non-Biting) and Blackflies.
- For ULV, Thermal and Barrier Applications using Ground and Aerial Equipment for control of Adult Mosquitoes and other biting flies.
- Formulation Allows Dilution with Water or Oil.
- May be Applied Undiluted.
- For surface and barrier applications using handheld equipment.
- Quick Knockdown and Effective Control of Target Insects.
- For ULV applications at rates up to 0.007 lbs. a.i. per acre.
- For barrier application at rates up to 0.1 lbs. a.i. per acre.
- Compatible with injector mixing systems or other insecticide mixing systems.

**Aqualuer 20-20** is recommended for application with ULV cold aerosol generators, thermal aerosol generators, mist-blowers, backpack sprayers, or handheld sprayers. Mist-blowers, backpack sprayers, handheld sprayers and low-pressure hand sprayers may be used for barrier or surface applications.

FOR BEST RESULTS treat when mosquitoes or insects are most active and weather conditions are conducive to keeping the fog near the ground e.g. cool temperatures, and consistent wind speeds are not greater than 10 m.p.h. Applications during the cool hours of night or early morning are usually preferable.

Do not retreat the same site more than once in 12 hours. Do not apply more than 0.18 lbs. of Permethrin per acre per year to any site. 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.

**Aqualuer 20-20** 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:

Almonds	Corn, fodder	Onions, dry bulb
Apples	Corn, forage	Peaches
Broccoli	Corn grain	Pears
Brussels sprouts	Eggplant	Peppers, bell
Cabbage	Range Grasses	Soybeans
Celery	Leafy Vegetables (except Brassica)	Tomatoes
Cauliflower	Lettuce, head	Vegetables, cucurbit
Cherries	Mushrooms	Walnuts

Do not allow spray treatment to drift on pastureland, cropland, (other than crops listed) or water supplies. In treatment of corrals, feedlots, animal confinements/houses, swine lots and zoos, cover any exposed drinking water, drinking fountains and animal feed before application.

**Aqualuer 20-20** provides effective control of adult mosquitoes, black flies, gnats, biting and non-biting midges, stable flies, horse flies, deer flies, sheep flies, horn and heel flies, and nuisance flying insects such as houseflies.

Air temperatures should be greater than 50° F when conducting all types of applications.

**GROUND APPLICATION**

**Vehicle-Mounted ULV Cold Aerosol Generators (Cold Fog):** Apply through non-thermal ULV application equipment and base all acreage calculations on the equipment manufacturer's recommended swath width.

Spray equipment must be adjusted so the volume median diameter or mass median diameter is less than 30 microns (Dv 0.5 < 30 µm) and that 90% of the spray is contained in droplets smaller than 48 microns (Dv 0.9 < 48 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 product 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 at a rate not to exceed 0.007 pounds of permethrin per acre.

An optimum swath is created when **Aqualuer 20-20** is applied from a truck being driven perpendicular to the wind direction. Direct the spray head of the equipment to ensure an optimum distribution of the spray cloud throughout the area. For best results, apply when insects are most active and meteorological conditions are conducive to keeping the spray cloud near the ground. An inversion of air temperatures and a light breeze of approximately 1 to 3 mph is preferable. During applications consistent ground wind speeds should not exceed 10 MPH. Application of this product during cooler hours of the night or early morning is recommended.

**Aqualuer 20-20** may be applied through all ULV Cold Aerosol Generators, or other similar equipment designed for non-thermal ULV aerosol applications. The desired application rate may be obtained from the chart below or by altering the dilution rate of **Aqualuer 20-20**, the flow rate of the insecticide from the application equipment and the vehicle speed. Some examples are provided in the following chart. When an alternate rate is required, adjust the flow rate accordingly, provided the droplet size and spectrum remain within the label specifications.

FLOW RATE (Fluid Ounces Per Minute)						
Dilutions Based on a 15 Gallon Tank*						
Application Rate (Pounds of Permethrin a.i./Acre)	Vehicle Speed (MPH)	Undiluted	Diluted 1: 3	Diluted 1: 4.5	Diluted 1: 6.5	Diluted 1: 9
0.0015	10	0.7	2.8	3.7	5.25	6.7
	15	1.05	4.2	5.5	7.88	10.0
	20	1.4	5.6	7.3	10.50	14.0
0.0035	10	1.55	6.2	8.6	11.7	15.6
	15	2.35	9.3	12.8	17.5	23.3
	20	3.1	12.5	17.2	23.4	
0.007	10	3.1	12.4	17.0	23.2	
	15	4.65	18.6	25.5		
	20	6.2	24.7			

\*Dilution Instructions: Fill tank with the recommended amount of water, start agitation then add the correct amount of **Aqualuer 20-20**. The use of metering pumps, injector systems or other mixing systems is optional.

Note: When using oil as a diluent agitate well before use.

Where dense vegetation is present, use higher rates of application and/or a slower speed for best results. All applications should be conducted when temperatures are greater than 50 F.

**BACKPACK OR HANDHELD SPRAYER APPLICATION:** Apply through non-thermal ULV application equipment and base acreage calculations on a 300-foot swath. To apply undiluted at 0.007 pounds of permethrin per acre adjust equipment to an output rate of 1.24 ounces per minute and walk at 4 mph. To apply 0.0035 pounds of permethrin per acre, dilute 1 part **Aqualuer 20-20** with 5 parts of diluent and apply at a rate of 3.8 ounces per minute and walk at 4 mph.

**THERMAL AEROSOL APPLICATION:** For use in truck-mounted, handheld or other thermal fogging equipment. Spray equipment must be adjusted so the volume median diameter or mass median diameter is less than 30 microns (Dv 0.5 < 30 µm) and that 90% of the spray is contained in droplets smaller than 48 microns (Dv 0.9 < 48 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 product acceptable droplet size spectra. Application equipment must be tested at least annually to confirm that pressure at the nozzle and nozzle flow rates(s) are properly calibrated. Apply this product mixed with water or oil at a rate not to exceed 0.007 lbs. per acre. Base acreage calculations on a 300 feet swath. For best results, direct the thermal fog into and allow to drift through areas where adult mosquitoes are found.

**BARRIER APPLICATIONS:** To exclude and control resting or flying adult mosquitoes in areas such as animal quarters, roadsides, urban areas, residential areas, commercial areas, industrial areas, golf courses, parks, recreational areas, tire piles and all public areas where adult mosquitoes occur or find harborage. May be used to treat aggregation and harborage areas such as the perimeter of residential buildings, commercial buildings, storage buildings, crawl spaces, transport trailers, abandoned or uninhabited buildings and other areas where adult mosquitoes find harborage.

When this product is applied as a barrier application using low pressure hand sprayers, hydraulic sprayers or ground ULV equipment, do not apply within 100 feet (30 meters) of lakes and streams.

To apply this product using low pressure hand sprayers or other similar equipment, for the control of mosquitoes on resting or aggregation surfaces mix 0.126 oz. (3.73 ml) in one gallon of water and apply sufficient spray to dampen the surface - approximately 700-750 square feet of treated area. Use equipment that is capable of delivering an even distribution of the labeled rate over the treatment area. For application using backpack or truck-mounted mist-blower equipment apply **Aqualuer 20-20** undiluted at a rate not to exceed 7.3 oz. per acre. If diluted apply at a rate not to exceed 0.1 lbs. permethrin a.i. per acre. Diluted or undiluted applications may be made onto foliage at the perimeter of areas such as recreational areas, parks, or golf courses from which mosquitoes or flies are to be excluded. Applications may be directed into harborage areas or other resting areas where adult mosquitoes or flies may be found.

**URBAN ULV MOSQUITO CONTROL APPLICATIONS:** For control of resting or flying adult mosquitoes, biting flies and biting midges in harborage areas such as but not limited to utility tunnels, sewers, storm drains and catch basins, pipe tunnels, basements, underground passages, parking decks, crawl spaces under buildings, abandoned buildings or uninhabited buildings. Apply **Aqualuer 20-20** diluted or undiluted using mechanical foggers, hand-held or truck-mounted ULV equipment, thermal foggers or other spray equipment suitable for this type of application. **Aqualuer 20-20** maybe applied at rates up to but not exceeding 0.007 lbs. permethrin per acre.

**AERIAL APPLICATION**

Apply **Aqualuer 20-20** either diluted or undiluted at rates up to 0.007 lbs. Permethrin/PBO per acre by fixed wing or rotary aircraft equipped with a spraying system capable of making a ULV application. For aerial applications of **Aqualuer 20-20**, use ULV equipment and nozzles such as rotary atomizers or similar spray equipment. Spray equipment must be adjusted so 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 115 microns (Dv 0.9 < 115 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 product 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 of **Aqualuer 20-20** shall be made at altitudes ranging from 100 feet to 300 feet. Do not apply when ground wind speed equals 0 MPH or when ground wind exceeds 10 MPH. Aerial applications of **Aqualuer 20-20** shall only be made when recommended by public health officials and trained personnel of mosquito abatement districts and other mosquito control programs. To ensure best results applications shall be made when temperatures are greater than 50° F.

For best results, apply **Aqualuer 20-20** when insects are most active and meteorological conditions are conducive to keeping the spray cloud near the ground. Aerial applications using aircraft equipped with global positioning systems (GPS) may be needed to compensate for windy conditions and to ensure drift into target areas.

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

**STORAGE AND 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:** Pesticide, spray mixture or rinse water that cannot be used according to label instructions must be disposed of at or by 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 incineration, or if allowed by State and local authorities, by burning. If burned, stay out of smoke.

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

EPA Reg. No 769-985  
 EPA Est. No. 44616-MO-1(H)  
 EPA Est. No. 44616-GA-1(G)  
 Circled letter corresponds to first letter of lot number on container.

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**SPECIMEN LABEL**