MASTERLINE
KONTROL 31 - 67 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 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: (3-phenoxyphenyl) methyl (+/-) cis/trans 3-(2,2-dichloroethyl)
2,2-dimethyl- cyclopropanecarboxylate, (+/-) cis (min) 35%, (+/-) trans (max) 65% ......................... 31.15%
Piperonyl Butoxide Technical*: .......................................................... 66.85%
INERT INGREDIENTS: .......................................................................... 2.00%

TOTAL ................................ 100.00%

*Equivalent to 80% (butylcarbityl)(6-propylpiperonyl) ether and 20% related compounds
Contains 2.86 pounds of Permethrin and 6.13 pounds of Piperonyl Butoxide per gallon.

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”

NET CONTENTS:

1.0 GAL _______ 2.5 GAL _______ 30 GAL _______
PRECAUTIONARY STATEMENTS

HAZARDS TO DOMESTIC ANIMALS AND HUMANS

CAUTION: Harmful if swallowed. Causes moderate eye irritation. Avoid contact with skin, eyes or clothing. Remove contaminated clothing and wash before reuse. Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum or using tobacco. Prolonged or frequently repeated skin contact may cause allergic reactions in some individuals. Wear long sleeved shirt and long pants, socks, shoes and chemical resistant (such as nitril or butyl) gloves.

<table>
<thead>
<tr>
<th>First Aid</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>If Swallowed:</strong></td>
</tr>
<tr>
<td>Immediately call a poison control center or doctor. Do not induce vomiting unless told to do so by a poison control center or doctor. Have person sip a glass of water if able to swallow. Do not give anything by mouth to an unconscious person.</td>
</tr>
<tr>
<td><strong>If on Skin or Clothing:</strong></td>
</tr>
<tr>
<td>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.</td>
</tr>
<tr>
<td><strong>If in Eyes:</strong></td>
</tr>
<tr>
<td>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.</td>
</tr>
</tbody>
</table>

Have the product container or label with you when calling a poison control center or doctor, or going for treatment. You may contact Poison Control Center at 800-222-1222 for emergency medical treatment information.

NOTE TO PHYSICIAN AND VETERINARIANS: Do not administer or instill milk, cream or other substances containing vegetable or animal fats which will enhance absorption of lipophilic substances.

ENVIRONMENTAL HAZARDS

This pesticide 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. 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 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 or 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.

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.

PHYSICAL AND CHEMICAL HAZARDS

Do not use, pour, spill or store near heat or open flame. Flashpoint greater than 230°F.

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

**Container Disposal:** (Metal) 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. (Plastic) Triple rinse or equivalent. Then offer for recycling or reconditioning or puncture and dispose of in a sanitary landfill or incineration, or if allowed by State and local authorities, by burning. If burned, stay out of smoke.

**Container Disposal for Refillable Containers:** Replace the dry disconnect cap, if applicable, and seal all openings which have been opened during use.

CONDITIONS AND RATES TO USE FOR MOSQUITO CONTROL

**KONTROL 31-67** may be applied either diluted or undiluted as a thermal or non-thermal fog.

**KONTROL 31-67** is recommended for application as an ultra low volume (ULV) non-thermal aerosol (cold fog) to control adult mosquitoes, flies and gnats in residential and recreational areas where these insects are a problem, such as, but not limited to parks, campsites, woodlands, athletic fields, golf courses, residential areas, municipalities, gardens, playgrounds, recreational areas and overgrown waste areas. For best results, treat when insects are most active and conditions are conducive to keeping the fog close to the ground.

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 only when ground wind speed is greater than 1 mph. Do not apply when wind speed exceed 10 mph. Applications cannot exceed the recommended rates.

Do not re-treat a 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.

**KONTROL 31-67 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:

<table>
<thead>
<tr>
<th>Alfalfa</th>
<th>Range Grasses</th>
</tr>
</thead>
<tbody>
<tr>
<td>Almonds</td>
<td>Horseradish</td>
</tr>
<tr>
<td>Apples</td>
<td>Kiwifruit</td>
</tr>
<tr>
<td>Artichoke, globe</td>
<td>Leafy Vegetables (except Brassica)</td>
</tr>
<tr>
<td>Asparagus</td>
<td>Lettuce, head</td>
</tr>
<tr>
<td>Avocado</td>
<td>Mushrooms</td>
</tr>
<tr>
<td>Broccoli</td>
<td>Onion, dry bulb</td>
</tr>
<tr>
<td>Brussels Sprouts</td>
<td>Peaches</td>
</tr>
<tr>
<td>Cabbage</td>
<td>Pears</td>
</tr>
<tr>
<td>Celery Cauliflower</td>
<td>Pepper, bell</td>
</tr>
<tr>
<td>Cherries</td>
<td>Pistachio</td>
</tr>
<tr>
<td>Corn, fodder</td>
<td>Potato</td>
</tr>
<tr>
<td>Corn, forage</td>
<td>Soybeans</td>
</tr>
<tr>
<td>Corn, grain (field and pop)</td>
<td>Spinach</td>
</tr>
<tr>
<td>Corn, stover</td>
<td>Tomatoes</td>
</tr>
</tbody>
</table>
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 APPLICATION INSTRUCTIONS (Thermal and Non-Thermal Applications)**

**DROPLET SIZE CALIBRATION FOR GROUND APPLICATION EQUIPMENT:** 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 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 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.

**THERMAL AEROSOL FOGGING**

TRUCK MOUNTED: Apply diluted or undiluted with suitable Thermal Fogging equipment. Do not exceed the maximum a.i./acre rates. May be applied at speeds of 5 to 20 mph, treating a 300 ft. swath. To reduce oil requirement and sludge buildup in equipment, use a suitable mineral oil of 60 – 100 second viscosity. For use with hand foggers, use the same a.i./acre rates and a swath width of 50 ft with a walking speed of 2 mph. Do not wet foliage since the oil base formulation may be phytotoxic. Do not fog when wind conditions exceed 10 miles per hour. Use well maintained and properly calibrated fogger.

**Suggested Dilution Rates to Achieve 0.00175# a.i. per Acre**

<table>
<thead>
<tr>
<th>MACHINE OUTPUT GAL/HOUR</th>
<th>DILUTION RATIO WITH FOG OIL 5 MPH</th>
<th>DILUTION RATIO WITH FOG OIL 10 MPH</th>
<th>MACHINE OUTPUT</th>
<th>DILUTION RATE</th>
</tr>
</thead>
<tbody>
<tr>
<td>10 gal/hr</td>
<td>1:79</td>
<td>1:39</td>
<td>0.25 gal/hr</td>
<td>1 : 15.5</td>
</tr>
<tr>
<td>20 gal/hr</td>
<td>1:159</td>
<td>1:79</td>
<td>2.0 gal/hr</td>
<td>1 : 131</td>
</tr>
<tr>
<td>30 gal/hr</td>
<td>1:239</td>
<td>1:119</td>
<td>5.0 gal/hr</td>
<td>1 : 330</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>8.0 gal/hr</td>
<td>1 : 496</td>
</tr>
</tbody>
</table>

**NON-THERMAL AEROSOL (COLD FOG)**

**KONTROL 31-67 Non-Thermal Aerosol (cold fog) Application:** To control mosquitoes, midges, black flies and other biting flies, apply KONTROL 31-67 using any standard ULV ground applicator capable of producing a non-thermal aerosol spray. Apply the product undiluted at a flow rate of 1.0 to 6.00 ounces per minute at an average vehicle speed of 10 mph. If a different vehicle speed is used, adjust the rate accordingly. These rates are equivalent to 0.0035 to 0.021 pounds of permethrin and 0.0075 to 0.047 pounds of piperonyl butoxide per acre. 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 meter must be used to ensure the proper flow rate. KONTROL 31-67 may also be applied by diluting with a suitable solvent such as mineral oil and applying so as not to exceed the maximum pounds of active ingredient per acre as shown in the first column of the following tables. The following charts represent some suggested dilution and application rates for ground ULV applications. If an alternative dilution rate is used, adjust the flow rate accordingly.

For proper ground application, mount the fog applicator so that the nozzle is at least 4 ½ feet above ground level and directed out the back of the vehicle. Failure to follow the above directions may result in reduced effectiveness.
Undiluted Use Rates for KONTROL 31-67

<table>
<thead>
<tr>
<th>Permethrin Lbs./Acre</th>
<th>Application Rates/Fluid Ounces To Use Per Minute</th>
<th>Fl. Oz. KONTROL 31-67 per Acre</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>5 mph</td>
<td>10 mph</td>
</tr>
<tr>
<td>0.021</td>
<td>3.0</td>
<td>6.0</td>
</tr>
<tr>
<td>0.0105</td>
<td>1.5</td>
<td>3.0</td>
</tr>
<tr>
<td>0.007</td>
<td>1.0</td>
<td>2.0</td>
</tr>
<tr>
<td>0.0035</td>
<td>0.5</td>
<td>1.0</td>
</tr>
</tbody>
</table>

For a 1:2 KONTROL 31-67/Solvent Dilution Ratio
Mix one (1) part KONTROL 31-67 with two (2) parts solvent and apply at the following rates.

<table>
<thead>
<tr>
<th>Permethrin Lbs./Acre</th>
<th>Application Rates/Fluid Ounces To Use Per Minute</th>
<th>Fl. Oz. Finished Spray per Acre</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>5 mph</td>
<td>10 mph</td>
</tr>
<tr>
<td>0.007</td>
<td>3.0</td>
<td>6.0</td>
</tr>
<tr>
<td>0.0035</td>
<td>1.5</td>
<td>3.0</td>
</tr>
<tr>
<td>0.00175</td>
<td>0.75</td>
<td>1.5</td>
</tr>
</tbody>
</table>

For a 1:4 KONTROL 31-67/Solvent Dilution Ratio
Mix one (1) part KONTROL 31-67 with four (4) parts solvent and apply at the following rates.

<table>
<thead>
<tr>
<th>Permethrin Lbs./Acre</th>
<th>Application Rates/Fluid Ounces To Use Per Minute</th>
<th>Fl. Oz. Finished Spray per Acre</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>5 mph</td>
<td>10 mph</td>
</tr>
<tr>
<td>0.007</td>
<td>5.0</td>
<td>10.0</td>
</tr>
<tr>
<td>0.0035</td>
<td>2.5</td>
<td>5.0</td>
</tr>
<tr>
<td>0.00175</td>
<td>1.25</td>
<td>2.5</td>
</tr>
</tbody>
</table>

For a 1:8 KONTROL 31-67/Solvent Dilution Ratio
Mix one (1) part KONTROL 31-67 with eight (8) parts solvent and apply at the following rates.

<table>
<thead>
<tr>
<th>Permethrin Lbs./Acre</th>
<th>Application Rates/Fluid Ounces To Use Per Minute</th>
<th>Fl. Oz. Finished Spray per Acre</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>5 mph</td>
<td>10 mph</td>
</tr>
<tr>
<td>0.007</td>
<td>9.0</td>
<td>18.0</td>
</tr>
<tr>
<td>0.0035</td>
<td>4.5</td>
<td>9.0</td>
</tr>
<tr>
<td>0.00175</td>
<td>2.25</td>
<td>4.5</td>
</tr>
</tbody>
</table>

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.

AERIAL APPLICATION INSTRUCTIONS
The use of aircraft specially equipped and capable of applying ULTRA LOW VOLUMES of KONTROL 31-67 may be necessary.

DROplet SIZE CALIBRATION FOR AERIAL APPLICATION EQUIPMENT: 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 115 microns (Dv 0.9 < 115 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 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 applications should be done by suitable ULV equipment. Flow rate should be set so as to achieve 0.16 to 1.0 fluid ounces KONTROL 31-67 per acre of the undiluted product. KONTROL 31-67 may also be diluted with a suitable solvent such as mineral oil and applied by aerial ULV equipment so long as 1.0 fluid ounces per acre of KONTROL 31-67 is not exceeded.

Aerial application shall be made at altitudes ranging from 75 to 300 feet. For fixed wing aircraft with flat fan or rotary nozzles, or rotary wing aircraft equipped with rotary nozzles, apply at a sufficient airspeed to deliver the appropriate amount of a.i./acre (0.00175 to 0.021 # a.i./acre) and to achieve the appropriate droplet range. Apply only when ground wind speed is greater than 1 mph.

**PROHIBITION FOR AERIAL USE:** Not for aerial application in Florida unless specifically authorized by the Bureau of Entomology and Pest Control, Florida Department of Agriculture and Consumer Services.

**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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