

# EVOLUER™ 31-66 ULV



**Evoluer 31-66 ULV Is A Quick Knockdown, Synergized Synthetic Pyrethroid for Use in the Control of Outdoor Flying Insects, including: Adult Mosquitoes, Biting and Non-Biting Midges, Black flies, Gnats, Cluster Flies, and House Flies.**

**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.**

<b>ACTIVE INGREDIENTS:</b>	
Permethrin [CAS 52645-53-1] .....	31.0%
Piperonyl Butoxide Technical [CAS 51-03-6] .....	66.0%
<b>OTHER INGREDIENTS</b> .....	<b>3.0%</b>
<b>Total:</b> .....	<b>100.0%</b>

Contains 2.84 lbs. ai Permethrin/gallon and 6.05 lbs. ai Piperonyl Butoxide/gallon  
EPA Reg. No. 769-991 EPA Est. No. 44616-MO-1

## KEEP OUT OF REACH OF CHILDREN CAUTION

FIRST AID	
IF ON SKIN OR CLOTHING:	<ul style="list-style-type: none"> <li>• Take off contaminated clothing.</li> <li>• Rinse skin immediately with plenty of water for 15 to 20 minutes.</li> <li>• Call a poison control center or doctor for treatment advice.</li> </ul>
IF SWALLOWED:	<ul style="list-style-type: none"> <li>• Call a Poison Control Center or doctor immediately for treatment advice.</li> <li>• Have person sip a glass of water if able to swallow.</li> <li>• Do not induce vomiting unless told to by a poison control center or doctor.</li> <li>• Do not give anything by mouth to an unconscious person.</li> </ul>
IMPORTANT: Have this product container or label with you when calling a poison control center or doctor or when going for treatment. You may also call 1-800-858-7378 for emergency medical treatment advice.	

PRECAUTIONARY STATEMENTS	
<b>HAZARDS TO HUMANS AND DOMESTIC ANIMALS</b> <b>CAUTION:</b> Harmful if absorbed through skin. Harmful if swallowed. Avoid contact with skin, eyes or clothing. Prolonged or frequently repeated skin contact may cause allergic reactions in some individuals. Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum, or using tobacco.	
<b>ENVIRONMENTAL HAZARDS</b> 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. 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 washwaters. <b>Bee Warning:</b> 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 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.	

### DIRECTIONS FOR USE

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

Evoluer 31-66 ULV is recommended for application as an Ultra Low Volume (ULV) Thermal or Non-thermal aerosol (cold fog) to control adult mosquitoes, flies, midges, and gnats in residential and recreational areas where these insect pests become a problem; such as parks, campsites, woodlands, athletic fields, golf courses, residential areas, municipalities, gardens, playgrounds, and non-crop waste areas. Evoluer 31-66 ULV may be used as is, or diluted with a suitable solvent i.e. a 60 to 100 second viscosity mineral oil. For exact rates see the "UNDILUTED" or the "DILUTION" rate charts on this label.

FOR BEST RESULTS treat when mosquitoes or other listed insects are most active and weather conditions are conducive to keeping the fog close to the ground, e.g. cool temperatures. Applications during the cool hours of night or early morning are usually preferable. Do not apply when air temperature is below 50° F. Do not retreat the same site more than once in 3 days. Do not exceed 25 applications at 0.007 lbs Permethrin ai per acre per application or 0.025 lbs PBO ai per acre per application, or 0.18 lbs. of permethrin per acre per season or 2.0 lbs. PBO per acre per year. 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 REQUIREMENTS

A variety of factors including weather conditions (e.g., wind direction, wind speed, temperature, and relative humidity) and method of application (e.g., ground, aerial, airblast, Chemigation) can influence spray drift. The applicator must evaluate all factors and make appropriate adjustments when applying this product. Apply when wind speed is greater than or equal to 1 mph. For best results apply when consistent wind speeds are not greater than 10 mph. 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.

Evoluer 31-66 ULV 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	Almonds	Apples	Artichoke, globe
Asparagus	Avocados	Broccoli	Brussels sprouts
Cabbage	Celery	Califlower	Cherries
Corn, fodder	Corn, forage	Corn, grain	Corn, Stover
Eggplant	Filberts	(field and pop)	Garlic
Horseradish	Kiwi fruit	Peppers, bell	Pistachios
Peaches	Pears	Potato	Soybeans
Spinach	Tomatoes	Mushrooms	Lettuce, head
Onions, dry bulb		Walnuts	Watercress
Vegetables, cucurbit		Leafy Vegetables (except Brassica)	
Corn, sweet kernel & cob with husks removed			

### GENERAL USE INFORMATION

Do not spray or allow this product to drift onto cropland (other than crops listed) or potable 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. Do not apply directly to sewers or drains or to any area like a gutter where drainage to sewers, storm drains, water bodies, or aquatic habitat can occur, except as directed by this label. Not for use in outdoor residential misting systems. Not for use in metered release systems. 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.

### GROUND APPLICATION

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. Application may be made at speeds of 5 mph up to 20 mph. Failure to follow these label directions may result in reduced effectiveness. 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 rates(s) are properly calibrated.

### GROUND ULV NON-THERMAL AEROSOL (COLD FOG) APPLICATIONS

Apply Evoluer 31-66 ULV using any standard ULV ground applicator. When applying this product undiluted apply at a flow rate of 0.5 to 2.0 fluid ounces per minute at an average vehicle speed of 10 M.P.H. These rates are equivalent to 0.00175 to 0.007 pounds of Permethrin ai per acre. If a different vehicle speed is used, adjust the rate accordingly. Vary flow rates according to vegetation density and mosquito population. Use higher flow rates in heavy vegetation or when

insect populations are high. An accurate flow rate control system must be used to ensure proper flow rate. Evoluer 31-66 ULV may also be applied by diluting with a 60 to 100 second mineral oil or another suitable solvent, applied so as not to exceed the maximum ai rates per acre as shown below. If an alternate dilution is required, adjust the flow rate accordingly, provided droplet size and spectrum remain within label specifications. Do not exceed a flow rate of 20 oz. per minute unless recommended by equipment manufacturers and/or Public Health Officials.

#### GROUND THERMAL AEROSOL FOGGING APPLICATIONS

Refer to the UNDILUTED OR DILUTION RATES tables for fogging applications. Droplet size of thermal "fog" will be very small, usually in the 0.5 to 1.0 micron range.

**TRUCK MOUNTED:** Apply Evoluer 31-66 ULV diluted or undiluted with suitable thermal fogging equipment. If diluted use a 60 to 100 second viscosity mineral oil, or another suitable non-phytotoxic diluent, to reduce oil requirement and sludge buildup in equipment. Do not exceed the maximum 0.007 lb. Permethrin ai per acre rate. May be applied at speeds of 5 m.p.h. up to 20 m.p.h.

**HAND CARRIED and/or LAWN MOWER FOGGERS:** Use the same rates of ai per acre with a 300-foot swath width at a walking speed of 2 m.p.h. Do not wet plant foliage. Only use clean, well maintained, and properly calibrated equipment known to give excellent performance. Fog Downwind. Apply Evoluer 31-66 ULV at 0.00175 to 0.007 lb. Permethrin ai per acre.

#### INSECT BARRIER APPLICATIONS: AS AN INSECT BARRIER – USE A "BACKPACK" FOG-Type-MIST BLOWER

For use in Non-Thermal ULV, motorized, portable, Backpack, Fog type Mist Blower equipment. Evoluer 31-66 ULV may be applied undiluted or diluted (see Application Rates tables section). If diluted, use a 30 to 100 second viscosity mineral oil, or another (if recommended by Public Health Officials), suitable non-phytotoxic diluent. Use 1 to 4.5 fl. oz of Evoluer 31-66 ULV (.022 to 0.1 lb permethrin ai) per acre at a 300 ft. (91.44 m) swath width while walking at a speed of 2 m.p.h. (3.2 k.p.h.). Whether applied undiluted or diluted, or at a different speed, make sure that the amount of Evoluer 31-66 ULV does not exceed 4.5 fl. oz. (0.1 lb. permethrin ai) per acre. When this product is applied as a barrier treatment, do not apply within 100 feet (30 meters) of lakes and streams.

**URBAN APPLICATIONS:** For control of resting or flying adult mosquitoes in harborage 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 Evoluer 31-66 ULV diluted or undiluted using mechanical foggers, hand-held or truck-mounted ULV equipment, or thermal foggers suitable for this application.

#### AERIAL APPLICATION

**Aerial Application made at ≤ 200 feet 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 feet above ground elevation:** Spray equipment must be adjusted so 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 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.

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

CONDITIONS AND RATES TO USE EVOLUER 31-66 ULV UNDILUTED						
Pounds a.i. per/acre		Application Rates Fl. Oz. per Minute at M.P.H.				Fl. Oz. of Evoluer 31-66 ULV per acre
Permethrin	PBO	5 MPH	10 MPH	15 MPH	20 MPH	
0.007	0.015	1.0	2.0	3.0	4.0	0.33
0.0035	0.0075	0.5	1.0	1.5	2.0	0.165
0.00175	0.00375	0.25	0.5	0.75	1.0	0.0825

DILUTION RATES FOR EVOLUER 31-66 ULV FOR A 1:2 Dilution						
Mix 1 part EVOLUER 31-66 ULV with 2 parts suitable Mineral Oil; apply as follows:						
Pounds a.i. per/acre		Application Rates Fl. Oz. per Minute at M.P.H.				Fl. Oz. finished spray per acre
Permethrin	PBO	5 MPH	10 MPH	15 MPH	20 MPH	
0.007	0.015	3.0	6.0	9.0	12.0	1.0
0.0035	0.0075	1.5	3.0	4.5	6.0	0.5
0.00175	0.00375	0.75	1.5	2.25	3.0	0.25
For a 1:4 Dilution						
Mix 1 part EVOLUER 31-66 ULV with 4 parts suitable Mineral Oil; apply as follows:						
Pounds a.i. per/acre		Application Rates Fl. Oz. per Minute at Vehicle Speeds M.P.H.				Fl. Oz. finished spray per acre
Permethrin	PBO	5 MPH	10 MPH	15 MPH	20 MPH	
0.007	0.015	5.0	10.0	15.0	20.0	1.6
0.0035	0.0075	2.5	5.0	7.5	10.0	0.80
0.00175	0.00375	1.25	2.5	3.75	5.0	0.4
For a 1:8 Dilution						
Mix 1 part EVOLUER 31-66 ULV with 8 parts suitable Mineral Oil; apply as follows:						
Pounds a.i. per/acre		Application Rates Fl. Oz. per Minute at Vehicle Speeds M.P.H.				Fl. Oz. finished spray per acre
Permethrin	PBO	5 MPH	10 MPH	15 MPH	20 MPH	
0.007	0.015	9.0	18.0	27.0	36.0	3.0
0.0035	0.0075	4.5	9.0	13.5	18	1.5
0.00175	0.00375	2.25	4.5	6.75	9	0.75

#### 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:** Pesticide, spray mixture or rinsate water that cannot be used according to label instructions must be disposed of at or by an approved waste disposal facility. **Container Disposal: Nonrefillable container.** Do not reuse or refill this container. Triple rinse or pressure rinse container promptly after emptying. Offer for recycling, if available. **Containers ≤ 5 gallons:** 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 container ¼ full with mineral oil and recap. Shake for 10 seconds. Pour rinsate into application equipment or a 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. **Container > 5 gallons:** Triple rinse as follows: Empty the remaining contents into 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. **Pressure rinse as follows:** 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.

#### READ ENTIRE LABEL BEFORE USING

Read the entire Directions for Use, Conditions, Disclaimer of Warranties, and Limitation of Liability before using this product. By using this product, User and Buyer accept the following Conditions and Disclaimer. **CONDITIONS:** The Directions for Use of this product are believed to be adequate and should be followed carefully. However it is impossible to eliminate all risks associated with the use of this product. Injury, ineffectiveness or other unintended consequences may result because of such factors as weather conditions, presence of other materials, or the manner of use or application, all of which are beyond the control of Value Garden Supply All such risks shall be assumed by the User or Buyer. **DISCLAIMER:** Value Garden Supply warrants that this product conforms to the chemical description on the label and is reasonably fit for the specific purposes referred to in the Directions For Use, subject to the inherent risks referred to above. Value Garden Supply makes no other express or implied warranty of fitness or merchantability or any other express or implied warranty. To the extent provided by law Value Garden Supply shall not be liable for any consequential, special, or indirect damages resulting from the use, handling or application of this product.

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