



U.S. ENVIRONMENTAL PROTECTION AGENCY  
 Office of Pesticide Programs  
 Registration Division (7505P)  
 1200 Pennsylvania Ave., N.W.  
 Washington, D.C. 20460

**EPA Reg. Number:**

8329-118

**Date of Issuance:**

8/6/21

**NOTICE OF PESTICIDE:**

Registration  
 Reregistration  
 (under FIFRA, as amended)

**Term of Issuance:**

Conditional

**Name of Pesticide Product:**

ANVIL 4.5+4.5 ULV

**Name and Address of Registrant (include ZIP Code):**

Leisha Schumacher  
 Clarke Mosquito Control Products, Inc.  
 159 N. Garden Avenue  
 Roselle, Illinois 60172

**Note:** Changes in labeling differing in substance from that accepted in connection with this registration must be submitted to and accepted by the Registration Division prior to use of the label in commerce. In any correspondence on this product always refer to the above EPA registration number.

On the basis of information furnished by the registrant, the above named pesticide is hereby registered under the Federal Insecticide, Fungicide and Rodenticide Act.

Registration is in no way to be construed as an endorsement or recommendation of this product by the Agency. In order to protect health and the environment, the Administrator, on his motion, may at any time suspend or cancel the registration of a pesticide in accordance with the Act. The acceptance of any name in connection with the registration of a product under this Act is not to be construed as giving the registrant a right to exclusive use of the name or to its use if it has been covered by others.

This product is conditionally registered in accordance with FIFRA section 3(c)(7)(A). You must comply with the following conditions:

1. Submit and/or cite all data required for registration/reregistration/registration review of your product under FIFRA when the Agency requires all registrants of similar products to submit such data.

**Signature of Approving Official:**

Jacquelyn Herrick, Product Manager 03  
 IVB1, Registration Division (7505P)

**Date:**

8/6/21

3. You are required to comply with the data requirements described in the DCI identified below:
  - a. PBO GDCI-57001-1224
  - b. PBO GDCI-57001-1851

You must comply with all of the data requirements within the established deadlines. If you have questions about the Generic DCI listed above, you may contact the Chemical Review Manager in the Pesticide Reevaluation Division: <http://iaspub.epa.gov/apex/pesticides/f?p=chemicalsearch:1>

4. The bridging argument submitted to fulfill the Storage Stability and Corrosion Characteristic Guidelines (Guidelines 830.6317 and 830.6320) in non-fluorinated container material and in Baritainer (Kortrax®) material required under 40 CFR § 158.310 has been classified as unacceptable because product-specific data should be submitted to fulfill the guidelines. These guidelines are thus not satisfied. A one-year study is required to satisfy these data requirements.
5. Make the following label changes before you release the product for shipment:
  - Revise the EPA Registration Number to read, “EPA Reg. No. 8329-118.”
6. Submit one copy of the final printed label for the record before you release the product for shipment.

Should you wish to add/retain a reference to the company’s website on your label, then please be aware that the website becomes labeling under the Federal Insecticide Fungicide and Rodenticide Act and is subject to review by the Agency. If the website is false or misleading, the product would be misbranded and unlawful to sell or distribute under FIFRA section 12(a)(1)(E). 40 CFR 156.10(a)(5) list examples of statements EPA may consider false or misleading. In addition, regardless of whether a website is referenced on your product’s label, claims made on the website may not substantially differ from those claims approved through the registration process. Therefore, should the Agency find or if it is brought to our attention that a website contains false or misleading statements or claims substantially differing from the EPA approved registration, the website will be referred to the EPA’s Office of Enforcement and Compliance.

If you fail to satisfy these data requirements, EPA will consider appropriate regulatory action including, among other things, cancellation under FIFRA section 6(e). Your release for shipment of the product constitutes acceptance of these conditions. A stamped copy of the label is enclosed for your records. Please also note that the record for this product currently contains the following CSFs:

- Basic CSF dated 10/16/2020

If you have any questions, you may contact Hester Dingle at 703-347-8860 or via email at [dingle.hester@epa.gov](mailto:dingle.hester@epa.gov).

Enclosure

**ANVIL® 4.5+4.5 ULV**

d-PHENOTHRIN (SUMITHRIN®)

GROUP

**3A**

INSECTICIDE

[An Oil Soluble Synergized Pyrethroid for control of Adult Mosquitoes (Including Organophosphate Resistant Species) [Midges] [and] [Black Flies] in Outdoor Residential and Recreational Areas.]

**Active Ingredients**

Sumithrin® [3-phenoxybenzyl-(1RS, 3RS; 1RS, 3SR)-2,2-dimethyl-3-(2-methylprop-1-enyl) cyclopropanecarboxylate] .....	4.50%
Piperonyl Butoxide * .....	4.50%
Other Ingredients ** .....	<u>91.0%</u>
	100.0%

Contains 0.32 lb. Sumithrin® and  
0.32 lb. [Piperonyl Butoxide] [PBO] per gallon

\* (butyl carbityl) (6-propylpiperonyl) ether and related compounds.

\*\* Contains petroleum distillate

**ACCEPTED****08/06/2021**

Under the Federal Insecticide, Fungicide  
and Rodenticide Act as amended, for the  
pesticide registered under  
EPA Reg. No. 8329-118

**KEEP OUT OF REACH OF CHILDREN**  
**CAUTION**

**FIRST AID**

<b>IF SWALLOWED:</b>	Immediately call a poison control center or doctor. Do not induce vomiting unless told to do so by a poison control center or doctor. Do not give <b>any</b> liquid to the person. Do not give anything by mouth to an unconscious person.
<b>IF ON SKIN OR CLOTHING:</b>	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.

**NOTE TO PHYSICIAN:** Product contains a petroleum distillate. Vomiting may cause aspiration pneumonia.

Have product container or label with you when calling a poison control center or doctor, or going for treatment. For Medical Emergencies, call 1-800-214-7753.

**PRECAUTIONARY STATEMENTS****HAZARDS TO HUMANS AND DOMESTIC ANIMALS**

Caution. Harmful if absorbed through skin. Avoid contact with skin, eyes or clothing. In case of contact, flush with plenty of water. Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco, or using the toilet. Remove and wash contaminated clothing before reuse.

**Personal Protective Equipment (PPE):** Mixers, loaders, applicators and other handlers must wear: long-sleeve shirt, long pants, shoes and socks. In addition, all handlers except for applicators using motorized ground equipment, pilots, and flaggers, must wear chemical-

resistant gloves made of barrier laminate, nitrile rubber > 14 mils, neoprene rubber > 14 mils, or Viton > 14 mils. 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 material that have been drenched or heavily contaminated with the 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 pesticides [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 toxic to aquatic organisms. Runoff from treated areas or deposition of spray droplets into a body of water may be hazardous to aquatic organisms. 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 beyond the body of water to minimize incidental deposition into the water body. Do not contaminate bodies of water when disposing of equipment rinsate or wash waters.

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, 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 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.**

#### **USE RESTRICTIONS**

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 supervision, or as allowed by state regulations for persons treating private property.

IN CALIFORNIA: This product is to be applied by County Health Department, State Department of Health Services, Mosquito and Vector Control or Mosquito Abatement District personnel, or persons under contract to these entities only.

Do not treat a site with more than 0.0036 lb of Sumithrin and piperonyl butoxide [PBO] per acre in a single application or in any 24-hour period. Do not exceed 0.1 lb. of Sumithrin or piperonyl butoxide [PBO] per acre in any site in one year. More frequent applications 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.

NOTE: When rotating products with other insecticides containing PBO, do not exceed 2 lbs. PBO per acre per year.

Not for use in outdoor residential misting systems.

#### **INSECTICIDE RESISTANCE MANAGEMENT (IRM) RECOMMENDATIONS**

For resistance management, ANVIL 4.5+4.5 ULV contains a Group 3A insecticide. Any insect population may contain individuals naturally resistant to ANVIL 4.5+4.5 ULV and other Group 3A insecticides. The resistant individuals may dominate the insect population if this group of insecticides are used repeatedly in the same area. Appropriate resistance-management strategies should be followed.

To delay insecticide resistance, take the following steps:

- Rotate the use of ANVIL 4.5+4.5 ULV or other Group 3A insecticides with other labeled effective mosquito adulticides that have a different mode of action.
- Adopt an integrated pest management program for insecticide use that includes surveillance, uses historical information related to pesticide use, record keeping, and which considers biological and other chemical control practices.
- Monitor after application for unexpected target pest survival. If the level of survival suggests the presence of resistance, contact your local university specialist or Clarke representative.
- Contact your local extension specialist, technical advisor, and/or Clarke representative for any additional pesticide resistance-management and/or IPM recommendations for the specific site and pest problem in your area.
- For further information or to report suspected resistance, contact your local Clarke representative by calling 1-800-323-5727.

IN FLORIDA: Aerial applications of this product require trained personnel to perform industry accepted assays to monitor resistance formation in targeted mosquitoes.

### MANDATORY SPRAY DRIFT MANAGEMENT

#### Ultra Low Volume Applications

- Apply when ground wind speeds are equal to or greater than 1 mph.
- All types of applications should be conducted when temperatures at ground level are at or above 50°F.

#### For Ground Applications:

- Create an optimum swath when possible. An optimum swath width can be achieved when ANVIL 4.5+4.5 ULV is applied from a truck that is being driven perpendicular to the wind direction. Direct the spray head of equipment to ensure even distribution of the spray cloud throughout the area.
- FOR BEST RESULTS treat when mosquitoes or other labeled insects are most active and weather conditions are conducive to keeping the spray cloud in the air column close to the ground.
- An inversion of air temperatures and a light breeze is preferable. Application during the cooler hours of the night or early morning is recommended.

#### For Aerial Applications:

- Do not apply by fixed wing aircraft at a nozzle height less than 100 feet (30.5 m) above ground or canopy, or by helicopter at a height less than 75 feet (22.9 m) above the ground or canopy, unless specifically approved by the state or tribe based on public health needs.

### PRODUCT INFORMATION

ANVIL 4.5+4.5 ULV is approved for application as a thermal aerosol and as an Ultra Low Volume (ULV) nonthermal aerosol (cold fog) in mosquito adulticiding programs involving outdoor residential and recreational areas where adult mosquitoes are present in annoying numbers, and in vegetation surrounding parks, woodlands, swamps, marshes, overgrown areas and golf courses. ANVIL 4.5+4.5 ULV may be applied over agricultural areas for the control of adult mosquitoes within or adjacent to these areas.

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.

Note: ANVIL 4.5+4.5 ULV cannot be diluted in water. Dilute this product with light mineral oil if dilution is preferred.

### SPRAY DROPLET SIZE DETERMINATION

**Ground equipment, wide-area mosquito abatement application:** Spray equipment must be adjusted so that the volume median diameter (VMD) is less than 30 microns ( $D_v 0.5 < 30 \mu\text{m}$ ) and that 90% of the spray is contained in droplets smaller than 50 microns ( $D_v 0.9 < 50 \mu\text{m}$ ). 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.

**Aerial equipment, wide-area mosquito abatement application:** Spray equipment must be adjusted so that the volume median diameter produced is less than 60 microns ( $D_v 0.5 < 60 \mu\text{m}$ ) and that 90% of the spray is contained in droplets smaller than 80 microns ( $D_v 0.9 < 80 \mu\text{m}$ ). 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.

### GROUND APPLICATION

Apply ANVIL 4.5+4.5 ULV diluted or undiluted through a standard ULV cold aerosol or non-thermal aerosol (Cold Fog) generator. Consult the following table for various flow rates and equivalent dose, using a swath width of 300 feet for acreage calculations.

Vary flow rate according to vegetation density and mosquito population. Use higher flow rate in heavy vegetation or when populations are high.

Sumithrin/PBO Lb. per Acre	Flow Rates Fl.oz./Min.				Fl.oz. ANVIL 4.5+4.5 ULV per Acre
	5MPH	10MPH	15MPH	20MPH	
0.0036	4.3	8.7	13.0	17.3	1.43
0.0024	2.9	5.8	8.6	11.5	0.95
0.0012	5	2.9	4.4	5.8	0.48

ANVIL 4.5+4.5 ULV may also be applied with non-thermal, portable, motorized backpack equipment adjusted to deliver ULV particles of less than 100 microns VMD. Use 0.48 to 1.43 fluid ounces of the undiluted spray per acre (equal to 0.0012 to 0.0036 lb. a.i./acre), with a 50-foot [15.2 m] swath and walking at an average speed of 2 mph [3.2 kph]. Dilute with a suitable mineral oil if dilution is preferred. Do not exceed 1.43 fluid ounces of the undiluted spray per acre. Do NOT use portable backpack equipment for application in enclosed spaces.

ANVIL 4.5+4.5 ULV may be applied through truck mounted thermal fogging equipment and vehicle speeds of 5 to 20 mph. To reduce oil requirement and sludge buildup in equipment, use a 60-100 second viscosity mineral "fog" oil, or other fuel-type oil. Dilute sufficiently to provide thorough coverage. Do not exceed 1.43 fluid ounces of ANVIL 4.5+4.5 ULV per acre. Use a clean, well-maintained and properly calibrated fogger. Do not wet foliage since oil base formulations may be phytotoxic. For use with hand-carried foggers, use same rates of active ingredient per acre and a swath width of 50 ft and a walking speed of 2 mph for flow calculations. Do NOT use hand-carried thermal foggers in enclosed spaces.

### AERIAL APPLICATION

ANVIL 4.5+4.5 ULV may be applied at rates of 0.48 to 1.43 fluid ounces ANVIL 4.5+4.5 ULV by fixed wing or rotary aircraft equipped with suitable ULV application equipment. Dilute with a suitable solvent, such as mineral oil, if dilution is preferred. Do not exceed 1.43 fluid ounces per acre of the ANVIL 4.5+4.5 ULV concentrate.

**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 must be disposed of on site or at an approved waste disposal facility.

**CONTAINER HANDLING:**

[For Nonrefillable containers of 5 gallons or less]

[Nonrefillable container. Do not reuse or refill this container. Triple rinse container (or equivalent) promptly after emptying. 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 the container  $\frac{1}{4}$  full with mineral oil and recap. Shake for 10 seconds. Pour rinsate into application equipment or a rinse 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. 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.]

[For Nonrefillable containers over 5 gallons:]

[Nonrefillable container. Do not reuse or refill this container. Triple rinse container (or equivalent) promptly after emptying. Triple rinse as follows: Empty the remaining contents into the application equipment or a mix tank. Fill the container  $\frac{1}{4}$  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. 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.]

[For Refillable Containers]

[Refillable container. Refill this container with pesticide only. Do not reuse this container for any other purpose. Cleaning before refilling is the responsibility of the refiller. To clean the container before final disposal, empty the remaining contents from this container into application equipment or mix tank. Fill the container about 10 percent full with water. Agitate vigorously or recirculate water with the pump for 2 minutes. Pour or pump rinsate into rinsate collection system. Repeat this rinsing procedure two more times. 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.]

[IN CASE OF MEDICAL EMERGENCY, CALL THE INTERNATIONAL POISON CONTROL CENTER 1-800-214-7753]



[IN CASE OF TRANSPORTATION EMERGENCY, CALL INFO-TRAC 1-800-553-5053]

[NOTICE: To the extent provided by law, seller makes no warranty, expressed or implied, concerning the use of this product other than as indicated on the label. Buyer assumes all risk of use/handling of this material when use and/or handling is contrary to label instructions.]

[ANVIL® is a Registered Trademark of Clarke Mosquito Control Products, Inc.]

[SUMITHRIN® is a Trademark of Sumitomo Company Ltd.]

Manufactured [By][For]  
**CLARKE MOSQUITO CONTROL PRODUCTS, INC.**  
159 N. GARDEN AVENUE  
ROSELLE, ILLINOIS 60172

EPA Reg. No.: 8329-XXXX

EPA Est. No.:

NET CONTENTS: \_\_\_\_\_

LOT NO.: \_\_\_\_\_