



GLOBAL SOLUTIONS FOR MOSQUITO CONTROL

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Anvil®

Anvil, a highly effective, adulticide exclusive to Clarke Mosquito Control, has been used across the country to combat nuisance, disease-bearing and natural disaster mosquito populations. Whether applied by air or ground, Anvil is an excellent choice for municipalities, golf courses, cemeteries, residential areas and other environments.



Appropriate For:

Anvil and its active ingredients have been rigorously tested by independent laboratories. Based on those tests, the U.S. E.P.A. registered Anvil for use in mosquito adulticiding programs in outdoor residential and recreation areas where adult mosquitoes are present in annoying numbers, in vegetation surrounding parks, woodlands, swamps, marshes, overgrown areas and golf courses.

Target Species:

Anvil® is particularly effective against most known vector species, including organophosphate-resistant species.

Active Ingredients:

The active ingredient in Anvil is sumithrin, a synthetic pyrethroid in the Anvil formulation that replicates the mosquito fighting properties of pyrethrum, an extract of the chrysanthemum flower. Sumithrin is synergized with piperonyl butoxide (PBO) providing a fast knockdown of adult mosquitoes.

Formulations:

Anvil is labeled for ULV, thermal fog and aerial applications. For your convenience, Anvil® is available in 4 different container sizes and as a ready-to-use or concentrate. Non-corrosive and odorless, Anvil® 2+2 ULV and 10+10 ULV can easily be used in large aerial programs. It's hard to find a more versatile product anywhere.

For Use With:

Anvil can be applied aurally with fixed wing and rotary aircraft, and with truck-mounted, ATV or backpack ULV equipment.

PDFS: [Label](#) - Anvil 10+10
[Label](#) - Anvil 2+2
[MSDS](#) - Anvil 10+10
[MSDS](#) - Anvil 2+2

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ANVIL® 2+2 ULV

Contains An Oil Soluble Synergized Synthetic Pyrethroid For Control of Adult Mosquitoes (Including Organophosphate-Resistant Species) Midges, and Black Flies in Outdoor Residential and Recreational Areas.

ACTIVE INGREDIENTS:

3-Phenoxybenzyl-(1RS, 3RS; 1RS, 3SR)-2,2-dimethyl-3-(2-methylprop-1-enyl) cyclopropanecarboxylate*	2.00%
Piperonyl butoxide, Technical **	2.00%
OTHER INGREDIENTS ***	96.00%
	100.00%

Contains 0.15 pounds of Technical SUMITHRIN®/Gallon and 0.15 pounds Technical Piperonyl Butoxide/Gallon

* SUMITHRIN™ Trademark of Sumitomo Company, Ltd.

** Equivalent to 1.60% (butylcarbityl) (6-propylpiperonyl) ether and 0.40% related compounds

*** Contains a petroleum distillate

ANVIL® - Registered trademark of Clarke Mosquito Control Products, Inc.

CAUTION

KEEP OUT OF REACH OF CHILDREN

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

FIRST AID

IF SWALLOWED • 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 any liquid to the person. • Do not give anything by mouth to an unconscious person

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.

NOTE TO PHYSICIAN: Contains a petroleum distillate - vomiting may cause aspiration pneumonia.

Have the product container or label with you when calling a poison control center or doctor or going for treatment. For information regarding medical emergencies or pesticide incidents, call 1-888-740-8712.

PRECAUTIONARY STATEMENTS

HAZARDS TO HUMANS AND DOMESTIC ANIMALS

CAUTION: Harmful if absorbed through the 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, or using tobacco. Remove and wash contaminated clothing before reuse.

ENVIRONMENTAL HAZARDS

This product is 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 permanent 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 in order to minimize incidental deposition into the water body. Do not contaminate bodies of water when disposing of equipment rinsate or wash waters.

BEE WARNING: This product is toxic to bees exposed to direct treatment on blooming crops or weeds. Do not apply to or allow drift onto blooming crops or weeds when bees are 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.

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.

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 requirements exist.

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 only.

USE AREAS: For use in mosquito adulticiding programs involving outdoor residential and recreational areas where adult mosquitoes are present in annoying numbers in vegetation surrounding parks, woodlands, swamps, marshes, overgrown areas and golf courses.

For best results, apply when mosquitoes are most active and weather conditions are conducive to keeping the fog close to the ground. Application in calm air conditions is to be avoided. Apply only when ground wind speed is greater than 1 mph. Air temperature should be greater than 50F when conducting all types of applications.

Do not treat a site with more than 0.0036 pounds of Sumithrin® per acre in a 24-hour period. Do not exceed 1.0 pounds of Sumithrin® per acre in any site in any 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.

Do not contaminate food, feed or drinking water. Do not spray this product on or allow it to drift onto pastureland, rangeland, cropland, poultry ranges or potable water supplies. In treatment of corrals, feed lots, swine lots, and zoos, cover any exposed drinking water, drinking water fountains and animal feed before application.

Note: ANVIL 2+2 ULV can not be diluted in water. Dilute this product with light mineral oil if dilution is preferred.

SPRAY DROPLET SIZE DETERMINATION

Ground Equipment: Spray equipment must be adjusted so that the volume median diameter (VMD) is 8 to 30 microns (8 ≤ Dv 0.5 ≤ 30 um) and that 90% of the spray is contained in droplets smaller than 50 microns (Dv 0.9 < 50 um). 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: Spray equipment must be adjusted so that the volume median diameter produced is less than 60 microns (Dv 0.5 < 60 um) and that 90% of the spray is contained in droplets smaller than 115 microns (Dv 0.9 < 115 um). 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 ULV APPLICATION

Apply ANVIL 2+2 ULV through a standard ULV cold aerosol or non-thermal aerosol (cold fog) generator. Consult the following table for examples of various dosage rates using a swath width of 300 feet for acreage calculations.

Dosage Rate	Flow Rates in fluid oz./minute at truck speeds of:				
	Fl. oz. ANVIL				
Lbs Sumithrin®/acre	10+10 ULV per Acre	5MPH	10MPH	15MPH	20MPH
0.0036	3.0	9.3 oz.	18.6 oz.	27.9 oz.	37.2 oz.
0.0024	2.0	6.2 oz.	12.4 oz.	18.6 oz.	24.8 oz.
0.0012	1.0	3.1 oz.	6.2 oz.	9.3 oz.	12.4 oz.

ANVIL 2 + 2 ULV may also be applied undiluted with non-thermal, portable, motorized backpack equipment adjusted to deliver ULV particles of 50 to 100 microns VMD. Use 1.0 to 3.0 fl.oz. of the undiluted spray per acre (equal to 0.0012 to 0.0036 lb.ai./acre) as a 50 ft (15.2 m) swath while walking at a speed of 2 mph (3.2 kph).

ANVIL 2 + 2 ULV may be applied through truck mounted thermal fogging equipment. Do not exceed the maximum rates listed above. May be applied at speeds of 5 to 20 mph. To reduce oil requirement and sludge buildup in equipment, use 100-second viscosity mineral "fog" oil. For use with hand carried foggers, use same rates of active ingredient per acre. Do not wet foliage since oil base

formulations may be phytotoxic. Use a clean, well-maintained and properly calibrated fogger. Fog downwind.

ANVIL 2 + 2 ULV may be applied for Urban ULV mosquito control. For control of resting or flying adult mosquitoes, biting flies and biting midges in areas such as utility tunnels, sewers, storm drains and catch basins, pipe chases, underground basements, underground passages, parking decks, crawl spaces or uninhabited buildings. ANVIL 2+2 ULV may be applied using mechanical foggers, hand-held or truck mounted ULV equipment, thermal foggers or other spray equipment suitable for this application. Apply ANVIL 2+2 ULV at rates up to but not exceeding 0.0036 pounds sumithrin per acre per twenty-four hour period (not to exceed 1.0 pounds sumithrin per acre in any site in any year).

AERIAL APPLICATION

Prohibition on aerial use: Not for aerial application in Florida unless specifically authorized by the Bureau of Entomology, Florida Department of Agriculture and Consumer Service.

ANVIL 2+2 ULV may be applied at rates of 1.0 to 3.0 fluid ounces of ANVIL 2+2 ULV per acre by fixed wing or rotary aircraft equipped with suitable ULV application equipment. Aerial Application shall be made at 75 to 300 feet for rotary aircraft and 100 to 300 feet for fixed-wing aircraft.

Dosage Rate	Flow Rates in fluid oz./acre:
Lbs Sumithrin®/acre	ANVIL® 2 + 2 ULV
0.0036	3.0 oz
0.0024	2.0 oz
0.0012	1.0 oz

STORAGE & DISPOSAL

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

PESTICIDE STORAGE: Store in a cool, dry place. Keep container closed.

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: 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.

E.P.A. EST. No. 8329-IL-01

EPA Reg. No.1021-1687-8329

NET CONTENTS: 55 GAL

LOT NO. _____

MANUFACTURED FOR

CLARKE MOSQUITO CONTROL

PRODUCTS, INC.

159 N. GARDEN AVENUE • ROSELLE, ILLINOIS 60172

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

**FOR MORE INFORMATION CALL:
1-800-323-5727**

Material Safety Data Sheet

Date last revised: 14 December 2005

I. General Information

Chemical Name and Synonyms Sumithrin Piperonyl Butoxide	Trade Name & Synonyms Anvil 2+2 ULV
Chemical Family Synergized Synthetic Pyrethroid	EPA Registration Number 1021-1687-8329
Proper DOT Shipping Name Agricultural Insecticide, N.O.I., Non-Hazardous	DOT Hazard Classification Non-Hazardous
Manufacturer Clarke Mosquito Control Products, Inc.	Manufacturer's Phone Number (630) 894-2000
Manufacturer's Address 159 North Garden Avenue Roselle, Illinois 60172	INFOTRAC (Emergency) Hotline 1-800-535-5053

II. Ingredients

Principal Hazardous Components	CAS #	Percent
Sumithrin® [3-Phenoxybenzyl-(1RS, 3RS; 1RS, 3SR) 2,2-dimethyl-3-(2-methylprop-1-enyl) cyclopropane-carboxylate]	026002-80-2	2.00%
Piperonyl Butoxide [Alpha-(2-(1-butoxyethoxy)-4,5-methylenedioxy-2-propyl)toluene]	000051-03-6	2.00%
Petroleum Distillates		20 – 50%
Inert Ingredients are propriety or non-hazardous, Values are not product specifications		46 – 76%

III. Physical Data

Boiling Point (°F): Not Established	Specific Gravity (H₂O = 1): 0.898
Vapor Pressure (mm Hg.): Not Established	Vapor Density (Air = 1): Not Established
Solubility in Water: Emulsifiable	pH: Not Applicable
Appearance: Liquid, Clear with a light yellow tinge	Odor: Pungent aromatic, similar to smell of mothballs

IV. Fire & Explosion Hazard Data

Flash Point (Test Method): +200 °F (Tag Closed Cup)
Extinguishing Media: Foam, carbon dioxide, or dry chemical
Special Fire Fighting Procedures: Treat as an oil fire. Use a full-faced self-contained breathing apparatus along with full protective gear. Keep nearby containers and equipment cool with a water stream. Contain the run-off, if possible, for proper disposal.

V. Health Hazard Data

Exposure Limits: Not established by OSHA or ACGIH
EMERGENCY FIRST AID
Skin Contact: CAUTION. Can cause a burning sensation on more sensitive areas (face, eyes, mouth). Prolonged or repeated exposure can cause irritation and reddening of the skin, possibly progressing into dermatitis. Immediately flush affected area with large amounts of water. Remove contaminated clothing and wash affected areas with soap and water. If irritation persists, get medical attention.
Eye: CAUTION. Can cause temporary irritation, tearing, and blurred vision. 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. Call a poison control center or doctor for treatment advice.
Inhalation: CAUTION. Excessive inhalation can cause nasal and respiratory irritation. Remove affected person to fresh air. Give oxygen, if necessary. If breathing has stopped, administer artificial respiration and get medical attention immediately
Ingestion: CAUTION. Can cause stomach irritation, resulting in nausea, cramps and vomiting. Excessive ingestion can cause nervous system disorders, such as fatigue, dizziness, headaches, lack of coordination, tremors and unconsciousness. Do NOT induce vomiting because of aspiration pneumonia hazard. Call a physician or poison control center.

VI. Reactivity Data

Stability:	Stable
Incompatibility	Strong acidic or alkaline materials
Hazardous Decomposition	Not applicable

Material Safety Data Sheet

Anvil 2+2 ULV

Date last revised: 14 December, 2005

VII. Environmental Protection Procedures**Spill Response:**

Shut off ignition sources. Stop release, if possible without risk. Dike or contain release, if possible, and if immediate response can prevent further damage or danger. Isolate and control access to the release area. Take actions to reduce vapors. Absorb with appropriate absorbent. For large spills, collect product into drums, etc., via drains, pumps, etc. Absorb with appropriate absorbent. Clean spill area of residues and absorbent. Contaminated absorbent and wash water should be disposed of according to local, state and federal regulations.

Storage:

Store containers upright and closed. Store in areas that are cool, dry and well-ventilated. Keep away from heat, ignition sources and strong oxidizers. Emptied containers may retain product residues.

Waste Disposal:

Do not contaminate water when disposing of equipment wash waters. Do not discharge effluent containing this product into lakes, streams, ponds, estuaries, oceans, or other waters unless in accordance with the requirements of a National Pollutant Discharge Elimination System (NPDES) permit and the permitting authority has been notified in writing prior to discharge. Do not discharge effluent containing this product into sewer systems without previously notifying the sewage treatment plant authority. For guidance, contact your State Water Board or Regional Office of the EPA. Do not mix with other waste materials.

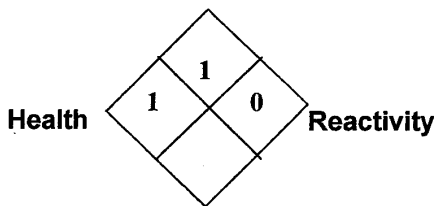
VIII. Special Protection Information

Eye Protection: OSHA-approved safety glasses, goggles or face shield	Skin Protection: Handlers should wear protective clothing, chemical resistant gloves, and chemical resistant apron when cleaning mixing or loading.
Respiratory Protection: Not required	Ventilation: Mechanical ventilation should be used when handling this product in enclosed spaces.
Other: IMPORTANT. Read and observe all precautions and instructions on the label.	

IX Additional Regulatory Information**Sara Title III Data****Section 313: (Title III Superfund Amendment and Reauthorization Act)**

This product contains the following toxic chemicals subject to the reporting requirements of section 313 of title III of the Superfund Amendments and Reauthorization Act of 1986 and 40 CFR Part 372.

Ingredient	CAS #	Percentage (by weight)
Piperonyl butoxide	51-03-6	2.0 %

Fire**NFPA Code**

4 = Severe
 3 = Serious
 2 = Moderate
 1 = Slight
 0 = Minimal

The information and statements herein are believed to be reliable but are not to be construed as a warranty or representation for which we assume legal responsibility. Users should undertake sufficient verification and testing to determine the suitability for their own particular purpose of any information or products referred to herein. **NO WARRANTY OF FITNESS FOR A PARTICULAR PURPOSE IS MADE.**