MOSQUITO CONTROL BY COMMERCIAL AND GOVERNMENT AGENCIES

Pesticide labels for commercial and homeowner products that are currently registered for use in Arkansas may be found through the Arkansas Department of Agriculture/State Plant Board website by clicking on the following link: https://agriculture.arkansas.gov/crops-industry/pesticides/pesticide-registration/

Insect	Insecticide Active Ingredient	Trade Name	Application Flow Rate (fl oz/min)	Application Speed (MPH)	Comments/Precautions
Mosquitoes, Adults (ULV and Low Volume Sprays by Ground Application)	chlorpyrifos	Mosquitomist One ULV	3.9-7.8	10	Non-corrosive, quick knockdown, low odor and low mammalian toxicity. 100-foot water set back. Breaks down quickly.
		PyroFos 1.5 ULV	1.4-10.5	5-20	
	chlorpyrifos + permethrin	ULV Mosquito Master 412	2.3-12.9	5-15	A choice where insecticide resistance is a serious concern.
	deltamethrin	DeltaGard	1.0-60.9	5-20	NO piperonyl butoxide (pbo) in formulation, Type II pyrethroid.
	etofenprox	Aqua Zenivex E20	0.9-40.4	10-20	Can be diluted with water.
		Zenivex E4 RTU	2.25-8.0	5-15	Can be diluted with water.
		Zenivex E20	0.9-52.8	10-20	Newer product that may be helpful if resistance is a concern.
	malathion	Fyfanon ULV	1.0-8.6	5-20	Long time standard and still effective and cost efficient. Odor present, excites mosquitoes prior to mortality.
	naled	Dibrom Concentrate	0.6-1.8	5-15	Best choice for salt-marsh mosquitoes, very safe environmentally, no water set back. However, highly corrosive to all equipment.
		Trumpet EC	0.8-2.2	5-15	
	permethrin/pbo	Aqualuer 20-20	1.6-6.2	10-20	Excellent choice for ground applications. Variety of applications.
		Aqua Perm-X UL 30-30	0.5-21.5	10-20	Widely used and highly effective. Maintain dose in the 0.0035 lb/acre range. Some resistance along Gulf Coast.100 foot water set back.
		Aqua-Reslin	0.7-35.4	10-20	
		Biomist 3+15	1.5-27	5-15	
		Biomist 4+4	4.5-18	5-15	
		Biomist 30+30	1-6	5-15	
		Biomist 31+66	1-6	5-15	
		Envion	0.5-25.8	10-20	Can be diluted with water or oil.
		Envion RTU	2.4-16.5	10	Pre-mixed, water diluted, ready-to-use formulation.
		Evolver 31-66 ULV	See label.	See label.	Application equipment must be tested at least annually to confirm that pressure at the nozzle and nozzle flow rates(s) are properly calibrated.
		Aqua-Kontrol Concentrate	2.0-15.5	5-20	May be diluted with water.
		Aqua-Kontrol 30-30	0.46-25.8	10-20	May be diluted with water.
		Kontrol 4-4	4-16	5-20	
		Kontrol 30-30	0.27-64.3	5-20	
		Permanone – Ready-to-use	6-18	5-15	
		Permanone 30-30	0.5-2	5-20	
		Permanone 31-66	0.5-15	5-20	
		Perm-X UL 4-4	1.4-105	5-20	
		Perm-X UL 30-30	0.3-38.2	5-20	
		Perm-X UL 31-66	0.2-33.6	5-20	
	sumithrin/pbo	Anvil 2+2 ULV	3.1-37.2	5-20	NO water set back; good for truck applications.
		Anvil 10+10 ULV	0.6-7.6	5-20	
	prallethrin/sumithrin/pbo	AquaDUET Water Based Dual-Action Adulticide	2.5-7.5	5-20	Combines two active ingredients + pbo, causes benign agitation, may have uses against Asian tiger mosquito.

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Insect	Insecticide Active Ingredient	Trade Name	Application Flow Rate (fl oz/min)	Application Speed (MPH)	Comments/Precautions
Mosquitos, Adults (Thermal Aerosols by Ground Application)	chlorpyrifos	Mosquitomist One ULV	9.6	5	Non-corrosive, quick knockdown, low odor and low mammalian toxicity. 100 foot water set back. Breaks down quickly.
		PyroFos 1.5 ULV	6.4	5	
	etofenprox	Aqua Zenivex E20	0.9-40.4	10-20	Apply at the rate of 0.00175-0.0070 lb ai/acre.
		Zenivex E4 RTU	3-48	5-15	
		Zenivex E20	0.9-52.8	10-20	
	malathion	Fyfanon ULV	1.6-2.1	5	Long time standard and still effective and cost efficient. Odor present, excites mosquitoes prior to mortality.
	naled	Dibrom Concentrate	1.6-2.1	5-15	Best choice for salt-marsh mosquitoes, very safe environmentally, no water set back; however, highly corrosive to all equipment.
	permethrin/pbo	Aqualuer 20-20	0.7-25.5	10-20	DO NOT exceed 0.007 lb ai/acre.
		Aqua Perm-X UL 30-30	0.5-21.5	10-20	
		Envion	2.2-25.8	10-20	Rate not to exceed 0.007 lb/acre.
		Envion RTU	1.2-32.9	5-20	Droplet size will range from 0.1-1 micron.
		Evolver 31-66 ULV	0.75-36.0	5-20	Application equipment must be tested at least annually to confirm that pressure at the nozzle and nozzle flow rates(s) are properly calibrated.
		Kontrol 4-4	21.0-64	5-20	
		Kontrol 30-30	21.0-64	5-20	
		Permanone 30-30	0.41-3	5-20	Flow rate depends on concentration. Rate not to exceed 0.007 lb permethrin/acre.
		Perm-X UL 4-4	1.4-105	5-20	
		Perm-X UL 30-30	0.3-38.2	5-20	
		Perm-X UL 31-66	0.2-33.6	5-20	
	sumithrin/phenothrin/pbo	Anvil 2+2 ULV	3.1-37.2	5-20	NO water set back; good for truck applications.
		Anvil 10+10 ULV	0.6-7.6	5-20	

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Insect	Insecticide Active Ingredient	Trade Name	Gross Amount Per Acre (oz)	Comments/Precautions
Mosquito Adults (Sprays by Aerial Application)	chlorpyrifos	Mosquitomist One ULV	3	Non-corrosive, quick knockdown, low odor and low mammalian toxicity. 100 foot water set back. Breaks down quickly.
		PyroFos 1.5 ULV	0.87	
	deltamethrin	Imperium	0.00089 to 0.00134 lb. ai/A (undiluted or diluted in water)	During any three day period do not apply more than 0.00134 lb ai/A. Do not make more than 25 applications per site per year at the high rate of 0.00134 lb ai/A. More frequent applications and more than 25 applications per site 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 mosquitoborne disease in animal or human populations, or if specifically approved by the state or tribe during a natural disaster recovery effort.
	etofenprox	Aqua Zenivex E20		Apply diluted or undiluted at rates up to 0.007 lb ai/acre. Minimum application height 100 feet.
		Zenivex E4 RTU		
		Zenivex E20		Apply at 100-300 feet altitude.
	malathion	Fyfanon ULV	2.6-3	Long time standard and still effective and cost efficient. Odor present, excites mosquitoes prior to mortality.
	naled	Dibrom Concentrate	0.5-1	Best choice for salt-marsh mosquitoes, very safe environmentally, no water set back, however, highly corrosive to all equipment.
		Trumpet EC	0.6-1.2	
	permethrin/pbo	AquaHalt	0.28-0.76	Water based, labeled for use over crops.
		Aqualuer 20-20		Apply diluted or undiluted at rates up to 0.007 lb ai/acre.
		Aqua-Reslin	0.25-0.5	Widely used and highly effective. Maintain dose in the 0.0035 lb/acre range. Some resistance along Gulf Coast. 100 foot water set-back.
		Biomist 4.0+4.0 ULV	3	
		Biomist 30+30 ULV	0.33-1	
		Biomist 31+66 ULV	0.33-1	
		Envion		Apply diluted or undiluted at rates up to 0.007 lb. Permethrin/PBO/acre.
		Envion RTU	up to 2.72	Apply at altitudes between 100-300 feet.
		Aqua-Kontrol Concentrate	up to 1.5	Apply at sufficient air speed to deliver the appropriate amount of ai/acre (from 0.00175-0.007 lb).
		Kontrol 4+4	up to 3	
		Kontrol 30+30	up to 0.35	
		Permanone 31-66	0.16-0.6	
		Perm-X UL 4-4	up to 3.1	
		Perm-X UL 30-30	up to 0.32	
		Perm-X UL 31-66	up to 0.36	
	sumithrin/pbo	Anvil 2+2 ULV	1-3	No water set back.
		Anvil 10+10 ULV	0.21-0.62	
	prallethrin/sumithrin/pbo	AquaDUET Water-Based Dual-Action Adulticide	0.41-1.24	Combines two active ingredients + pbo, causes benign agitation, option for Asian tiger mosquito.

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Insect	Insecticide Active Ingredient	Trade Name	Gross Amount Per Acre (oz)	Comments/Precautions
Mosquito Larvae (Control by Ground Application)	mineral oil	BVA 2 Mosquito Larvicide Oil	1-5 gal	Surface film material. Effective against both larvae and pupae, low labor input required. Use higher rates for areas with more vegetation or pollution.
		COCObear Mosquito Larvicide Oil	3-5 gal	
		Kontrol Mosquito Larvicide Oil	1-5 gal	
	methoprene	Altosid Liquid Larvicide	3-4 fl oz	Significant residual effect possible, up-front cost more, can save labor costs. Approved for use in stock waters. Newly approved for ULV applications. Used to prepare Altosand granular formulation for areas up to 2 ft in depth. Effective up to 150 days, rate depends on species targeted. Use lower rates when water is shallow or vegetation and/or pollution is minimal. Effective up to 30 days.
		Altosid Liquid Larvicide Concentrate	0.75-1 fl oz	
		Altosid Briquets	1/100 sq ft	
		Altosid XR Briquets	1 briquet/100-200 sq ft	
		Altosid Pellets	2.5-10 lb	
		Altosid Pellets Water Soluble Pouch (WSP)	up to 135 sq ft	
		Altosid SBG II	3-20 lb	Rate depends on target species.
		Altosid XR-G	5-20 lb	May be applied prior to flooding.
	Bacillus thuringiensis subsp. *israelensis*	Aquabac XT 12AS	1-2 pt	Biological control agent, very effective, environmentally sound. Store products in cool areas and use by expiration date. Timing of application critical for maximum effectiveness. Use higher label rates when large larval populations are present, larvae are in the late 3rd or 4th instars or local experience has demonstrated that higher rates are required to achieve high levels of mortality.
		Aquabac 200G	2.5-10 lb	
		Aquabac 400G	1.25-8 lb	
		FourStar Bti Briquets Sustained Release 150 Day Microbial Briquets	1 briquet/100 sq ft	
		Mosquito Dunks	1 briquet/100 sq ft	
		Teknar CG	2.5-20 lb	
		Vectobac WDG	1.75-14.0 oz	
		Vectobac 12AS	5-100 gal	
		Vectobac G	2-20 lb	
	Bacillus sphaericus	Vectolex FG	5-20 lbs 20-80 lbs for waste tires	Biological control agent with residual effect. Targets specific species, especially *Culex*. Not recommended for salt-marsh mosquitoes.
		Vectolex WSP	1 pouch/50 sq ft	
		Vectolex WDG	0.5-1.5 lb	
	Bacillus thuringiensis subsp. *israelensis* and *Bacillus sphaericus*	Fourstar 45 - Day Briquet	1 briquet/100 sq ft	Effective against all pest species of mosquitoes, will reduce likelihood of resistance. Approved for use in organic crops and sensitive areas.
		Fourstar 90 - Day Briquet	1 briquet/100 sq ft	
		Fourstar 180 - Day Briquet	1 briquet/100 sq ft	
		Fourstar Multi-Brood Granule	5-20 lb	
		Fourstar Multi-Brood Controlled Release Granule	7.5-20 lb	
	spinosad	Natular G	3.5-9 lb	New product, registered as a reduced risk pesticide by EPA.
		Natular G30	5-20 lb	
		Natular 2EC	1.3-2.8 fl oz/acre	
		Natular T30	1 tablet/100 sq ft	30-day residual.
		Natular XRT	1 tablet/100 sq ft	180-day residual.
	temephos	5% Skeeter Abate	2-10 lb	

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Insect	Insecticide Active Ingredient	Trade Name	Gross Amount Per Acre (oz)	Comments/Precautions
Mosquito Larvae (Control by Aerial Application)	mineral oil	BVA 2 Mosquito Larvicide Oil	3-5 gal	Surface film material. Not for use in environmentally sensitive areas. Surface film product that controls larvae and pupae.
		COCObear Mosquito Larvicide Oil	3-5 gal	
		Kontrol Mosquito Larvicide Oil	2-4 gal	Rate depends on water surface conditions and vegetative density.
	methoprene	Altosid (various formulations)	see labels	See labels.
	Bacillus thuringiensis subsp. *israelensis*	Aquabac XT	0.25-2 pt	Biological control agent, very effective, environmentally sound. Store products in cool areas and use by expiration date. Timing of application critical for maximum effectiveness.
		Fourstar Single Brood Bti Sand Granule	3-20 lb	
		Fourstar Multi-Brood Controlled Release Granule	7.5-20 lb/acre	
		Sustain MBG	5-20 lbs	
		Teknar CG	0.25-1 pt	
		Vectobac 12 AS	0.25-2 pt	
		Vectobac WDG	1.75-14.0 oz	
		Vectobac G	2.5-5 lb	
	Bacillus sphaericus	Vectolex CG	5-20 lb	Biological control agent with residual effect. Targets specific species, especially *Culex*.
		Vectolex WDG	0.5-1.5 lb	
		Vectolex WSP	1 pouch/50 sq ft	Water soluble pouch, good choice for catch basins.
	Bacillus thuringiensis subsp. *israelensis* and *Bacillus sphaericus*	Fourstar Multi-Brood Granule	5-20 lb	
		Fourstar Multi-Brood Controlled Release Granule	5-20 lb	
	spinosad	Natular G	3.5-9 lb	New product, registered as a reduced risk pesticide by EPA.
		Natular G30	5-20 lb	
		Natular 2EC	1.3-2.8 fl oz/A	
	temephos	5% Skeeter Abate	2-10 lb	

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