

MOSQUITO CONTROL BY COMMERCIAL AND GOVERNMENT AGENCIES

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.	
		Pyrifos One Mist ULV E. C.	1.9-15.5	5-20		
		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.	
	etofenprox	Zenivex	1.8-26.4	10-20	New 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	Trumpet EC	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.
				0.8-2.2	5-15	
	resmethrin	Scourge 4.0% + 12%		2.3-18	---	No water set back, better if used in aerial applications. Registration canceled after 2014; can use available stocks.
			Scourge 18% + 54%	1.5-18	---	
	permethrin/pbo		Aqualuer 20-20	1.6-6.2	10-20	Excellent choice for ground applications. Variety of applications. 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	
			Envion RTU	2.4-16.5	10	
			Aqua-Kontrol Concentrate	2-15.5	5-20	
			Kontrol 2-2	4.7-18.9	5-20	
			Kontrol 4-4	4-16	5-20	
			Kontrol 30-30	0.5-2.2	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				
sumithrin/pbo	Anvil 2+2 ULV		3.1-37.2	5-20	No water set back, good for truck applications.	
		Anvil 10+10	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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Mosquito 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	Zenivex	1.8-26.4	10-20	Apply at the rate of 0.00175-0.0070 lb ai/acre.	
	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	Envion	2.2-25.8	10-20	Do not exceed 0.007 lb ai/acre.
				1.2-32.9	5-20	Rate not to exceed 0.007 lb/acre.
				21.0-64	5-20	Droplet size will range from 0.1-1 micron.
				21.0-64	5-20	
				0.41-3	5-20	
	pyrethrin/pbo	Pyrenone 25-5		12-30	Variable	Rate not to exceed 0.0025 lb of pyrethrins/acre. No water set back, many indoor uses.
sumithrin/phenothrin/pbo	Anvil 2+2 ULV	Anvil 10+10 ULV	3.1-37.2	5-20	No water set back; good for truck applications.	
			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	60.87.4		
	etofenprox	Zenivex		Apply diluted or undiluted at rates up to 0.007 lb ai/a. Minimum application height 100 feet.	
	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 Trumpet EC	0.5-1 0.6-1.2	Best choice for salt-marsh mosquitoes, very safe environmentally, no water set back, however, highly corrosive to all equipment.	
	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	Apply diluted or undiluted at rates up to 0.007 lb. Permethrin/PBO/acre.
		Biomist 30 + 30 ULV		0.33-1	
		Biomist 31 + 66 ULV		0.33-1	
		Envion			
	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 a.i./acre (from 0.00175-0.007 lb).	
pyrethrin/pbo	Kontrol 4 + 4		up to 3	Apply up to 0.0025 lb of pyrethrins/acre with equipment designed and operated to produce a ULV spray application.	
	Kontrol 30 + 30		up to 0.35		
	Permanone 31 - 66		0.16-0.6		
resmethrin/pbo	Scourge 4 + 12 MF		0.75-3	No water set back, better if used in aerial applications.	
	Scourge 18 + 54 MF		1.5-3		
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		0.36-1.09	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 Briquets	1/100 sq ft	Rate depends on target species.
			Altosid XR Briquets	1 briquet/100-200 sq ft	
			Altosid Pellets	2.5-10 lb	
			Altosid G	8-10 lb	
			Altosid SBG	5-20 lb	
			Altosid XR-G	5-20 lb	
	<i>Bacillus thuringiensis</i> subsp. <i>israelensis</i>		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 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	
			Teknar HP-D	0.25-1 pt	
			Vectobac WDG	1.75-14.0 oz	
			Vectobac 12AS	5-100 gal	
			Vectobac G	2-20 lb	
	<i>Bacillus sphaericus</i>		Vectolex WSP	1 pouch/50 sq ft	Biological control agent with residual effect. Targets specific species, especial <i>Culex</i> . Not recommended for salt-marsh mosquitoes.
			Vectolex CC (for Waste Tires)	5-20 lb 20-80 lb or 0.5-2 lb/1,000 sq ft	
			Vectolex WDG	0.5-1.5 lb	
	<i>Bacillus thuringiensis</i> subsp. <i>israelensis</i> and <i>Bacillus sphaericus</i>		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			5-20 lb		
Fourstar Water Soluble Pouch			1 pouch/50 sq ft of larval habitat		
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.
		COCObear Mosquito Larvicide Oil	3-5 gal	Surface film product that controls larvae and pupae.
		Kontrol Mosquito Larvicide Oil	2-4 gal	Rate depends on water surface conditions and vegetative density.
	methoprene	Altosid (various formulations)	see labels	See labels.
	<i>Bacillus thuringiensis</i> subsp. <i>israelensis</i>	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.
		Teknar HPD	0.25-1 pt	
		Vectobac 12 AS	0.25-2 pt	
		Vectobac WDG	1.75-14.0 oz	
		Vectobac G	2.5-5 lb	
	<i>Bacillus sphaericus</i>	Vectolex CG	5-20 lb	Biological control agent with residual effect. Targets specific species, especially <i>Culex</i> .
		Vectolex WDG	0.5-1.5 lb	
		Vectolex WSP	1 pouch/50 sq ft	Water soluble pouch, good choice for catch basins.
	<i>Bacillus thuringiensis</i> subsp. <i>israelensis</i> and <i>Bacillus sphaericus</i>	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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