

Insecticide Toxicity to Fish

Trade Name	Common Name	LC ₅₀ in ppm*			Random Treatment
		Catfish	Minnow	Bluegill	
Admire, Premise, Merit, Alias, Couraze	imidacloprid	Highly toxic to aquatic invertebrates			
Agri-Mek	abamectin	0.024	0.015	0.0096	
Altacor, Coragen	chlorantraniliprole			1.84	
Prevathon					
Ambush, Eliminator, Permectrin II	permethrin	0.0011		0.033	0.022
Ammo, Cymbush	cypermethrin			0.00178	0.011
Applaud, Centaur	buprofezin				285 (tadpole)
Azatrol	azadirachtin				440 (trout)
Baythroid XL	β-cyfluthrin			0.0015	0.022 (carp)
Belt	flubendiamide				>250 (trout)
Bidrin	dicrotophos	7.7		24.2	6.3
Capture, Discipline Brigade	bifenthrin		0.0175	0.00035	
Carbine, Beleaf	flonicamid		>120	>100	>100 (trout)
Centric	thiamethoxam			114	
Comite, Omite	propargite		0.06	0.10	0.2 (trout)
Confirm	tebufenozide		0.72	3	5.7 (trout)
Curacron	profenofos	0.02		0.3	
Danitol	fenpropathrin		0.0031	0.0022	0.0023
Denim	emamectin benzoate			0.18	
Diamond	novaluron				>1.0 (trout)
Dibrom	naled	0.71	3.3	2.2	0.195
Dimate	dimethoate			6.0	6.2
Dimilin	diflubenzuron	180	255	660	240 (trout)
Di-Syston	disulfoton	4.7	4.3	0.30	1.85
Furadan	carbofuran	0.248	0.872	0.24	0.38
Guthion	azinphos-methyl	3.29		0.022	
Imidan	phosmet	<10	<1	<1	
Intrepid	methoxyfenozide		2.8	4.3	4.2 (trout)
Karate	λ-cyhalothrin			0.00021	
Kelthane	dicofol	8.36	0.37	0.52	0.12 (trout)
Lannate	methomyl	0.5	2.8	0.8	1.2
Larvin	thiodicarb			1.21	2.55
Lorsban, Dursban	chlorpyrifos	0.198	1.0	0.0024	0.0017
Methyl Parathion, Pennncap-M	methyl parathion	5.24	8.9	4.38	3.7
Mustang Max	ζ-cypermethrin			0.00237	
Orthene	acephate	>1000	>1000	>50	>50
Phantom	chlorfenapyr	Very toxic to fish and aquatic invertebrates			
Poncho, Belay	clothianidin		100	120	100 (trout)
Portal, Fujimite	fenpyroximate	Very highly toxic to fish and aquatic invertebrates			
Prolex, Proaxis	γ-cyhalothrin	Extremely toxic to aquatic organisms and fish			
Regent, Over 'n Out!	fipronil			0.085	
Sevin	carbaryl	15.8	14.6	7.0	2.2
Steward	indoxacarb			0.9	
Temik	aldicarb			1.5	8.8 (trout)
Thiodan	endosulfan	0.0015	0.0015	0.0012	0.0014
Tombstone, Renounce	cyfluthrin			0.0015	0.022 (carp)
Tracer, Elector, Spintor	spinosad		7.87	5.4	>100 (carp)
Vydate L	oxamyl	11.7		4.2	
Zeal	etoxazole			1.4	2.8 (trout)

*To convert ppm to pounds per acre-foot, multiply by 2.7. For example, Lorsban's LC₅₀ for catfish = 0.198; 0.198 x 2.7 would be 0.534 lb per acre-foot, which would give the LC₅₀ concentration.

Field Re-Entry Times for Insecticides

Insecticide	Common Name	Re-entry Period-Hours
Admire, Alias, Couraze, Trimax	imidacloprid	12
Agri-Mek, Epi-Mek	abamectin	12
Altacor, Coragen, Prevathon	chlorantraniliprole	4
Ambush	permethrin	12
Ammo	cypermethrin	12
Asana XL, Adjourn	esfenvalerate	12
Atrapa, Fyfanon	malathion	12
Baythroid, Tombstone	cyfluthrin	12
Belay	clothianidin	12
Belt	flubendiamide	12
Besiege	chlorantraniliprole/λ-cyhalothrin	24
Bidrin	dicrotophos	6 days
Capture, Discipline, Brigade	bifenthrin	12
Carbine	flonicamid	12
Centric	thiamethoxam	12
Cobalt Advanced	chlorpyrifos/λ-cyhalothrin	24
Comite	propargite	2-20 days
Confirm	tebufenozide	4
Curacron	profenofos	48
Denim	emamectin benzoate	12
Diamond	novaluron	12
Dicofol, Kelthane	dicofol	12
Dimate	dimethoate	48
Di-Syston	disulfoton	48
Endigo	thiamethoxam/λ-cyhalothrin	24
Fujimite, Portal	fenpyroximate	12
Furadan	carbofuran	14 days
Guthion	azinphos-methyl	7-44 days
Intrepid	methoxyfenozide	4
Intruder	acetamiprid	12
Karate	λ-cyhalothrin	24
Lannate	methomyl	2-7 days
Larvin	thiodicarb	48
Leverage	cyfluthrin/imidacloprid	12
Lindane	lindane	24
Lorsban	chlorpyrifos	24
Methyl Parathion, Pennncap M	methyl parathion	4 days
Methyl Parathion 2 + Thiodan 3	methyl parathion + endosulfan	4 days
Mustang Max, Respect	ζ-cypermethrin	12
Oberon	spiromesifen	12
Orthene, SpitFire	acephate	24
Prolex, Proaxis, Declare	γ-cyhalothrin	24
Regent	fipronil	0
Sevin	carbaryl	12
Steward	indoxacarb	12
Thiodan	endosulfan	48
Tracer	spinosad	4
Vendex	fenbutatin oxide	48
Vydate	oxamyl	48
Zeal	etoxazole	12