

Attachment 2. Composition of US Lorsban formulations

Lorsban 4E	Ingredient	CAS-#	Ingredient	Wt.% in Lorsban 4E	Acute Toxicity (96-h LC ₅₀ /EC ₅₀ , µg/L)	Source
Role of Ingredient						
Active Ingredient	Chlorpyrifos, nominal	2921-88-2		44.90	<i>Daphnia magna</i> : 1.7 (48 h) <i>Onchoryhnchus mykiss</i> : 8.1 <i>Skeletonema costatum</i> : 300	RED; fish value is geomean of 4 guideline studies
Surfactant	Surfactant 1			1.43	<i>Daphnia</i> spp.: >40000 (3 h) <i>Oryzias latipes</i> : 3000 (48 h) (medaka) Algae: 27	USEPA ECOTOX database Talmage, 1994 (lowest value reported for all algae/all surfactants)
	Surfactant 2			1.50	See entry below for Surfactant 4	
	Surfactant 3			1.17	See entry below for Solvent	
	Surfactant 4			1.50	Invertebrates: 43 Fish: 135 Algae: 27	Talmage, 1994 (lowest value reported for all invertebrates, fish, and algae/all surfactants)
Solvent	Solvent ^a			48.444	<i>Daphnia magna</i> : 1600 (48 h) <i>Onchoryhnchus mykiss</i> : 1600 <i>Selenastrum capricornutum</i> : 2960 (4 h) No data, no QSAR possible	USEPA ECOTOX database, lowest value reported
Antifoam	Antifoam			0.05	Daphnid: 94 (48 h) see note	QSAR, USEPA EPI Suite V. 3.10
Dye	Dye			0.006	Fish: 18 see note Green algae: 1.82	Note: log K _{ow} estimate of 7.63 suggests chemical may not be soluble enough to measure this predicted effect.
TOTAL				100		

^aBalance ingredient (includes impurities from technical).

Lorsban 15G

Role of Ingredient	Ingredient	CAS-# Ingredient	Wt.% in Lorsban 15G	Acute Toxicity (96-h LC ₅₀ /EC ₅₀ , µg/L)	Source
Active Ingredient	Chlorpyrifos	2921-88-2	15.0	<i>Daphnia magna</i> : 1.7 (48 h) <i>Onchoryhnchus mykiss</i> : 8.1 <i>Skeletonema costatum</i> : 300	RED; fish value is geomean of 4 guideline studies
Carrier	Carrier ^a		82.5	No data, no QSAR possible	
Stabilizer	Stabilizer		2.5	Daphnid: 8.6 x 10 ⁶ Fish: 224000 Green algae: 16400	QSAR, USEPA EPI Suite V. 3.10
TOTAL			100		

^aBalance ingredient (includes impurities from technical).

Lorsban 75WG

Role of Ingredient	Ingredient	CAS-# Ingredient	Wt.% in Lorsban 75WG	Acute Toxicity (96-h LC ₅₀ /EC ₅₀ , µg/L)	Source
Active Ingredient	Chlorpyrifos, nominal	2921-88-2	75.0	<i>Daphnia magna</i> : 1.7 (48 h) <i>Onchoryhnchus mykiss</i> : 8.1 <i>Skeletonema costatum</i> : 300	RED; fish value is geomean of 4 guideline studies
Shell Wall	Shell Wall		3.29	No data, no QSAR possible	
Flow Aid	Flow Aid		0.35	No data, no QSAR possible	
Emulsifier	Emulsifier 1 ^a Emulsifier 2		20.62 0.64	No data, no QSAR possible <i>Daphnia magna</i> : 19 (48 h) <i>Onchoryhnchus mykiss</i> : 4300 <i>Selenastrum capricornutum</i> : 9400	USEPA ECOTOX database, lowest reported value
Antimicrobial	Antimicrobial		0.10	<i>Daphnia magna</i> : 4400 (48 h) <i>Onchoryhnchus mykiss</i> : 1600 Algae: No data	USEPA ECOTOX database
TOTAL			100		

^aBalance ingredient (includes impurities from technical).