



Mammalian Toxicity ¹



The Forest Service has adopted several standard Environmental Protection Agency (EPA) tests to assess mammalian toxicity and irritation to skin and eyes.

The product concentrate and the most concentrated mixed product, based on approved mix ratios, are tested for acute oral and acute dermal toxicity. The results of these tests are reported as an LD₅₀ value or as greater than an LD₅₀ if the product is less toxic, higher value, than is required by the specification.

It is important to remember when comparing LD₅₀ values, that the lower the LD₅₀ value, the greater the toxicity.

Standard EPA skin and eye irritation tests are also performed on the product concentrate and the most concentrated mixed product. The results of these tests provide information needed to specify reasonable personal protective equipment necessary when handling the product.

When comparing values for eye or skin irritation scores, the lower the value, the lower the irritation.

Because of individual differences, a product that has acceptable performance on these tests may still cause irritation, allergic reaction, or other sensitizations. If this occurs, the supervisor should be notified as more stringent hygiene practices or additional protective gear may be helpful. In some instances, changes in duties may be required.

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Standard Test Procedure 1.3 gives instructions for the mammalian toxicity tests. STP-1.3 is available at http://www.fs.fed.us/rm/fire/wfcs/tests/stp01_3.htm



Mammalian Toxicity



Water Enhancers Concentrates and Mixtures

Product Name (As Evaluated)	Concentration	Acute Oral	Acute Dermal	Eye Irritation		Skin Irritation
		LD ₅₀ (mg/Kg)	LD ₅₀ (mg/Kg)	Single-Wash Eyes	Double Wash Eyes	Primary Irritation Index
Chemdal Aqua Shield 100	Concentrate	>5050	>2020	Moderately Irritating	Minimally Irritating	0.0
	0.6% (W/W)	>5050	>2020	Practically Non-Irritating	Minimally Irritating	0.0
Barricade II	Concentrate	>5050	>2020	Moderately Irritating	Moderately Irritating	0.1
	5%	>5050	>2020	Minimally Irritating	Practically Non-Irritating	0.2
Thermo-Gel 200L	Concentrate	>5050	>2020	Mildly Irritating	Minimally Irritating	0.9
	3%	>5050	>2020	Minimally Irritating	Minimally Irritating	0.2
Thermo-Gel 500P	Concentrate	>5050	>2020	Mildly Irritating	Minimally Irritating	0.0
	1.2%	>5050	>2020	Minimally Irritating	Minimally Irritating	0.0
Wildfire AFG Firewall II	Concentrate	>5050	>2020	Mildly Irritating	Mildly Irritating	1.1
	3.0%	>5050	>2020	Minimally Irritating	Minimally Irritating	0.2
BioCentral Blazetamer 380	Concentrate	>5050	>2020	Minimally Irritating	Minimally Irritating	1.1
	0.65%	>5050	>2020	Minimally Irritating	Minimally Irritating	0.0
GelTech Firelce	Concentrate	>505	>2020	Mildly Irritating	Minimally Irritating	0.0
	2.1%	>5050	>2020	Non Irritating	Non Irritating	0.3
Phos-Chek Insul-8	Concentrate	>5050	>2020	Mildly Irritating	Minimally Irritating	0.9
	3.0%	>5050	>2020	Non Irritating	Non Irritating	0.0

Notes:

- 1 Standard Test Procedure 1.3 gives information for the mammalian toxicity tests. STP-1.3 is available at http://www.fs.fed.us/rm/fire/wfcs/tests/stp-1_3.htm