



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 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.

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.

» Product Performance Data on next page »

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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



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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)	Non-Washed Eyes	Washed 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
Stockhausen Cindet FP-47	Concentrate	>5000	>2020	Severely Irritating	Mildly Irritating	0.6
	2%	>5000	>2020	Practically Non-Irritating	Non-Irritating	0.2
Wildfire AFG Firewall	Concentrate	>5050	>2020	Mildly Irritating	Mildly Irritating	2.2
	3%	>5050	>2020	Minimally Irritating	Practically Non-Irritating	0.2
Barricade II	Concentrate	>5050	>2020	Moderately Irritating	Moderately Irritating	0.1
	5%	>5050	>2020	Minimally Irritating	Practically Non-Irritating	0.2
Thermo-Gel 200L Red Pail	Concentrate	>5050	>2020	Mildly Irritating	Minimally Irritating	0.9
	3%	>5050	>2020	Minimally Irritating	Minimally Irritating	0.2

Notes:

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