



PRODUCT TECHNICAL BULLETIN

FISH TOXICITY VALUES OF PHOS-CHEK WD 881 AND OTHER CLASS A FOAM CONCENTRATES

FISH TOXICITY VALUES WD881

It is a fact that the results of laboratory fish toxicity testing show that PHOS-CHEK® WD-881 concentrate has a higher value than some other Class A foam concentrates. However, the reported differences are not great enough to be of concern because, during actual firefighting operations, a very small amount of WD-881 is mixed with very large amounts of water resulting in solutions which are “practically nontoxic” according to EPA guidelines on toxicity severity.

- Fish toxicity tests are run on the foam concentrate, i.e., not on the foam solution that is used in firefighting. Foam concentrate would never be discharged to water during normal handling and use. The user needs to take action to assure that accidental spills of any foam concentrate does not occur because they all have the potential to kill fish and the guidelines are the same for all brands of Class A foam during handling and use around bodies of water.
- The actual foam solution when mixed during normal operations is at most 1.0% concentrate and 99% water. While there is more of an opportunity for foam solution to enter the waterways during normal use, it is so diluted that the aquatic toxicity value should not be a concern. Fish toxicity values for WD 881 foam solutions are 1,100-11,000 mg/L based on standard use rates of 0.1-1.0%; significantly above the “practically nontoxic” category.

EPA TOXICITY CATEGORIES FOR AQUATIC ORGANISMS

EPA, Technical Overview of Ecological Risk Assessment

ANALYSIS PHASE:

Ecological Effects Characterization

www.epa.gov/oppefed1/ecorisk_ders/toera_analysis_eco.htm

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AQUATIC ORGANISMS – ACUTE

CONCENTRATION (PPM)	TOXICITY CATEGORY
< 0.1	Very Highly Toxic
0.1 – 1	Highly Toxic
> 1 – 10	Moderately Toxic
> 10 – 100	Slightly Toxic
> 100	Practically Nontoxic

The EPA will not classify any product as “nontoxic”, “Practically Nontoxic” is the best that you can achieve. Thus, *all Class A foam solutions* that have been tested and approved for use by the U.S. Forest Service fall into the same least toxic and best EPA Category.

U.S. Forest Service approved Class A foam products have passed their requirements for the concentrate test values (>10 mg/L) and all products in the mixed solution are significantly above the 100 mg/L EPA rating and are thus of low concern even at the highest use rate of 1.0%. There is no practical difference in terms of environmental concern between any of these qualified products. High performing concentrates generally have greater toxicity values because they contain a greater concentration of foam forming ingredients.

In addition, if the foam solution should accidentally reach a body of water, it will be further diluted which will result in a lesser environmental concern; the amount and speed of dilution will vary with the size of the stream or body of water and how fast it is flowing.

Care should be taken to minimize the accidental spilling of ANY foam concentrate and the application of even the practically nontoxic foam solutions into bodies of water.

Questions or help please contact your local authorized PHOS-CHEK distributor or factory representative (909) 983-0772 or <https://phoschek.com/contact/>

For more information, contact any of our worldwide Perimeter Solutions Fire Safety offices or visit www.Phos-Chek.com or www.Perimeter-Solutions.com

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