



Envirotemp FR3 Fluid: Environmental Properties

This section provides information regarding key environmental and health related properties of FR3 fluid. The following documents are included:

- *Envirotemp FR3 Fluid Environmental Properties, CPS Engineering Development Report*: This report lists all environmental testing to date (method and results).
 - Key environmental and health properties
 - Site assessment standard test results
 - Assessment-related properties
- *ETV Joint Verification Statement, US EPA and California EPA*: This report, available from the US EPA web site, grants Environmental Technology Verification status to FR3 fluid. The report includes, among other things, dielectric coolant performance and environmental impact performance. Based on the results, the California EPA also issued their Environmental Technology Certification certifying FR3 fluid as a pollution prevention technology.
- *State of Florida*: Affirms that there is “no current Florida Department of Environmental Protection reporting requirement applicable to a release of FR3 fluid into the environment”.
- *University of Cincinnati Research Report*: This report addresses the theoretical concern that rapid and complete biodegradation depletes oxygen in surface waters. Their conclusion states “Since there was no significant depletion of dissolved oxygen noted, there should be no adverse effect on aquatic life, even under stagnant conditions.” (Worst case.)
- *Regulation of Certain Oil Used in Transformers, Section 1403, 2005 Energy Policy Act*: States that soybean oil dielectric fluid used “in electrical transformers shall not be regulated as an (petroleum based) oil”.
- *Congressional Record, February 1, 2006*: Comments on the intent of Section 1403 by the House of Representatives Energy Committee Chair.
- *Field Analysis of Envirotemp FR3 Fluid-Filled Transformers Microbiological Growth, CPS Certified Test Report*: The report shows that Envirotemp FR3 fluid is not subject to microbiological growth in transformer applications.
- *Material Safety Data Sheet*

Conclusions - Envirotemp FR3 Fluid:

- Not toxic in standard oral and acute aquatic toxicity tests performed
- Readily and completely biodegrades in standard aquatic biodegradation tests performed.
- Not on the US EPA list of hazardous substances



- Does not significantly contribute to oxygen depletion when biodegrading in surface waters, even stagnant pond water, per tests performed.