



May 5, 2019

**Water Enhancers for Wildland Fire Management****Qualified By US Forest Service in Accordance with Forest Service Specification 5100-306B****These products are evaluated, qualified, and approved for use only at the specified mix ratio range with the indicated application equipment.**

Consult individual agencies for specific policies relating to water enhancer use. Please review the Notes for Selection and Use.

Chemical	Mix Ratio <sup>1</sup>	Qualified Applications <sup>2</sup>				
		Fixed-Wing Airtanker		Helicopters		Ground Engine
		Multi Engine	SEATS	Fixed-Tank	Bucket	
<b>Uncolored Concentrates</b>						
Barricade II	1.0%	3	●	-	●	●
Barricade II	1.0% - 3.0%	-	-	-	●	●
Thermo-Gel 200L	0.5% - 3.0%	3	●	-	●	●
Thermo-Gel 500P	0.4% - 0.5% [0.03-0.04 lb/gal]	3	●	●	●	●
Thermo-Gel 500P	0.4% - 1.2% [0.03-0.10 lb/gal]	3	●	-	●	●
Firewall II (formerly Wildfire AFG Firewall II)	0.25% - 3.0%	3	●	●	●	●
BioCentral Blazetamer 380	0.65%	3	●	●	●	●
FireIcse 561	1.4% - 2.1% [0.12-0.18 lb/gal]	3	●	-	●	●
Phos-Chek Insul-8	0.37%	3	●	●	●	●
Phos-Chek Insul-8	>0.37% - 1.0%	3	●	-	●	●
Phos-Chek Insul-8	>1.0% - 3.0%	-	-	-	●	●
EarthClean TetraKO XL-P	0.5%-1.5% [0.04-0.13 lb/gal]	3	●	-	●	●
<b>Colored Concentrates</b>						
No single-component colored concentrate is currently approved						
<b>Notes</b>						
1	Each product is qualified for the specified mix ratio or range. Mixtures <b>outside the mix ratio or mix ratio range shown</b> are <b>not</b> qualified for use. Mix ratio is described as the percentage of product in water. Mix ratios for dry concentrates may also be described as pounds of concentrate added to 1 gallon of water. This description is shown in brackets.					
2	Qualification Notes					
	<ul style="list-style-type: none"> <li>● Fully Qualified – Product complies with all requirements of a formal specification.</li> <li>○ Conditional Approval – Product complies with all requirements in the specification for laboratory evaluation; a field evaluation is required for full qualification. Evaluations from the field are requested regarding effectiveness, ease of use and mixing. (Evaluation forms are available at <a href="http://www.fs.fed.us/rm/fire/wfcs/tests/index.htm">www.fs.fed.us/rm/fire/wfcs/tests/index.htm</a>. Select “Water Enhancer Evaluation” under Section 12 – Operational Field Evaluation Test.)</li> <li>- Not qualified for this application.</li> </ul>					
3	Forest Service policy does not allow application of water enhancers from large airtankers. These products meet the requirements for application from multi-engine aircraft for those agencies whose policy permits this use					



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### Colored Water Enhancers for Wildland Fire Management

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Chemical	Mix Ratio <sup>1</sup>	Qualified Applications <sup>2</sup>				
		Fixed-Wing Airtanker		Helicopters		Ground Engine
		Multi Engine	SEATS	Fixed-Tank	Bucket	
<b>Colored Products – 2 Components</b>						
<ul style="list-style-type: none"> <li>Each color is evaluated and approved for use with a specific product.</li> <li>Using a color qualified for use with one product in another product does not make a qualified product.</li> <li>Add color to water at the approved concentration and mix thoroughly. Use the colored water to dilute approved water enhancer concentrate to the approved mix ratio.</li> </ul>						
Thermo-Gel 200L Blue Mixed Product	0.1125% AV-B1 color in water 0.5%-3.0% Thermo-Gel 200L concentrate	3	•	-	•	•
FireIce 561 Cool Blue-F	2.0 g of Cool Blue-F colorant per gallon of water 1.4%-2.1% FireIce 561 concentrate by volume (0.12-0.18 lb/gal)	3	•	-	•	•

**Notes**

- Each product is qualified for the specified mix ratio or range. Mixtures **outside the mix ratio or mix ratio range shown** are **not** qualified for use. Mix ratio is described as the percentage of product in water. Mix ratios for dry concentrates may also be described as pounds of concentrate added to 1 gallon of water. This description is shown in brackets.
- Qualification Notes
  - Fully Qualified – Product complies with all requirements of a formal specification.
  - Conditional Approval – Product complies with all requirements in the specification for laboratory evaluation; a field evaluation is required for full qualification. Evaluations from the field are requested regarding effectiveness, ease of use and mixing. Evaluation forms are available at [www.fs.fed.us/rm/fire/wfcs/tests/index.htm](http://www.fs.fed.us/rm/fire/wfcs/tests/index.htm). Select "Water Enhancer Evaluation" under Section 12 – Operational Field Evaluation Test.)
  - Not qualified for this application.
- Forest Service policy does not allow application of water enhancers from large airtankers. These products meet the requirements for application from multi-engine aircraft for those agencies whose policy permits this use.