



ATTACHMENT 11
Very Large Airtanker Project
Victoria 2010

VLAT-Project Operations Program

Qualified Products List USFS

Long term Retardants


USDA Forest Service		Washington Office		Fire & Aviation Management		
9/5/09						
LONG-TERM RETARDANT						
Qualified by USDA Forest Service In Accordance with Forest Service Specification 5100-304b, As Amended						
These products are evaluated and qualified only at the specified mix ratio and only for use with the indicated application						
Consult individual agencies for specific policies relating to long-term retardant use.						
Chemical	Mix Ratio (Pounds concentrate Per gallon water)	Qualified Applications ¹				
		Fixed-Wing Airtanker	SEATS	Helicopter Fixed-Tank	Bucket	Ground Engine
Dry Concentrate - Gum-thickened; Permanent or Temporary Base						
Phos-Chek D75-R	1.20 lb/gal	•	•		•	
Phos-Chek D75-F	1.20 lb/gal	•	•		•	
Dry Concentrate - Gum-thickened; Temporary Base						
Phos-Chek 259-F	1.14 – 1.60 lb/gal	•	•	•	•	•
Phos-Chek G75-F	1.12 lb/gal	•	•		•	•
Phos-Chek G75-W	1.12 lb/gal				•	•
Wet Concentrate - Gum-thickened; Permanent or Temporary Base						
Phos-Chek LC-95A-R	5.5:1	•	•		•	•
¹ • 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.)						

Foam Concentrates

USDA Forest Service		Washington Office		Fire & Aviation Management		
4/5/09						
CLASS A WILDLAND FIRE FOAM						
Qualified by USDA Forest Service In Accordance with Forest Service Specification 5100-307a						
These products are evaluated and qualified only at the specified mix ratio range and only for use with the indicated application						
Consult individual agencies for specific policies relating to wildland fire foam use.						
Chemical	Mix Ratio	Qualified Applications ¹				
		Fixed-Wing Water Scooper	SEATS ²	Helicopter Fixed-Tank	Bucket	Ground Engine
Tyco Silv-Ex	0.1-1.0%	•	•		•	•
FireFoam 103B ³	0.1-1.0%	•	•	•	•	•
Phos-Chek WD 881	0.1-1.0%	•	•	•	•	•
FireFoam 104	0.1-1.0%	•	•		•	•
Angus ForExpan S	0.1-1.0%		•		•	•
Pyrocap B-136	0.1-1.0%		•		•	•
Phos-Chek WD 881-C	0.1-1.0%	•	•		•	•
National Foam KnockDown	0.1-1.0%	•	•		•	•
Summit FlameOut	0.1-1.0%		•		•	•
Angus Hi-Combat A	0.1-1.0%	•	•		•	•
Buckeye Platinum Class A Foam	0.1-1.0%	•	•		•	•
Chemguard First Class	0.1-1.0%	•	•	•	•	•
Also sold as Thermo-Foam						
Solberg Fire-Brake 3150A	0.1-1.0%	•	•		•	•
Phos-Chek First Response	0.1-1.0%	•	•	•	•	•
Tyco Silv-Ex Plus Class A	0.1-1.0%	•	•	•	•	•
¹ • Fully Qualified (Product complies with all requirements of a formal specification.) ○ Conditional Approval (Product may be included in procurement actions such as solicitations and bids) ★ Administrative Approval (Product complies with all requirements of a formal specification or administrative work plan.)						
² Within Canada, the wildland fire management agencies apply foam from land-based fixed-wing airtankers (single or multi engine). The presence of a dot in this column indicates						
³ Administrative approval has been granted for application from fixed-tank helicopters. No further approvals are needed.						

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Water enhancers

		USDA Forest Service		Washington Office		Fire & Aviation Management	
9/5/09							
WATER ENHANCERS							
Qualified By USDA Forest Service In Accordance with Forest Service Specification 5100-306A (June 2007) These products are evaluated and qualified only at the specified mix ratio range and only for use with the indicated application Consult individual agencies for specific policies relating to water enhancer use. Please review the Notes for Selection and Use [www.fs.fed.us/rm/fire/wfcs/documents/we_notes.pdf]							
Chemical	Mix Ratio ¹	Qualified Applications ³					
		Fixed-Wing Airtanker		Helicopter		Ground	
		Multi Engine	SEATS	Fixed-Tank	Bucket	Engine	
Uncolored ² Only uncolored products have completed a laboratory evaluation as required by Forest Service Specification 5100-306a							
Chemdal Aqua Shield 100	0.4-1.2%	3	•		•	•	
Sold as Phos-Chek AquaGel-K			• 4				
Sold as FireOut Ice							
Stockhausen Cindet FP-47	2%	3			•	•	
Sold as Thermo-Gel 200L (blue pails)							
Wildfire AFG Firewall	3.0%	3	• 4		•	•	
Barricade II	1.0%	3	• 4		•	•	
Barricade II	1.0% - 3.0%				•	•	
Thermo-Gel 200L (red pails)	0.5% - 3.0%	3	• 4		•	•	
Thermo-Gel 500P	0.4% - 0.5%	3	• 4	•	•	•	
Thermo-Gel 500P	0.4% - 1.2%		• 4		•	•	
Wildfire AFG Firewall II	0.25% - 3.0%	3	• 4	•	•	•	
Colored- No colored water enhancers are available							
¹ The product, outside the mix ratio or mix ratio range shown, is not qualified for use.							
² • Fully Qualified (Product complies with all requirements of a formal specification.)							
o Conditional Approval (Product complies with all requirements in the specification for laboratory evaluation; a field evaluation is required for full qualification. Not available for use except during an agency-authorized field evaluation.)							
Evaluations from the field are requested with regard to effectiveness, ease of use and mixing. (Evaluation forms are available on the web at www.fs.fed.us/rm/fire/wfcs/tests/index.htm . Select "Water Enhancer Evaluation" under Section 12 - Operational Field Evaluation Test.)							
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.							
⁴ Colored products may be used within a controlled study to determine visibility as required by the specification.							

Further information

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