



12/5/04

Fire Chemicals
For use by USDA Forest Service
 (Qualified or Approved and commercially available)

Chemical	Mix Ratio (Pounds concentrate Per gallon water)	Qualified/Approved Applications ¹				
		Fixed-Wing Airtanker	SEATS	Fixed-Tank Helicopter	Helicopter Bucket	Ground Engine
LONG-TERM FIRE RETARDANTS (Meets the requirements of Forest Service Specification 5100-304b)						
Dry Concentrate						
Gum-thickened; Permanent or Temporary Base						
Fire-Trol GTS-R	1.66 lb/gal	•	•		•	
Phos-Chek D75-R	1.20 lb/gal	•	•		•	
Gum-thickened; Temporary Base						
Phos-Chek 259-R	1.14 lb/gal	•	•	•	•	•
Phos-Chek 259-R	1.60 lb/gal	•	•	•	•	•
Phos-Chek G75-W	1.12 lb/gal				•	•
Unthickened - None available						
Wet Concentrate						
Gum-thickened; Permanent or Temporary Base						
Phos-Chek HV-R=	3.6:1	•	•		•	
Phos-Chek HV-R	3.1:1	•	•		•	
Phos-Chek MV-R	3.6:1	•	•		•	
Phos-Chek LV-R	3.6:1	•	•		•	•
Phos-Chek LC-95A-R	5.5:1	•	•		•	•
Phos-Chek LC-95D-R	4.25:1	•	•		•	•
Unthickened; Permanent or Temporary Base						
Fire-Trol LCA-R	5:1	•	•		•	
Fire-Trol LCG-R	4.75:1	•	•		•	
Fire-Trol FTR ²	4.75:1	○	○		○	

¹ • Fully Qualified ○ Conditional Approval

² A field evaluation must be completed to upgrade product status to qualified. The evaluation will be scheduled when a product is selected for use.



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		Fixed-Wing Airtanker ²	Fixed-Wing Water Scooper	SEATS	Fixed-Tank Helicopter	Helicopter Bucket	Ground Engine
WILDLAND FIRE FOAM (Meets the requirements of Forest Service Specification 5100-307)							
Ansul Silv-Ex	0.1-1.0%	•	•	•		•	•
Fire-Trol FireFoam 103	0.1-1.0%	•	•	•		•	•
Fire-Trol FireFoam 103B ³	0.1-1.0%	•	•	•	★	•	•
Phos-Chek WD 881 ³	0.1-1.0%	•	•	•	★	•	•
Fire-Trol FireFoam 104	0.1-1.0%	•	•	•		•	•
Angus ForExpan S	0.1-1.0%	•	•	•		•	•
Pyrocap B-136	0.1-1.0%	•		•		•	•
Fire Choke	0.1-1.0%	•		•	•	•	•
Phos-Chek WD 881-C	0.1-1.0%	•	•	•		•	•
Phos-Chek Anchor Point	0.1-1.0%					•	•
National Foam KnockDown	0.1-1.0%	•	•	•		•	•
Summit FlameOut	0.1-1.0%					•	•
Angus Hi-Combat A ⁴	0.1-1.0%	•	•	•		•	•
Buckeye Platinum Class A Foam	0.1-1.0%	•	•	•		•	•
Chemguard First Class ⁵	0.1-1.0%	•	•	•	•	•	•

¹ • Fully Qualified ★ Administrative Approval
² Products meet requirements for application from fixed-wing airtankers. Consult individual agencies for specific policies relating to foam use. USDA Forest Service does not allow application of foam from fixed-wing airtankers
³ Administrative approval has been granted for application from fixed-tank helicopters. No further approvals are needed.
⁴ This product was evaluated and qualified under the name KnockDown Plus.
⁵ This product was evaluated and qualified under the name Chemguard Class A Plus.



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Chemical	Mix Ratio	Qualified/Approved Applications ¹					Ground Engine
		Fixed-Wing Airtanker	Fixed-Wing Water Scooper	SEATS	Fixed-Tank Helicopter	Helicopter Bucket	
FIRE SUPPRESSANT WATER ENHANCERS (Approved under Administrative Work Plan – qualification of these product types will be covered by Forest Service Specification 5100-306a as soon as it is implemented). Please review the Notes for Selection and Use [www.fs.fed.us/rm/fire/retardants/current/gen/documents/waterenh.htm]							
Phos-Chek AquaGel-K ²	0.4-1.2%					★	★
Thermo-Gel 200L ³	2%					★	★
Flame Guard Gel	0.6 lb/gal						★
Wildfire AFG Firewall ⁴	3.0%						★

¹ • Fully Qualified ★ Administrative Approval
² This product was evaluated and approved under the name Chemdal Aqua Shield.
³ This product was evaluated and approved under the name Stockhausen Cindet FP-47.
⁴ This product was evaluated and approved under the name NoChar E112.



12/5/04

Fugitive-Colored Products
(Qualified or Approved and commercially available)

Chemical	Mix Ratio (Pounds concentrate Per gallon water)	Qualified/Approved Applications ¹					Ground Engine
		Fixed-Wing Airtanker	SEATS	Fixed-Tank Helicopter	Helicopter Bucket		
LONG-TERM FIRE RETARDANTS (Meets the requirements of Forest Service Specification 5100-304a and California Department of Forestry and Fire Protection manual direction. Forest Service Specification 5100-304b does not make a distinction between fugitive-colored and iron oxide- colored products.)							
Dry Concentrate							
Gum-thickened; Permanent or Temporary Base							
Phos-Chek D75-F	1.20 lb/gal	•	•		•		
Fire-Trol 300-F	1.77 lb/gal	•	•		•		
Gum-thickened; Temporary Base							
Phos-Chek 259-F	1.14 lb/gal	•	•	•	•		•
Phos-Chek 259-F	1.60 lb/gal	•	•	•	•		•
Phos-Chek G75-F	1.12 lb/gal	•	•		•		•

¹ • Fully Qualified ○ Conditional Approval; targeted LAQA will be performed



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Products Meeting the Canadian Specification for Long-Term Retardants

(Qualified or Approved and commercially available)

Chemical	Mix Ratio (Pounds concentrate Per gallon water)	Qualified/Approved Applications ¹	
		Aerial Application	Ground Application
LONG-TERM FIRE RETARDANTS (Meets Qualifying Performance Requirements for Long-Term Fire Retardants, CIFFC, 2002)			
Dry Concentrate			
Gum-thickened; Permanent or Temporary Base			
Fire-Trol GTS-R	1.66 lb/gal	•	•
Phos-Chek D75-R	1.20 lb/gal	•	•
Gum-thickened; Temporary Base			
Phos-Chek 259-R	1.14 lb/gal	•	•
Phos-Chek 259-R	1.60 lb/gal	•	•
Phos-Chek G75-W	1.12 lb/gal	•	•
Unthickened - None available			
Wet Concentrate			
Gum-thickened; Permanent or Temporary Base			
Phos-Chek HV-R	3.6:1	•	•
Phos-Chek HV-R	3.1:1	•	•
Phos-Chek MV-R	3.6:1	•	•
Phos-Chek LV-R	3.6:1	•	•
Phos-Chek LC-95A	5.5:1	•	•
Phos-Chek LC-95D	4.25:1	•	•
Unthickened; Permanent or Temporary Base			
Fire-Trol LCA-R	5:1	•	•
Fire-Trol LCG-R	4.75:1	•	•
Fire-Trol 931-R	5.5:1	•	•
Fire-Trol FTR ²	4.75:1	○	○
Fire-Trol FTR ²	5.5:1	○	○

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² A field evaluation must be completed to upgrade product status to qualified. The evaluation will be scheduled when a product is selected for use.