



11/5/03 Corrected

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 G75-W | 1.12 lb/gal | | | | • | • |
| Unthickened - None available | | | | | | |
| Wet Concentrate | | | | | | |
| Gum-thickened; Permanent or Temporary Base | | | | | | |
| Phos-Chek HV-R ² | 3.6:1 | • | • | | • | |
| Phos-Chek HV-R | 3.1:1 | • | • | | • | |
| Phos-Chek MV-R ² | 3.6:1 | • | • | | • | |
| Phos-Chek LV-R ² | 3.6:1 | • | • | | • | • |
| Phos-Chek LC-95A-R ² | 5.5:1 | • | • | | • | • |
| Phos-Chek LC-95D-R ² | 4.25:1 | • | • | | • | • |
| Unthickened; Permanent or Temporary Base | | | | | | |
| Fire-Trol LCA-R | 5:1 | • | • | | • | |
| Fire-Trol LCG-R | 4.75:1 | • | • | | • | |
| Fire-Trol FTR ³ | 4.75:1 | ○ | ○ | | ○ | |

¹ • Fully Qualified ○ Conditional Approval
² Targeted LAQA will be performed during the first fire season of use.
³ A field evaluation must be completed to upgrade product status to qualified. The evaluation will be scheduled when a product is selected for use.



8/5/04

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| Chemical | Mix Ratio | Qualified/Approved Applications ¹ | | | | | |
|---|-----------|--|-----------------------------|-------|--------------------------|----------------------|------------------|
| | | 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% | • | • | • | | • | • |

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.



8/5/04

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

| 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] | | | | | | | |
| FireOut ICE 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.



11/5/03

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

| Chemical | Mix Ratio (Pounds concentrate Per gallon water) | Fixed-Wing Airtanker | Qualified/Approved Applications ¹ | | | | Ground Engine |
|---|---|-------------------------|--|--------------------------|----------------------|--|------------------|
| | | | 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 G75-F | 1.12 lb/gal | • | • | | • | | • |

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



11/5/03

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 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 | ○ | ○ |

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.