

### Long-Term Fire Retardant Characteristics and Mix Factors<sup>1</sup>

Retardant <sup>2</sup>	Approved Applications <sup>3</sup>	Mix Ratio	Mixed Retardant Prepared Per Ton	Specific Weight of Mixed Retardant	Viscosity of Mixed Retardant	Marsh Funnel Flow-Through Time of Mixed Retardant	Refractometer Reading of Mixed Retardant	Density of Mixed Retardant
<i>Product Name<sup>5</sup></i>	<i>Per FS QPL</i>	<i>concentrate to water</i>	<i>gallons</i>	<i>pounds/gallon</i>	<i>centipoise</i>	<i>seconds</i>	<i>scale reading</i>	<i>g/mL</i>
<b>Dry Concentrate, Gum-thickened, High and Medium Viscosity (Use large-tip, 17/64" diameter, Marsh Funnel for flow-through time.)</b>							<b>REQUIRED</b>	<b>REFERENCE</b>
Phos-Chek MVP-Fx	FW, SEAT, HB, G	0.96 lb to 1 gal H <sub>2</sub> O	2209	8.75 – 8.84	401 - 800	16 - 22	8.0 - 9.75	1.048 - 1.059
Phos-Chek MVP-F	FW, SEAT, HB, G	0.95 lb to 1 gal H <sub>2</sub> O	2224	8.77 – 8.88	401 - 800	16 - 22	8.25 - 10.0	1.051 - 1.064
Phos-Chek P100-F	FW, SEAT, HB, G	1.0 lb to 1 gal H <sub>2</sub> O	2128	8.74 – 8.81	801 - 1500	17 - 30	8.0 - 9.75	1.047 - 1.056
Fortress FR-100	FW, SEAT, HB, G	1.68 lb to 1 gal H <sub>2</sub> O	1313	9.00 – 9.15	401 - 800	19 - 27	14.8 – 18.0	1.079 – 1.097
<b>Dry Concentrate, Gum-thickened, Low Viscosity (Use small-tip, 3/16" diameter, Marsh Funnel to determine flow-through time.)</b>							<b>REQUIRED</b>	<b>REFERENCE</b>
Phos-Chek 259-Fx	FW, SEAT, HF, HB, G	1.01 lb to 1 gal H <sub>2</sub> O	2105	8.77 – 8.87	150 - 400	29-44	9.75 - 11.75	1.051 - 1.063
Phos-Chek 259-F	FW, SEAT, HF, HB, G	1.14 lb to 1 gal H <sub>2</sub> O	1856	8.90 – 9.00	150 - 400	39-61	12.25 - 14.5	1.066 - 1.079
<b>Wet Concentrate, Gum-thickened, Low-Viscosity (Use small-tip, 3/16" diameter, Marsh Funnel to determine flow-through time.)</b>							<b>REQUIRED</b>	<b>REFERENCE</b>
Phos-Chek LC-95A-R	FW, SEAT, HB, G	5.5:1 (5.5 part H <sub>2</sub> O to 1 part Concentrate)	1054	8.94 – 9.07	150 - 400	33 - 49	12.0 - 14.5	1.071 - 1.087
Phos-Chek LC-95A-Fx	FW, SEAT, HB, G	5.5:1 (5.5 part H <sub>2</sub> O to 1 part Concentrate)	1053	8.94 – 9.08	150 - 400	32 - 50	11.5 - 14.0	1.071 - 1.088
Phos-Chek LC-95A-F	FW, SEAT, HB, G	5.5:1 (5.5 part H <sub>2</sub> O to 1 part Concentrate)	1050	8.93 – 9.06	150 - 400	32 - 50	11.5 - 14.0	1.070 - 1.086
Phos-Chek LCE20-Fx	FW, SEAT, HB, G	5.2:1 (5.2 part H <sub>2</sub> O to 1 part Concentrate)	1113	8.81 – 8.92	150 – 400	32 - 40	9.75 – 12.0	1.056 – 1.069
Phos-Chek LC-95-W	FW, SEAT, HB, G	5.5:1 (5.5 part H <sub>2</sub> O to 1 part Concentrate)	1050	8.92 – 9.05	150 - 400	34 - 52	11.75 - 14.0	1.069 - 1.085
Fortress FR-200	FW, SEAT, HB, G	2.4:1 (2.4 part H <sub>2</sub> O to 1 part Concentrate)	645	8.98 – 9.17	150 - 400	32 - 51	15.4 - 18.8	1.076 - 1.099

- The listed products are evaluated, qualified for use only at the specified mix ratio with the indicated application equipment.
- Based on Forest Service Qualified Products List (QPL). Consult individual agencies for specific policies relating to long-term retardant use. Data from all approved variations (formulations) of each product were used in the preparation of the information in this table.
- FW - Fixed-Wing Airtanker, SEAT – Single Engine Airtanker, HF - Fixed-Tank Helicopter; HB- Helicopter Bucket; G - Ground Engine.