

TABLE 1:

**F3 MilSpec vs ICAO vs AFFF MilSpec fire tests**

Fire Test Standard	F3 MilSpec (PRF32725, 20231)	ICAO Level B & C3	AFFF MilSpec (PRF24385F [SH] v4, 20202)
Suitability	Land-based, Freshwater only	Freshwater only	Land and Sea, Fresh and Seawater
Foam proportioning %	3% only	1%, 3% or 6%	3% and 6% versions
Foam Proportioning tolerance:	Normal 3%: 2.9-3.1%; LEAN 1.5%:1.45-1.55%; RICH 6%: 5.8-6.2%	2.7-3.3%	Normal 3%: 2.8-3.1%; LEAN 1.5%:1.45-1.55% RICH 15%: 12-18%
Fire area	Circular 28ft2 (2.6m2); Circular 50ft2 (4.64m2)	Level B: Circular 4.5m2 (49ft2) Level C: Circular 7.32m2 (79ft2)	Circular 28ft2 (2.6m2); Circular 50ft2 (4.64m2)
Fuels	All Jet A except 1x 28ft2 ULG	Jet A1	ALL ULG
Volumes fuel used (on water base)	10gals (38L) 28ft2; 15gals (57L) 50ft2	Level B: 100L Level C: 157L	10gals (38L) 28ft2; 15gals (57L) 50ft2
Qty Fire tests required	9: 8x 28ft2 (1x ULG); 1x 50ft2 (Jet A)	1 ONLY	10: 9x 28ft2; 1x 50ft2 (ALL ULG)
Foam used	New and Aged*	New only	New and Aged*
Dry Chem fire compatibility	YES	NONE	YES
Passes required	2of 3 attempts (66% success!) - why is 33% failure rate acceptable? ...increases life risk Re-qualification every 5 yrs.	One pass only ...potentially out of 100 attempts. ...No duplicate pass required ...ever.	ALL tests must PASS (100% success) Re-qualification every 5 yrs.
Foam nozzle and flow rate	MilSpec 2gpm (7.5L/min) -28ft2 Modified 3gpm (11.3L/min) 50ft2 JetA	UNI86 11.4L/min (2.8gpm) special high expansion nozzle	MilSpec 2gpm (7.5L/min) -28ft2 & 50ft2 (ALL ULG)
Application density (small)	0.07g/ft2 (2.87L/m2) fresh water only	Level B: 2.53L/m2 (0.06g/ft2) freshwater only	0.07g/ft2 (2.87L/m2) fresh AND seawater
Application density (large)	0.06g/ft2 (2.46L/m2) freshwater only	Level C: 1.56L/m2 (0.04g/ft2) freshwater only	0.04g/ft2 (1.64L/m2) fresh AND seawater
Ambient temps. during fire tests	5-32oC (41-89oF)	15oC (59oF) some Certs show 0oC.	ND
Foam solution temps.	18-28oC (64-82oF)	15oC (59oF)	18-28oC (64-82oF)
Fuel & water substrate temps.	10-32oC (50-89oF)	ND	ND
Wind speed max.	5mph (2.23m/sec)	3m/sec (6.7mph)	10 mph (4.7m/sec)
Foam expansion ratio	min 7:1	ND (typically 8-10:1)	min 5:1
Preburn	10secs 28ft2 (Jet A & ULG); 60secs 50ft2 (Jet A)	60 secs	10secs 28ft2 and 50ft2 (ULG Only)
Extinguishment time (Pass)	28ft2 - Jet A: 30secs (new foam, 60secs Aged), 60secs ULG; 50ft2-Jet A: 60secs (75% out in 20secs) freshwater only	Level B: flickers allowed up to 120secs freshwater only; Level C: flickers allowed up to 120secs freshwater only	28ft2-ULG: 30secs (new & aged, fresh & seawater), 45secs half-strength, (fresh and seawater), 55secs RICH seawater; 50ft2-ULG 50secs (seawater)
Burnback commenced (from end foam appln.)	after 30s (45+-15s)	after 120 secs	within 60 secs (implying 55-59secs)

Key: NR = Not Required; ND = Not Defined; ULG = Unleaded Gasoline;

\* = 10days @65oC (149oF);

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	= Harder
	= Easier
	= Potential danger