

FP70

FP70 is a superior quality FluoroProtein (FP) fire fighting foam concentrate for extinguishing and securing flammable hydrocarbon liquid fires.



Its unique formulation is based on advanced protein foam technology. The protein base provides a tough cohesive foam blanket with high resistance to heat that quickly smothers, cools, and seals the risk. Fluorochemical surface active agents combined with the protein base increase the fluidity and fuel repellency of the foam.

- Stable long-lasting foam blanket for unsurpassed burnback resistance and post-fire security.
- Highly fluid foam for rapid fire knockdown and extinguishment.
- Detergent-free for high resistance to fuel pick-up.
- Excellent sealing action on hot metal surfaces.
- Foam blanket re-seals when ruptured by personnel or equipment.

Environment

FP70 is biodegradable and virtually non-toxic to aquatic organisms. It is based on a natural protein foaming agent and contains no harmful synthetic detergent or glycol ether.

Applications

FP70 is the ideal fire fighting foam to use in situations where hydrocarbon fuels such as crude oil, gasoline, and fuel oils are stored, processed, or transported. It is used extensively by major world oil and petrochemical companies for hydrocarbon storage tank fire protection.

Other typical applications include process areas, road/rail loading racks, power stations, marine terminals, and airports.

FP70 provides a vapour-suppressing foam blanket on unignited hydrocarbon spills.

Performance

The fire performance of FP70 is measured primarily against Underwriters Laboratories Standard UL 162 (7th Edition).

Approvals and Listings

FP70 has numerous approvals and UL Listings. Independently Tested and Certified to EN1568: 2008 Part 3

Equipment

FP70 is intended for use as a 3% solution in water (3 parts concentrate to 97 parts water) at low expansion, and as a 6% solution in water at medium expansion.

It is readily proportioned using conventional foam proportioning equipment such as portable and fixed in-line foam venturi proportioners, handline nozzles/branchpipes with pick-up tubes, balanced pressure variable flow proportioners, balanced pressure bladder tank proportioners, and around-the-pump proportioners.

FP70 should be used with air aspirating discharge devices such as low expansion branchpipes, monitors, top pourer sets, rimseal foam pourers, and foam/water sprinklers. It also produces top quality medium expansion foam when applied through medium expansion branchpipes and bund pourers.

As with any foam, FP70 is best applied gently on to the burning liquid surface. However, its exceptional resistance to fuel contamination enables it to withstand vigorous mixing with fuel. This makes it ideal for forceful application on to storage tank fires from ground-based mobile monitors or through base (sub-surface) injection systems.

Compatibility

FP70 is suitable for use in combination with:

- Soft or hard, fresh, brackish or sea water.
- Dry powder extinguishing agents either separately or as twin agent systems.
- Expanded protein-based or synthetic foams for application to a fire in sequence or simultaneously.

Storage

FP70 foam concentrate is exceptionally stable in long-term storage. A shelf-life of at least ten years can be expected if it is stored properly.

Disposal

FP70 can be successfully treated in biological waste water treatment systems.

Reliability

FP70 is produced to rigorous quality control standards to ensure consistent fire performance and excellent product reliability. Angus Fire operates a quality management system which complies with the requirements of BS EN ISO 9001:2008.

Typical Physico-Chemical Properties

Appearance		Dark brown liquid
Specific gravity @ 20°C (68°F)		1.15 - 1.17
pH @ 20°C (68°F)		6.6 - 7.6
Viscosity @ 30°C (86°F)	mm ² sec ⁻¹	5.3 - 8.0
Viscosity @ 20°C (68°F)	mm ² sec ⁻¹	7.6 - 11.0
Viscosity @ 10°C (50°F)	mm ² sec ⁻¹	11.2 - 16.8
Viscosity @ 0°C (32°F)	mm ² sec ⁻¹	20.0 - 30.0
Viscosity @ -10°C (14°F)	mm ² sec ⁻¹	28.8 - 43.2
Maximum continuous storage temperature	°C (°F)	40 (104)
Maximum intermittent storage temperature	°C (°F)	60 (140)
Effect of freeze/thaw		No performance loss
Lowest use temperature	°C (°F)	-10 (14)
Sediment as shipped	% v/v	≤ 0.2
Sediment after ageing	% v/v	≤ 0.5

Typical Foam Properties:

These vary depending on the performance characteristics of the foam. When tested in accordance with UK Defence Specification 42-40 it gives the following typical properties	
Expansion ratio	≥ 7:1
25% drainage time	≥ 7 mins 30 secs

Packing Specification	Plastic Square		Plastic Cylindrical		Ecobulk MX
Capacity	25 litres	5 US gallons	200 litres	55 US gallons	1000 litres
Empty weight (kg)	1.2	0.8	9.0	9.0	70
Filled weight (kg)	30	23	241	250	1230
Dimensions (mm)	448 x 286 x 286	402 x 293 x 240	580 D x 922 H	580 D x 922 H	1200 L x 1000 W x 1160 H

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