



Niagara FFFP AR 3x3

Niagara FFFP AR 3x3 is a superior quality Alcohol Resistant Film-Forming FluorProtein (AR-FFFP) fire fighting foam concentrate at 3% induction rate for extinguishing and securing both flammable hydrocarbon and polar solvent liquid fires.

Benefits

- Highly versatile - eliminates need to stock a variety of foam types
- Detergent-free for high resistance to fuel pick-up
- Foam blanket re-seals when disrupted by personnel or equipment

Features

- Easy pouring and induction
- Extremely low environmental impact
- Highly versatile
- Film-forming foam with fast knockdown

Easy pouring and induction

Niagara FFFP AR 3x3 does not contain any polymers that cause conventional AR type concentrates to be viscous. It is therefore easy to pour from the drum when used with portable foam equipment. High fluidity means that proportioning is quick, easy and accurate with both portable inductors and fixed balanced pressure proportioners.

Environment

Niagara FFFP AR 3x3 is based on a natural protein foaming agent and contains no harmful synthetic detergents, glycol ethers, alkyl phenol ethoxylates (APEs), tolyltriazoles, or complexing agents.

Applications

Ideal for use in high-risk applications where polar solvents (such as alcohols, ketones, and ethers) and/ or hydrocarbons (such as crude oil, gasoline, diesel fuel, aviation kerosene) are stored, processed or transported.

Approvals and Listings

Niagara FFFP AR 3x3 has numerous approvals and UL Listings against Underwriters Laboratories Standard UL 162 (7th Edition). Independently Tested and Certified to EN1568:2008 Part 3.



ANGUS FIRE

Equipment

Intended for multipurpose use at 3% (3 parts concentrate to 97 parts water) on hydrocarbons & polar solvents.

Proportioning

Readily proportioned at 3% using conventional foam proportioning equipment such as portable and fixed foam proportioners. Newtonian fluid characteristics for easy pouring from drums over a wide range of temperatures.

Non-aspirated

Non-aspirated application is not recommended as the primary method of attack for major fires where a stable foam cover is essential. However, Niagara FFFP AR 3x3 can be used with non-aspirating discharge devices such as spray nozzles, monitors, and conventional sprinklers for use on shallow spill fires of hydrocarbons only.

Low expansion

Air aspirating discharge devices such as low expansion branchpipes, monitors, top pourer sets, MEX Bund Pourers and foam/water sprinklers are all suitable for use with Niagara's exceptional resistance to fuel contamination enables it to withstand vigorous mixing with hydrocarbon fuels.

This makes it suitable for forceful application onto large hydrocarbon storage tank fires from ground-based mobile monitors or via sub-surface injection systems.

Compatibility

Suitable for use in combination with:

- Soft, hard, brackish and saline water.
- Dry powder extinguishing agents either separately or in twin agent systems.
- Expanded foams (either protein or synthetic based) for application simultaneously or sequentially to a fire.

Disposal

For fire water runoff and accidental spillage please refer to Angus Fire's Foam Disposal Guide and MSDS for more information.

Reliability

Niagara FFFP AR 3x3 is produced to rigorous quality control standards which 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.



EN1568:2008
Parts 3 & 4



Can 25 litres



Drum 200 litres



Container 1000 litres

Typical Physico-Chemical Properties

Appearance	Dark brown free-flowing liquid
Specific gravity @ 20°C (68°F)	1.15 - 1.17
pH @ 20°C (68°F)	6.7 - 7.7
Viscosity @ 20°C (68°F) CS	18
Viscosity @ 0°C (32°F) CS	47
Viscosity @ -10°C (14°F) CS	105
Maximum continuous storage temperature	49 °C (120 °F)
Maximum intermittent storage temperature	60°C (140°F)
Effect of freeze/thaw	No performance loss
Lowest use temperature	-17.8°C (0 °F)
Sediment as shipped	≤ 0.25 % v/v
Sediment after ageing	< 0.5 % v/v

Typical Foam Properties:

These vary depending on the performance characteristics of the foam.

When tested in accordance with UK Defence Specification 42-41 it gives the following typical properties

Induction rate %	3
Expansion ratio	≥ 7:1
25% drainage time minutes	≥ 3' 30"

