



Aer-O-Water®3EM^{C6}

Aqueous Film-Forming Foam

NFC210

- ✓ U.S. Military Specification MIL-PRF-24385F(SH) Qualified Products List (QPL)
- ✓ Low Energy Input AFFF - Requires Minimal Agitation
- ✓ Excellent Fluidity Provides Rapid "Knockdown"
- ✓ Suitable For Use With Fresh Or Sea Water
- ✓ Compatible With Standard Proportioning And Foam Making Devices
- ✓ Suitable For Use With Foam Compatible Dry Powder Extinguishing Agents
- ✓ Underwriters Laboratories, Inc.
- ✓ Underwriters Laboratories of Canada (ULC)
- ✓ Formulated using 'C6' fluorosurfactant technology



Aer-O-Water®3EM^{C6} is a superior quality aqueous film forming foam (AFFF) which is used at 3% concentration to extinguish fires in hydrocarbon fuels. It has been tested and qualified to meet the stringent requirements of U.S. Military Specification MIL-PRF-24385F(SH). Aer-O-Water®3EM^{C6} is suitable for use with most types of proportioning equipment and discharge devices.

AFFF foam concentrates are designed for rapid fire knockdown by producing a thin aqueous film which spreads across the surface of the fuel, separating the fuel from oxygen. This is accomplished by allowing the foam solution to quickly drain from the foam bubble which in turn, affects long term sealability and burnback resistance.

The aqueous film is produced by the fluorocarbon surfactant (i.e. PFAS) reducing the surface tension of the foam solution to a point where the solution can be supported by the surface tension of the fuel. The effectiveness of the aqueous film is directly influenced by the surface tension of the fuel. The film tends to be more effective on fuels with higher surface tension such as diesel and jet fuels, and less effective on fuels with lower surface tension such as hexane and gasoline.

In general, AFFF foam concentrates may be used with non-aspirating nozzles and sprinklers, however, for best foam

expansion and 25% drainage time, all foam concentrates should be used with aspirating nozzles and foam making discharge devices.

Aer-O-Water®3EM^{C6} has successfully passed UL-162 7th Edition test criteria for use at 3% concentration on hydrocarbons. The UL listings include application through a variety of proportioning and foam making discharge devices using fresh or sea water. See UL Fire Protection Equipment Directory at www.ul.com/database or consult National Foam for details on compatible equipment listings.

Aer-O-Water®3EM^{C6} has passed stringent U.S. Military requirements for flammable liquid fire protection and is listed on the qualified products list (QPL-24385).

Applications

Aer-O-Water®3EM^{C6} is used at 3% concentration in fire suppression systems and manually to fight fires involving hydrocarbon fuels such as crude oil, gasoline, and fuel oils. It is not suitable for use on polar solvents or water miscible fuels such as alcohols, ketones, esters, and ethers. Typical installations include foam-water sprinkler systems, aircraft hangars, loading racks, process areas, etc. Aer-O-Water®3EM^{C6} is also an excellent agent for use in Aircraft Rescue and Fire Fighting (ARFF) or other manual fire fighting applications where polar solvent fuels are not encountered.

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Typical Physical Properties

Appearance.....Light Amber Color
Specific Gravity at 77°F(25°C).....1.04
pH.....8.0
Viscosity at 77°F(25°C).....4 cST
Freezing Point.....10°F(-12°C)
Min Usable Temperature.....35°F(2°C)
Max Usable Temperature.....120°F(49°C)

Storage and Handling

Aer-O-Water®3EM^{C6} is ideally stored in its original shipping container or in tanks or other containers which have been designed for such foam storage. Recommended construction materials are stainless steel (Type 304L or 316), high density cross-linked polyethylene, or reinforced fiberglass polyester (isophthalic polyester resin) with a vinyl ester resin internal layer coating (50 -100 mils). Refer to National Foam Technical Bulletin NFTB100 for further information.

Foam concentrates are subject to evaporation which accelerates when the product is exposed to air. Storage tanks should be sealed and fitted with a pressure vacuum vent to prevent free exchange of air. The recommended storage environment is within the UL-listed temperature range of 35°F to 120°F (2°C to 49°C). When product is stored in atmospheric storage tanks, contents must be covered with 1/4-inch (6.35mm) of National Foam Seal Oil to ensure prevention of air coming into contact with the foam concentrate. Use of Seal Oil is only recommended in stationary

storage tanks. Refer to National Foam Technical Bulletin NFTB100 or National Foam product data sheet NFC950 for further information.

Aer-O-Water®3EM^{C6} foam concentrate is freeze/thaw stable. Should the product freeze during shipment or storage, no performance loss is expected upon thawing.

Aer-O-Water®3EM^{C6} has been tested for compatibility with all 3% AFFF foam concentrates which are qualified to MIL-F-24385F, and are suitable for mixing in long term storage. It should not be mixed with other foam concentrates which are not qualified to MIL-PRF-24385F(SH). Such mixing could lead to chemical changes in the product and a possible reduction in or loss of fire fighting capability. Most expanded foams are compatible for side-by-side application during an incident.

Aer-O-Water®3EM^{C6} is suitable for use in combination with foam compatible dry chemical extinguishing agents.

Shelf Life, Inspection, and Testing

The shelf life of any foam concentrate is maximized by proper storage conditions and maintenance. Factors affecting shelf life are wide temperature changes, extreme high or low temperatures, evaporation, dilution, and contamination by foreign materials. National Foam firefighting foam concentrates have been tested and have not shown significant loss of performance even after 10 years or more, provided annual testing and proper storage recommendations are followed.

Refer to National Foam technical bulletin NFTB240 for recommendations on foam concentrate storage and preservation.

Annual testing of all firefighting foam is recommended by the National Fire Protection Association (NFPA). National Foam provides a Technical Service Program to conduct such tests. Refer to National Foam product data sheet NFC960 for further details on Technical Service program.

Environmental and Toxicological Information

As all 'C6' foams contain PFAS please refer to the product's Safety Data Sheet (SDS) and website for more information regarding the use, discharge and disposal of all firefighting foam products.

Prevent foam concentrate and foam solution from entering ground water, surface water, or storm drains. Discharge and disposal of Aer-O-Water®3EM^{C6} concentrate or foam solution should be made in accordance with federal, state, and local regulations.

Aer-O-Water®3EM^{C6} has not been tested for acute oral toxicity, primary skin irritation, or primary eye irritation. Repeated skin contact will remove oils from the skin and cause dryness. Aer-O-Water®3EM^{C6} is a primary eye irritant, and contact with the eyes should be avoided. Users are advised to wear protective equipment. If Aer-O-Water®3EM^{C6} enters the eyes, flush them well with water and seek immediate medical attention. For further details, see the Aer-O-Water®3EM^{C6} Safety Data Sheet NMS210.

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Ordering Information			
Container	Shipping Weight	Shipping Dimensions	Part Number
5-Gallon Pails (19 liters)	46 lb. (20.9 kg)	1.13 cu. ft. ³ (0.032 cu. m)	1133-8340-4
55-Gallon Drums (208 liters)	499 lb. (225.8 kg)	11.51 cu. ft. ³ (0.326 cu. m)	1133-8481-4
275-Gallon IBC Reusable Tote Tank (1041 liters)	2520 lb. (1140.4 kg)	51.11 cu. ft. ³ (1.1061 cu. m)	1133-8725-4
330-Gallon IBC Reusable Tote Tank (1249 liters)	3017 lb. (1365.3 kg)	55.8 cu. ft. ³ (1.580 cu. m)	1133-8033-4
Bulk	8.67 lb./gal. (1.04 kg/l)		1133-8001-4

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