ANSULITE AFC-3MS 3% AFFF Concentrate

Description

ANSULITE AFC-3MS 3% AFFF (Aqueous Film-Forming Foam) Concentrate combines fluoro- and hydrocarbon-surfactant technology to provide superior fire and vapor suppression for Class B hydrocarbon fuel fires. This synthetic foam concentrate is intended for firefighting applications at 3% solution in fresh, salt, or hard water.

ANSULITE AFC-3MS foam solution utilizes three suppression mechanisms for rapid fire knockdown and enhanced burnback resistance:

- The foam blanket blocks oxygen supply to the fuel.
- Liquid drains from the foam blanket and forms an aqueous film that suppresses fuel vapor and seals the fuel surface.
- The water content of the foam solution produces a cooling effect for additional fire suppression.

TYPICAL PHYSIOCHEMICAL PROPERTIES AT 77 °F (25 °C)

Appearance	Pale yellow liquid
Density	1.02 ± 0.02 g/ml
pH	7.0 - 8.5
Refractive Index	1.3655 ± 0.0020
Viscosity	3.25 ± 1.0 cSt*
Spreading Coefficient	3.0 minimum at 3%
Pour Point	27 °F (-3 °C)
Freeze Point	27 °F (-3 °C)

*Cannon-Fenske viscometer at 25 °C

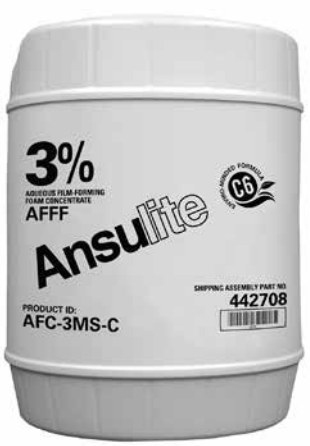
Application

ANSULITE AFC-3MS 3% AFFF Concentrate is intended for use on Class B hydrocarbon fuel fires having low water solubility, such as crude oils, gasolines, diesel fuels, and aviation fuels. It is not suitable for use on polar fuels having appreciable water solubility, such as methyl and ethyl alcohol, acetone, and methyl ethyl ketone.

The concentrate has excellent wetting properties that can effectively combat Class A fires as well. It may also be used in conjunction with dry chemical agents to provide even greater fire suppression performance.

ANSULITE AFC-3MS Concentrate is ideal for fixed and emergency response firefighting systems designed to protect naval and aviation assets. Typical applications include:

- Military and civilian aircraft facilities
- Crash fire rescue (per US DOT FAA AC No. 150/5210-6D)
- On-board marine/naval fire suppression systems
- Storage tanks
- Docks/marine tankers



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Approvals and Listings

ANSULITE AFC-3MS 3% AFFF Concentrate is approved, listed, qualified under, or meets the requirements of the following specifications and standards:

- US Department of Defense Military Specification
  - MIL-F-24385F: Fire Extinguishing Agent, Aqueous Film-Forming Foam (AFFF) Liquid Concentrate, for Fresh and Sea Water
- Underwriters Laboratories Inc.
  - UL Standard 162, Foam Liquid Concentrates
  - Fresh and Sea Water
- National Fire Protection Association (NFPA)
  - NFPA 403, Standard for Aircraft Rescue and Fire-Fighting Services at Airports
  - NFPA 409, Standard on Aircraft Hangars
  - NFPA 412, Standard for Evaluating Aircraft Rescue and Fire-Fighting Foam Fire Equipment
  - NFPA 414, Standard for Aircraft Rescue and Fire-Fighting Vehicles
  - NFPA 418, Standard for Heliports

Please contact Tyco Fire Protection Products Technical Services and/or refer to listing agency for current product and compatible hardware listings.

The environmentally-mindful ANSULITE AFC-3MS Concentrate formulation contains short-chain, C-6 fluorochemicals manufactured using a telomer-based process. The telomer process produces no PFOS, and these C-6 materials do not breakdown to yield PFOA. The fluorochemicals used in the concentrate meet the goals of the U.S. Environmental Protection Agency 2010/15 PFOA Stewardship Program.

ENVIRO-MINDED FORMULA C6

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Foaming Properties

ANSULITE AFC-3MS Concentrate may be effectively applied using most conventional foam discharge equipment at 3% dilution with fresh, salt, or hard water. For optimum performance, water hardness should not exceed 500 ppm expressed as calcium and magnesium.

Because of the low energy required to create foam with ANSULITE AFC-3MS Concentrate, the foam solution may be applied with aspirating and non-aspirating discharge devices. Aspirating discharge devices typically produce expansion ratios from 3.5:1 to 10:1, depending on the type of device and the flow rate. Non-aspirating devices, such as handline water fog/stream nozzles or standard sprinkler heads, typically produce expansion ratios of 2:1 to 4:1. Medium-expansion discharge devices typically produce expansion ratios between 20:1 and 60:1.

TYPICAL FOAM CHARACTERISTICS (Fresh and Sea Water)**

Proportioning Rate	3%
Expansion Ratio LE	9.5
25% Drain Time (min:sec)	3:30
50% Drain Time (min:sec)	5:45

**per EN 1568-3, 2008 protocol

Proportioning

ANSULITE AFC-3MS 3% AFFF Concentrate can be correctly proportioned using most conventional, properly calibrated, in-line proportioning equipment such as:

- Balanced and in-line balanced pressure pump proportioners
- Balanced pressure bladder tanks and ratio flow controllers
- Around-the-pump type proportioners
- Fixed or portable in-line venturi type proportioners
- Handline nozzles with fixed eductor/pick-up tubes

For immediate use: The concentrate may also be diluted with fresh or sea water to a 3% pre-mix solution.

For delayed use: Consult Technical Services for guidance regarding suitability of a pre-mix solution (fresh water only).

Storage and Handling

ANSULITE AFC-3MS Concentrate should be stored in the original supplied package (HDPE totes, drums, or pails) or in the foam system equipment recommended by Technical Services. The product should be maintained within the recommended 35 °F to 120 °F (2 °C to 49 °C) operational temperature range. If the concentrate freezes during transport or storage, full product serviceability can be restored upon thaw with gentle re-mixing.

Factors affecting the foam concentrate long-term effectiveness include temperature exposure and cycling, storage container, air exposure, evaporation, dilution, and contamination. The effective life of ANSULITE AFC-3MS Concentrate can be maximized through optimal storage conditions and proper handling.

ANSULITE foam concentrates have demonstrated effective firefighting performance with contents stored in the original package under proper conditions for more than 10 years.

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ANSULITE AFC-3MS 3% AFFF Concentrate has been successfully evaluated by the US Naval Sea Systems Command for prolonged compatibility with other 3% AFFF concentrates qualified under MIL-F-24385F specification.

- Mixing with foam concentrates not vetted by MIL-F-24385F is not recommended.
- For immediate incident response, it is appropriate to use the concentrate in conjunction with comparable 3% AFFF products.

Materials of Construction Compatibility

ANSULITE AFC-3MS Concentrate compatibility with HDPE has been successfully evaluated using ASTM D1693-70 protocol under UL-162 standard. Concentrate corrosion studies with cold-rolled carbon steel (UNS G10100), 90-10 copper-nickel (UNS C70600), 70-30 nickel-copper (UNC N04400), bronze (UNS C90500), and CRES steel (UNS S30400) have been successfully completed per ASTM E527 protocol under MIL-F-24385F specification.

To avoid corrosion, galvanized pipe and fittings should never be used in contact with undiluted concentrate. Please refer to Technical Bulletin No. 59 for recommendations and guidance regarding compatibility of ANSUL® concentrates with common materials of construction in the firefighting foam industry.

Inspection

ANSULITE AFC-3MS 3% AFFF Concentrate should be inspected periodically per NFPA 11 “Standard for Low-, Medium-, and High-Expansion Foam,” EN 13565-2 “Foam System Standard,” or other relevant standard. A representative concentrate sample should be sent to Tyco Fire Protection Products Foam Analytical Services or other qualified laboratory for quality analysis per the applicable standard. An annual inspection and sample analysis is typically sufficient, unless the product has been exposed to unusual conditions.

Ordering Information

ANSULITE AFC-3MS 3% AFFF Concentrate is available in pails, drums, totes or bulk shipment. Commercially-packaged product is designated AFC-3MS-C. Product requiring DLA, US military contract packaging is designated AFC-3MS.

Part No.	Description	Shipping Weight	Cube
442708*	Pail 5 gal (19 L)	45 lb (20.4 kg)	1.25 ft^3 (0.0353 m^3)
442710*	Drum 55 gal (208 L)	495 lb (224.5 kg)	11.83 ft^3 (0.3350 m^3)
442711*	Tote 265 gal (1000 L)	2463 lb (1117 kg)	50.05 ft^3 (1.42 m^3)
442707‡	Pail 5 gal (19 L)	45 lb (20.4 kg)	1.25 ft^3 (0.0353 m^3)
442709‡	Drum 55 gal (208 L)	495 lb (224.5 kg)	11.83 ft^3 (0.3350 m^3)

* AFC-3MS-C Concentrate in commercial packaging (Pails and Drums, UL-162 compliant)

‡ AFC-3MS Concentrate in MIL-F-24385F specified packaging for direct government acquisition. Packaging requirements for specific contract identification is the responsibility of the contract holder.

Note: The converted metric values provided are for dimensional reference only and do not reflect an actual measurement.

Safety Data Sheet (SDS) available at www.ansul.com