ANSULITE AFC-6MS 6% AFFF Concentrate

Description
ANSULITE AFC-6MS 6% AFFF (Aqueous Film-Forming Foam) Concentrate combines fluoro- and hydrocarbon-surfactant technologies to provide superior fire and vapor suppression for Class B hydrocarbon fuel fires. This synthetic foam concentrate is intended for firefighting applications at 6% solution in fresh, salt, or hard water.

ANSULITE AFC-6MS foam solution utilizes three suppression mechanisms for rapid fire knockdown and superior 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 PHYSICOCHEMICAL PROPERTIES AT 77 °F (25 °C)
- Appearance: Pale yellow liquid
- Density: 1.03 ± 0.02 g/ml
- pH: 7.0 – 8.5
- Refractive Index: 1.3600 minimum
- Viscosity*: 2.5 ± 1.0 cSt
- Spreading Coefficient: 3 dynes/cm minimum at 6% dilution
- Pour Point: 21 °F (-6 °C)
- Freeze Point: 21 °F (-6 °C)
*Cannon-Fenske viscometer at 77 °F (25 °C)

Application
ANSULITE AFC-6MS 6% AFFF Concentrate is intended for use on Class B hydrocarbon fuel fires with low water solubility, such as crude oils, gasolines, diesel fuels, and aviation fuels. It is not suitable for use on polar fuels with appreciable water solubility, such as methyl and ethyl alcohol, acetone, and methyl ethyl ketone. It may also be used in conjunction with dry chemical agents to provide even greater fire suppression performance.

ANSULITE AFC-6MS Concentrate can be 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

Approvals, Listings, and Standards
ANSULITE AFC-6MS 6% 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

Contact Johnson Controls Technical Services and/or refer to listing agency for current product and compatible hardware listings.

The ANSULITE AFC-6MS 6% AFFF Concentrate formulation contains short-chain, C-6 fluorochemicals manufactured using a telomer-based process that does not produce PFOS.

Foaming Properties
ANSULITE AFC-6MS 6% AFFF Concentrate may be effectively applied using most conventional foam discharge equipment at 6% dilution with fresh, salt, or hard water. For optimum performance, water hardness should not exceed 500 ppm expressed as calcium and magnesium.
**Foaming Properties (Continued)**

ANSULITE AFC-6MS Concentrate requires low energy to foam and the foam solution may be applied with aspirating and non-aspirating discharge devices. Non-aspirating devices, such as handline water fog/stream nozzles or standard sprinkler heads, typically produce expansion ratios from 2:1 to 4:1. Aspirating low-expansion discharge devices typically produce expansion ratios from 3:5:1 to 10:1, depending on the type of device and the flow rate. Medium-expansion discharge devices typically produce expansion ratios from 20:1 to 60:1.

**TYPICAL FOAM CHARACTERISTICS** (Fresh and Sea Water)

<table>
<thead>
<tr>
<th>Proportioning Rate</th>
<th>Expansion Ratio LE</th>
<th>25% Drain Time (min:sec)</th>
<th>50% Drain Time (min:sec)</th>
</tr>
</thead>
<tbody>
<tr>
<td>6%</td>
<td>9.1</td>
<td>3:45</td>
<td>6:10</td>
</tr>
</tbody>
</table>

**Storage and Handling (Continued)**

Factors affecting the foam concentrate’s long-term effectiveness include temperature exposure and cycling, storage container characteristics, air exposure, evaporation, dilution, and contamination. The effective life of ANSULITE AFC-6MS Concentrate can be maximized through optimal storage conditions and proper handling. ANSULITE concentrates have demonstrated effective firefighting performance with contents stored in the original package under proper conditions for more than 10 years.

ANSULITE AFC-6MS 6% AFFF Concentrate has been successfully evaluated by the US Naval Sea Systems Command for prolonged compatibility with other 6% 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 6% AFFF products.

**Inspection**

ANSULITE AFC-6MS 6% AFFF Concentrate should be inspected periodically per NFPA 11, EN 13565-2, or other relevant standard. A representative concentrate sample should be sent to Johnson Controls 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-6MS 6% AFFF Concentrate is available in pails, drums, totes, or bulk shipment. Commercially-packaged product is designated AFC-6MS-C. Product requiring DLA, US military contract packaging is designated AFC-6MS.

<table>
<thead>
<tr>
<th>Part No.</th>
<th>Description</th>
<th>Approximate Shipping Weight</th>
</tr>
</thead>
<tbody>
<tr>
<td>442713*</td>
<td>5 gal (19 L)</td>
<td>45 lb (20.4 kg)</td>
</tr>
<tr>
<td>442715*</td>
<td>55 gal (208 L)</td>
<td>495 lb (224.5 kg)</td>
</tr>
<tr>
<td>442716*</td>
<td>265 gal (1,003 L)</td>
<td>2,463 lb (1,117 kg)</td>
</tr>
<tr>
<td>442712‡</td>
<td>5 gal (19 L)</td>
<td>45 lb (20.4 kg)</td>
</tr>
<tr>
<td>442714‡</td>
<td>55 gal (208 L)</td>
<td>495 lb (224.5 kg)</td>
</tr>
</tbody>
</table>

* AFC-6MS-C Concentrate in commercial packaging (pails and drums, UL-162 compliant)
‡ AFC-6MS Concentrate in MIL-F-24385F specified packaging for direct government acquisition. Packaging requirements for specific contract identification is the responsibility of the contract holder.

Safety Data Sheets (SDS) are available at www.ansul.com

If any foam product is discharged into the environment, efforts should be made to control, contain and collect the discharge for proper disposal, while following all applicable laws, regulations, and codes. Further information regarding the use, discharge, and disposal of firefighting foams can be found at www.ansul.com.

**Note:** The converted metric values in this document are provided for dimensional reference only and do not reflect an actual measurement. ANSUL, ANSULITE, and the product names listed in this material are marks and/or registered marks. Unauthorized use is strictly prohibited.