

## ANSULITE® A336 USCG 3% $\times$ 3% AR-AFFF Concentrate

### Description

ANSULITE® A336 USCG 3x3 AR-AFFF (Alcohol Resistant Aqueous Film-Forming Foam) Concentrate combines fluoro- and hydrocarbon-surfactant technologies to provide superior fire and vapor suppression for Class B, polar solvent and hydrocarbon fuel fires. This synthetic foam concentrate is intended for firefighting applications at 3% solution on hydrocarbon fuels and at 3% solution on polar solvent fuels in fresh, salt, or hard water.

ANSULITE A336 USCG foam solution utilizes three suppression mechanisms intended 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 either:
  - An aqueous film on a hydrocarbon fire, or
  - A polymeric membrane on a polar solvent fire which suppresses the 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	Viscous red liquid
Density	1.03 $\pm$ 0.2 g/ml
pH	7.0 - 8.0
Refractive Index	1.3520 minimum
Viscosity*	1700 $\pm$ 500 cPs
Spreading Coefficient	3 dynes/cm minimum at 3% dilution
Pour Point	28 °F (-2 °C)
Freeze Point	27 °F (-3 °C)

\*Brookfield Viscometer Spindle #4, 60 rpm

ANSULITE A336 USCG Concentrate is a non-Newtonian fluid that is both pseudoplastic and thixotropic; therefore, dynamic viscosity will decrease as shear increases.

ANSULITE A336 USCG 3x3 AR-AFFF Concentrate formulation contains short-chain, C6 fluorochemicals manufactured using a telomer-based process that does not produce PFOS.

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### Approvals, Listings, and Standards

ANSULITE A336 USCG 3x3 AR-AFFF Concentrate is designed in accordance with National Fire Protection Association (NFPA) Standard 11 for Low-, Medium-, and High-Expansion Foam. The concentrate is approved, listed, qualified under, or meets the requirements of the following specifications and standards:

- Marine, Foam Liquid Concentrates
  - UL Standard 162, Foam Liquid Concentrates
  - NFPA 11 Annex F, 2016 Edition
- ULC S564, Category 2 Foam Liquid Concentrate
- USCG Approved



### Application

ANSULITE A336 USCG 3x3 AR-AFFF Concentrate is intended for use on both types of Class B fires: hydrocarbon fuels with low water solubility, such as crude oils, gasolines, diesel fuels, and aviation fuels; and polar solvent 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 A336 USCG Concentrate can be ideal for fixed, semi-fixed, and emergency response firefighting applications such as:

- Docks and on-board marine systems
- Fuel or chemical storage tanks
- Truck/rail loading and unloading facilities
- Flammable liquid containment areas
- Mobile equipment

## Foaming Properties

ANSULITE A336 USCG 3x3 AR-AFFF Concentrate may be effectively applied using most conventional foam discharge equipment at the correct dilution with fresh, salt, or hard water. For optimum performance, water hardness should not exceed 500 ppm expressed as calcium and magnesium.

ANSULITE A336 USCG 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 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)

Proportioning Rate	3%
Expansion Ratio	≥ 5
25% Drain Time (min:sec)	≥ 9:00
50% Drain Time (min:sec)	≥ 16:00

\*\*per EN 1568-3, 2008 protocol

## Proportioning

The recommended operational temperature range for ANSULITE A336 USCG 3x3 AR-AFFF Concentrate is 35 °F to 120 °F (2 °C to 49 °C) per UL 162. This foam 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 premixed with fresh or sea water to 3% solution for hydrocarbon fuel fires or a 3% solution for polar solvent fuel fires.

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

## Inspection

ANSULITE A336 USCG 3x3 AR-AFFF Concentrate should be inspected periodically in accordance with 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.

## Materials of Construction Compatibility

To help avoid corrosion, galvanized pipe and fittings should never be used in contact with undiluted ANSULITE A336 USCG 3x3 AR-AFFF Concentrate. Refer to Johnson Controls Technical Bulletin *Acceptable Materials of Construction* for recommendations and guidance regarding compatibility of foam concentrates with common materials of construction in the firefighting foam industry.

## Storage and Handling

ANSULITE A336 USCG 3x3 AR-AFFF Concentrate should be stored in the original supplied package (HDPE totes, drums, or pails) or in the recommended foam system equipment as outlined in Johnson Controls Technical Bulletin *Storage of Foam Concentrates*. A thin layer up to 1/4 in. (6 mm) thick of appropriate-grade mineral oil may be applied to the surface of the foam concentrate stored in a fixed, atmospheric storage container to help minimize evaporation. Consult Johnson Controls Technical Services for further guidance regarding the use of mineral oil to help seal the surface of AR-AFFF concentrates.

The concentrate should be maintained within the recommended operational temperature range. Freezing of the product should be avoided. If, however, the product freezes during transport or storage, it must be thawed and inspected for signs of separation. If separation has occurred or is suspected, ANSULITE A336 USCG Concentrate should be mechanically mixed until homogeneous, and additional testing may be required after mixing to verify product quality.

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 A336 USCG Concentrate can be maximized through optimal storage conditions and proper handling. ANSUL® foam concentrates have demonstrated effective firefighting performance with contents stored in the original package under proper conditions for more than 10 years.

Mixing ANSULITE A336 USCG Concentrate with other foam concentrates for long-term storage is not recommended. Use in conjunction with comparable 3x3 AR-AFFF products for immediate incident response is appropriate.

## Ordering Information

ANSULITE A336 USCG 3x3 AR-AFFF Concentrate is available in pails, drums, totes, or bulk shipment.

Part No.	Description	Shipping Weight
<b>Pails</b>		
448857	5 gal (19 L)	45 lb (20.4 kg)
<b>Drums</b>		
448859	55 gal (208 L)	495 lb (224.5 kg)
<b>Totes*</b>		
448861	265 gal (1003 L)	2463 lb (1117 kg)

For bulk orders, consult an account representative.

\*Totes are not UL/ULC listed packaging.

Safety Data Sheets (SDS) are available at [www.ansul.com](http://www.ansul.com)

**Note:** The converted values in this document are provided for dimensional reference only and do not reflect an actual measurement.

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