

3% FLUOROPROTEIN FOAM CONCENTRATE EXTINGUISHING AGENT

Data/Specifications



DESCRIPTION

ANSUL® 3% Fluoroprotein Foam Concentrate is formulated from hydrolyzed protein, fluorochemical surfactants, foam stabilizers (metal salts), bactericide, corrosion inhibitors, freezing point depressants and solvents. It is transported and stored as a concentrate to provide ease of use and considerable savings in weight and space.

It is intended for use as a 3% proportioned solution either in fresh, salt or hard water. The correct proportioning ratio is 3 parts of concentrate to 97 parts of water.

Two fire extinguishing mechanisms are in effect when using ANSUL 3% Fluoroprotein Foam. First, a foam blanket is formed which works to prevent the release of fuel vapor. Second, the water content of the foam provides a cooling effect.

APPLICATION

ANSUL 3% Fluoroprotein Foam Concentrate is intended for use on Class B hydrocarbon fuels having low water solubility such as various crude oils, gasolines, diesel fuels, aviation fuels, etc. It is not suitable for use on fuels having appreciable water solubility (polar solvents), i.e., methyl and ethyl alcohol, acetone and methyl ethyl ketone. This concentrate can be used only with air aspirating type discharge devices.

Its wetting characteristics make it useful in combating Class A fires as well. It can also be used with foam compatible dry chemical extinguishing agents without regard to the order of application, to provide even greater fire protection capability.

PERFORMANCE

Fire Performance – The fire performance of ANSUL 3% Fluoroprotein Foam Concentrate is measured against specifications and standards such as Underwriters Laboratories Standard UL 162, latest edition.

Foaming Properties – When used with fresh or salt water or water of any hardness at the correct dilution and with most conventional foam making equipment, the expansion ratio will vary depending on the performance characteristics of the equipment. Air aspirating discharge devices produce expansion ratios from 6 to 1 to 12 to 1 depending primarily on type and flow rate. In general, the higher the flow rate the higher the expansion ratio. Thus, monitors and foam chambers normally produce higher expansion ratios than foam water sprinkler heads and hand held type nozzles.

Typical expansion ratios for foam chambers are in the range of 5 to 1 to 7 to 1, and for foam water sprinkler heads in the range of 3 to 1 to 6 to 1. Subsurface injection is a special case where generally speaking, expansion ratios of 2 to 1 to 3 to 1 are preferred but up to 4 to 1 is also effective.

Typical Physicochemical Properties at 77 °F (25 °C)

Type	3%
Appearance	Dark brown liquid
Density	1.15 g/ml ± 0.03
pH	6.0 – 8.0
Viscosity	10 ± 4 centistokes
Freezing Point	5 °F (–15 °C)
Sediment Volume	0.20% maximum

Proportioning – 3% Fluoroprotein Foam Concentrate can be easily proportioned (at the correct dilution) using most conventional proportioning equipment such as:

1. Balanced pressure and in-line balanced pressure pump proportioning equipment
2. Balanced pressure bladder tank type proportioners
3. Around the pump type proportioners
4. Fixed or portable in-line venturi type proportioners
5. Hand line nozzles with fixed induction/pick up tubes

The minimum and maximum usable temperatures for ANSUL 3% Fluoroprotein Foam Concentrate with this equipment is: 20 °F (–6.7 °C) to 120 °F (49 °C) respectively.

Storage/Shelf Life – When stored in the packaging supplied (polyethylene drums or pails) within the temperature limits specified, or in equipment recommended by the manufacturer as part of the foam system, the shelf life of ANSUL 3% Fluoroprotein Foam Concentrate is generally in excess of 10 years. If the product is frozen during storage or transportation, thawing will render the product completely usable.

Compatibility – There are no specifications or standards which address the subject of compatibility of different manufacturer's brands of fluoroprotein foam concentrates. In an emergency or if the manufacturer has supporting test data to substantiate that the mixture meets the same requirements as the individual component concentrates, they may be mixed together in the same storage vessel.

Different types of foam concentrates, i.e., AFFF and fluoroprotein base should not be mixed under any circumstances.

Inspection – As with any fire extinguishing agent, ANSUL 3% Fluoroprotein Foam Concentrate should be inspected periodically. Please refer to the Field Inspection Manual for detailed procedures how to perform this inspection. An annual inspection is recommended unless unusual conditions of exposure occur. In the latter case, ANSUL's recommendation should be sought.

APPROVALS AND LISTINGS

ANSUL 3% Fluoroprotein Foam Concentrate is approved, qualified under, listed or meets the requirements of the following specifications and standards:

- ▶ Underwriters Laboratories, Inc. – UL Standard 162
 1. Foam Quality Test
 2. Class B Hydrocarbon Fuel Fire Tests
 3. Foam Identification Tests
 4. Test of shipping containers
 5. Class B Hydrocarbon fuel fire tests using foam water sprinkler (both upright and pendent approvals)
 6. Subsurface Injection

It is impractical for ANSUL to list its 3% Fluoroprotein Foam Concentrate with every piece of UL listed hardware. Moreover there are numerous foam hardware components without UL listings that cannot be listed for use with any fluoroprotein foam agent.

Many unlisted pieces of foam hardware should be similar to those listed. However, on installations where ANSUL 3% foam concentrate may be used with hardware components of significantly different types than those tested, contact ANSUL for recommendations.

ORDERING INFORMATION

Part No.	Description
73973	3% Fluoroprotein Foam – 5 gallon
73972	3% Fluoroprotein Foam – 55 gallon

Shipping Weight:

5 gal (19 L) pail – 51 lb (23.1 kg)
55 gal (208 L) drum – 555 lb (262.6 kg)

Cube:

5 gal (19 L) pail – 1.08 ft³ (0.0305 m³)
55 gal (208 L) drum – 11.33 ft³ (0.3208 m³)

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