

JET-X 2 3/4% High-Expansion Foam Concentrate

Description

JET-X 2 3/4% High-Expansion Foam Concentrate contains hydrocarbon surfactants, solvents, and stabilizers is formulated for use with medium- and high-expansion foam generators. This synthetic foam concentrate is intended for firefighting applications at 2 3/4% solution in fresh, salt, or hard water.

JET-X 2 3/4% foam solution can be used to produce foam with expansion ratios ranging from 50:1 to 1000:1 depending upon the type of generator and its operating pressure. The foam blanket has excellent mobility and stability and utilizes several suppression mechanisms:

- Free air movement necessary for combustion is reduced.
- The temperature is cooled below the combustion or auto ignition temperature and oxygen is displaced as liquid drains from the foam and converts to steam.
- The reduced surface tension of the liquid draining from the foam penetrates into Class A materials.
- Insulating and heat reflective properties provide a heat shield and block radiant heat feedback.

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

Appearance	Green liquid
Density	1.020 g/ml ± 0.020
pH	6.0 – 7.0
Refractive Index	1.365 ± 0.010
Viscosity*	8 ± 2 cSt

*Cannon-Fenske viscometer

Application

JET-X 2 3/4% High-Expansion Foam Concentrate is a tremendously flexible firefighting agent, used in suppressing Class A, Class B, and LNG fires both indoors and outdoors. The foam solution should only be used with air-aspirating foam discharge devices except when used as a wetting agent on Class A fuels.

JET-X 2 3/4% Concentrate, when used with high-expansion generators, is capable of totally flooding large rooms and enclosures allowing it to effectively suppress horizontal and vertical (three-dimensional) fires. High-expansion foam is also effective in reducing vapor concentrations downwind from unignited LNG and other hazardous low boiling point gaseous products such as ammonia spills.

When used with medium-expansion foam equipment, JET-X 2 3/4% Concentrate forms a foam blanket which prevents the release of fuel vapor and provides additional cooling due to the higher water content. Medium-expansion foam has benefits in outdoor applications because the foam is less affected by wind conditions.



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Approvals, Listings, and Standards

JET-X 2 3/4% High-Expansion Foam 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:

- UL Standard 139, High-Expansion Foam Liquid Concentrates



Foaming Properties

The performance of JET-X 2 3/4% High-Expansion Foam Concentrate will vary depending upon the performance characteristics of the equipment. Expansion ratios through high-expansion generators are typically between 200:1 and 1000:1. For this reason, it is important for the proper design of a high-expansion system that the JET-X 2 3/4% High-Expansion Foam Concentrate be specifically listed with the foam generators. Refer to the performance table listing expansion ratios of JET-X high-expansion generators used in conjunction with JET-X 2 3/4% Foam Concentrate (see data sheet JET-X High-Expansion Foam Generator, Form No. F-93137, latest revision). Medium-expansion foam generators typically deliver expansion ratios between 50:1 and 200:1.

Proportioning

The recommended operational temperature range for JET-X 2 3/4% High-Expansion Foam Concentrate is 35 °F to 120 °F (2 °C to 49 °C) per UL 139. 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 tank proportioners
- Around the pump type proportioners
- Fixed or portable in-line venturi (eductor) type proportioners

Storage and Handling

JET-X 2 3/4% High-Expansion Foam 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".

The concentrate should be maintained within the recommended operational temperature range. Freezing of the product should be avoided. If the concentrate freezes during storage or transport, it must be thawed and inspected for signs separation. If separation has occurred, or is suspected, the JET-X 2 3/4% Concentrate should be mechanically mixed until homogeneous, and additional testing may be required after mixing to verify product quality.

Storage of JET-X 2 3/4% Concentrate as a pre-mix is not recommended.

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 JET-X 2 3/4% Concentrate can be maximized through optimal storage conditions and proper handling. JET-X foam concentrates have demonstrated effective firefighting performance with contents stored in the original package under proper conditions for more than 10 years.

Mixing JET-X 2 3/4% Concentrate with other high-expansion foam concentrates for long-term storage is not recommended. Different types of foam concentrates (e.g. AFFF or protein base) should not be mixed under any circumstances. JET-X 2% Concentrate should not be mixed for use with JET-X 2 3/4% Concentrate.

Materials of Construction Compatibility

To help avoid corrosion, galvanized pipe and fittings should never be used in contact with undiluted JET-X 2 3/4% High-Expansion Foam Concentrate. Refer to Johnson Controls Technical Bulletin "Acceptable Materials of Construction" for recommendations and guidance regarding compatibility of foam concentrate with common materials of construction in the fire-fighting foam industry.

Inspection

JET-X 2 3/4% High-Expansion Foam 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.

Expansion ratios observed in lab tests may vary depending on the equipment and methods used by the testing laboratory. For this reason, lab scale expansion ratios outside of the range typical of full scale equipment (200:1 to 1000:1) do not necessarily mean that a foam concentrate is not fit for purpose. If there are any questions about the viability of an ANSUL® High-Expansion Foam Concentrate sample, contact Johnson Controls.

Quality Assurance

JET-X 2 3/4% High-Expansion Foam Concentrate is subject to stringent quality controls throughout production, from incoming raw materials inspection to finished product testing, and is manufactured in an ISO 9001:2008 certified facility.

Ordering Information

JET-X 2 3/4% High-Expansion Foam Concentrate is available in pails, drums, totes, or bulk shipment.

Part No.	Description		Approximate Shipping Weight	
	gal	(L)	lb	(kg)
Pail				
420008	5	(19)	51	(23.1)
Drum				
420009	55	(208)	577	(261.7)
Tote*				
431175	265	(1000)	2465	(1118)

For bulk orders, contact an account representative.

*Totes are not UL approved packaging.

Safety Data Sheets (SDS) are available at 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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