T-STORM 703LV 3% x 3% AR-AFFF Concentrate

Description

T-STORM 703LV 3x3 AR-AFFF (Alcohol Resistant Aqueous Film-Forming Foam) Concentrate from Williams Fire & Hazard Control combines fluoro- and hydrocarbon-surfactant technologies to provide 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 on polar solvent fuels in fresh, salt, or hard water.

T-STORM 703LV 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 liquid
Density	1.02 ± 0.02 g/ml
pH	7.0 – 8.5
Refractive Index	1.3580 minimum
Viscosity*	1900 ± 500 cPs
Spreading Coefficient	3.0 minimum at 3% dilution

*Brookfield Viscometer Spindle #4, speed 30 rpm

T-STORM 703LV Concentrate is a non-Newtonian fluid that is both pseudoplastic and thixotropic; therefore dynamic viscosity will decrease as shear increases.

010060

Approvals, Listings, and Standards

T-STORM 703LV 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:

- UL Standard 162, Foam Liquid Concentrate

UL LISTED

Application

T-STORM 703LV 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. The concentrate also has excellent wetting properties that can effectively combat Class A fires.

To provide even greater fire protection capability, T-STORM 703LV foam solution may be applied simultaneously with WILLIAMS FIRE & HAZARD CONTROL PKW dry chemical for a twin-agent system. When using a twin-agent application on polar solvent fuels, take care with the velocity of the dry chemical discharge to minimize submergence of the polymeric membrane below the fuel surface.

T-STORM 703LV Concentrate is ideal for emergency response and semi-fixed firefighting applications such as:

- Industrial chemical and petroleum processing facilities
- Truck/rail loading and unloading facilities
- Flammable liquid containment areas
- Mobile equipment

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Foaming Properties

T-STORM 703LV 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.

T-STORM 703LV Concentrate requires low energy to foam and 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 from 2:1 to 4:1. Medium-expansion discharge devices typically produce expansion ratios from 20:1 to 60:1.

Proportioning

The recommended operational temperature range for T-STORM 703LV 3X3 AR-AFFF Concentrate is 35 °F to 120 °F (2 °C to 49 °C). 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 and polar solvent fuel fires.

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

Materials of Construction Compatibility

To help avoid corrosion, galvanized pipe and fittings should never be used in contact with undiluted T-STORM 703LV 3x3 AR-AFFF 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 firefighting foam industry.

Storage and Handling

T-STORM 703LV 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 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, the T-STORM 703LV 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 T-STORM 703LV Concentrate can be maximized through optimal storage conditions and proper handling. T-STORM foam concentrates have demonstrated effective firefighting performance with contents stored in the original package under proper conditions for more than 10 years.

Mixing T-STORM 703LV 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.

Inspection

T-STORM 703LV 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.

Quality Assurance

T-STORM 703LV 3x3 AR-AFFF 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

T-STORM 703LV 3x3 AR-AFFF Concentrate is available in drums or totes.

Part No.	Description	Shipping Weight	Container Volume
710153	Drum 55 gal (208L)	495 lb (224.5 kg)	11.83 ft^3 (0.3350m^3)
710154*	Tote 265 gal (1000L)	2463 lb (1117 kg)	50.05ft^3 (1.42 m^3)

For bulk orders, contact an account representative.

*Totes are not UL/ULC approved packaging.

Safety Data Sheets (SDS) are available at WILLIAMSFIRE.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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