ULTRAGUARD 1% x 3% AR-AFFF FOAM CONCENTRATE

Description

CHEMGUARD ULTRAGUARD C135 1% x 3% alcohol-resistant aqueous film-forming foam (AR-AFFF) concentrate is characterized by a substantially lower viscosity than other 1% x 3% polar solvent AR-AFFF concentrates. (See Typical Properties.) Formulated using a new and proprietary technology, ULTRAGUARD C135 can improve performance in all types of foam proportioning equipment, including in-line eductors, balanced-pressure systems, and built-in systems on Fire Apparatus. ULTRAGUARD C135 also offers better fire-fighting properties than other AR-AFFF foam concentrates and is effective with blended gasoline additives, such as Methyl Tertiary Butyl Ether (MTBE) and Ethanol. ULTRAGUARD C135 is ideally suited for municipal applications, where a variety of flammable liquid spills and/or fires may occur.

TYPICAL PROPERTIES AT 77 °F (25 °C)

Appearance	Amber gel-like liquid
Density	1.04±0.01 g/ml
pH	7.0-8.0
Refractive Index	1.3555
Typical Viscosity	2200 cps*
Spreading Coefficient	4.0-6.0

*Brookfield #4 Spindle at 30 rpm

Listings and Approvals

Underwriters Laboratories successfully tested ULTRAGUARD C135 to the requirements contained in UL Standard 162, ''Standard for Air-Foam Equipment and Liquid Concentrates'':

Foam Quality Tests
- Class B Hydrocarbon Fuel Fire Tests
- Class B Polar Solvent Fuel Fire Tests
- Foam Identification Tests
- Tests of Shipping Containers

This product is Listed to applicable Canadian National Standards and requirements by Underwriters' Laboratories of Canada. UL also lists ULTRAGUARD C135 for use with UL-listed hardware components.

ULTRAGUARD C135 also has a DNV EC Type Approval to IMO MSC. 1/Circ. 1312

Application

ULTRAGUARD C135 is suitable for both conventional Class B fuels and polar solvent type Class B fuels. Because of its high wetting properties, it also may be effective on Class A fires. Either aspirating or non-aspirating foam discharge devices can be used.

ULTRAGUARD C135 can be used with approved dry chemical extinguishing agents (regardless of the application order), although the polymeric membrane should not be submerged below the fuel surface when using twin agents on polar fuels.

PROPORTIONING

ULTRAGUARD C135 can be proportioned correctly with most conventional proportioning equipment, including:

- Balanced-pressure and in-line balanced-pressure pump proportioners
- Around-the-pump and through-the-pump proportioning devices
- Fixed or portable (in-line) venturi proportioners
- Handline nozzles with fixed induction pickup tubes

Performance

Formulated from special fluorochemical and hydrocarbon surfactants, high-molecular-weight polymers, and solvents, ULTRAGUARD C135 is specified for use as a 1% proportioned solution on hydrocarbon fuels and a 3% proportioned solution on polar fuels, using fresh, salt, or hard water. When applied on a conventional Class B hydrocarbon fuel fire (gasoline, diesel, etc.)or a Class B polar solvent fuel fire (water-miscible fuels – methyl alcohol, acetone, etc.), three fire-fighting processes result:

1. A film forms to help block the release of fuel vapor – an aqueous film for hydrocarbon fuels, a polymeric membrane for polar solvent fuels.

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2. A foam blanket forms to prevent oxygen from reaching the fire and to promote the film/membrane as liquid drains from the foam.
3. Water contained in the foam cools the fire.

FIRE PERFORMANCE

ULTRAGUARD C135 provides exceptional performance, particularly on high-octane gasoline.

FOAMING PROPERTIES

Foam concentrate expansion depends on numerous variables, including water type (fresh, salt, or hard water), dilution, and the foam-making equipment. Depending on the device, the flow rate, and operating conditions, aspirating discharge devices typically produce expansion ratios of 5:1 to 10:1; handline water fog/stream nozzles and other non-aspirating devices typically produce expansion ratios of 2:1 to 4:1; and medium-expansion discharge devices typically produce expansion ratios of 20:1 to 60:1.

STORAGE

ULTRAGUARD C135 can be transported and stored as a concentrate, offering both ease of use and the substantial savings from reduced weight and volume.

ULTRAGUARD C135 offers a shelf life of 20-25 years if stored in the original polyethylene totes, drums, or pails and within the specified temperature limits. If ULTRAGUARD C135 concentrate is stored in an atmospheric storage tank, we suggest adding a 0.125 to 0.25 inch (3-6 mm) layer of mineral oil as a sealer to minimize the effects of evaporation.

ULTRAGUARD C135 offers a usable temperature range of 35 °F (2 °C) to 120 °F (49 °C).

ULTRAGUARD C135 should be protected from freezing. If freezing does occur, the concentrate must be thawed and inspected for signs of separation. If separation has occurred, the concentrate should be mechanically mixed until homogeneous.

COMPATIBILITY

Although many foams are compatible, never mix AR-AFFF foam concentrates with standard AFFF foam concentrates. Please contact CHEMGUARD if you have foam concentrate compatibility questions.

ULTRAGUARD C135 is compatible with standard carbon steel "black" pipe, as well as pipe manufactured from various stainless steel and brass alloys. In some installations, alternative pipe, plastic fittings, and valves may be used; please check the customer and/or regulating authorities for approval guidelines. Do not use galvanized pipe and fittings where they could come into contact with undiluted concentrate.

Please contact CHEMGUARD for further information on construction materials.

Ordering Information

Part No.	Container	Weight
C135P	5 gal (19L)	45 lb
C135D	55 gal (208L)	495 lb
C135BD	330 gal (1249L)	3000 lb
C135T	Bulk Liquid Tanker Truck*	

*Quantity of foam concentrate per bulk liquid truck shipment may vary due to weight considerations. Contact CHEMGUARD for bulk liquid truck sizes and estimated delivery charges

Environmental Impact

Readily biodegradable, ULTRAGUARD C135 contains no perfluorooctane sulfonate (PFOS) or perfluorooctanoic acid (PFOA) ingredients.