

DATA SHEET #NFC425

UNIVERSAL 1% / 3% LOW VISCOSITY AR-AFFF Environmentally Responsible Foam Concentrate

Description

Environmentally Responsible Universal® 1%/3% Low Viscosity is a superior quality alcohol resistant aqueous film forming foam (AR-AFFF) which is used at 1% concentration to extinguish fires involving hydrocarbon fuels and 3% for polar-solvent (water-miscible) fires. This new formulation demonstrates National Foam's commitment to superior flexibility, firefighting performance, and environmental responsibility.

Universal[®] 1%/3% Low Viscosity has been formulated to have lower concentrate viscosity than many conventional AR-AFFF formulations and can be used with all types of foam proportioning and discharge equipment.

Universal[®] 1%/3% AR-AFFF is formulated using National Foam patented AFFF technology and contains a biosynthesized polymer. This polymer is designed to fulfill two functions. The first is to form a protective membrane between the fuel and the foam as it contacts the watermiscible fuel, making extinguishment possible. The second function is to make the foam more stable and heatresistant, resulting in better burnback resistance and sealability compared to conventional AFFF's.

Features

- Low Viscosity formulation provides ease of use in most standard proportioning and foam making devices
- Use at 1% to extinguish hydrocarbon fires
- Use at 3% to extinguish polar solvent (water-miscible) fuels
- Suitable for use with fresh and sea water
- Suitable for use with foam compatible dry powder extinguishing agents

Applications

Universal[®] 1%/3% Low Viscosity can be used at 1% concentration in fire suppression systems and manually to fight fires involving hydrocarbon fuels such as crude oil, gasoline, and fuel oils. Universal[®] 1%/3% Low Viscosity is also suitable for use on polar solvents or water miscible fuels such as alcohols, ketones, esters and ethers. Typical installations include foam water sprinkler systems, aircraft hangars, loading racks, process areas, etc. It is also useful as a wetting agent in combating Class A fires.

Typical Physical Properties

Appearance	Dark Amber Color
Specific Gravity at 68°F(20°C)	
рН	
Viscosity at 77°F(25°C)	less than 1000 cps*
Freezing Point	28°F (-2°C)
Minimum Usable Temperature	
Maximum Usable Temperature	120°F (49°C)

Approvals and Listings

Underwriters Laboratories, Inc.

Universal® 1%/3% Low Viscosity has successfully passed UL-162 7th Edition test criteria for use at 1% concentration on hydrocarbon fuels and 3% on polar solvent fuels. The U. L. Listings include application through a variety of proportioning and foam making discharge devices using fresh or sea water. Consult National Foam for a complete list of these devices.

Storage and Handling

Universal® 1%/3% Low Viscosity is ideally stored in its original shipping container or in tanks or other containers which have been designed for such foam storage. Recommended construction materials are stainless steel, high-density crosslinked polyethylene or reinforced polyester (isophthalic polyester resin) with a vinyl ester resin internal layer coating (50-100 mils).

Foam concentrates are subject to evaporation, which accelerates when the product is exposed to air. Storage tanks should be sealed and fitted with a pressure vacuum vent to prevent free exchange of air. The recommended storage environment is within the UL Listed temperature range of 35° F to 120° F (2° C to 49° C).



It is recommended that Universal[®] 1%/3% Low Viscosity not be mixed with any other type of foam concentrate in long-term storage. Such mixing could lead to chemical changes in the product and a possible reduction in or loss of firefighting capability. Most expanded foams are compatible for side-by-side application during an incident.

Universal[®] 1%/3% Low Viscosity is suitable for use in combination with foam compatible dry chemical extinguishing agents.

Shelf Life, Inspection and Testing

Proper storage conditions and maintenance maximize the shelf life of any foam concentrate. Factors affecting shelf life are wide temperature changes, extreme high or low temperatures, evaporation, dilution, and contamination by foreign materials. Properly stored National Foam AFFF foam concentrates have been tested and shown no significant loss of fire fighting performance, even after 25 years.

The National Fire Protection Association (NFPA) recommends annual testing of all firefighting foam. National Foam provides a Technical Service Program to conduct such tests.

Environmental and Toxicological Information

Universal[®] 1%/3% Low Viscosity contains no ingredients reportable under the Superfund Amendments and Reauthorization Act (SARA) Title III, Section 313 of 40 CFR-372 or the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA) as of July 1, 1995.

Universal® 1%/3% Low Viscosity is biodegradable. How-

ever, as with any substance, care should be taken to prevent discharge from entering ground water, surface water, or storm drains. With advance notice, Universal® 1%/3% Low Viscosity can be treated by local biological sewage treatment systems. Since facilities vary widely by location, disposal should be made in accordance with federal, state and local regulations.

Repeated skin contact will remove oils from the skin and cause dryness. Users are advised to wear protective equipment. If Universal[®] 1%/3% Low Viscosity enters the eyes, flush them well with water and seek immediate medical attention. For further details, see the Universal[®] 1%/3% Low Viscosity Material Safety Data Sheet.

Ordering Information

CONTAINER	SHIPPING WEIGHT	PART NUMBER			
5-Gallon Pails (19 litres)	46 lb. (20.9 kg)	2129-1340-6			
55-Gallon Drun (208 litres)	1s 503 lb. (228.0 kg)	2129-1481-6			
275-Gallon IBC (1041 litres)	Reusable Tote Tank 2549 lb. (1156.0 kg)	2129-1725-6			
Bulk	8.75 lb./gal.(1.05 kg/l)	2129-1001-6			
Palletizing of pa	ils and drums is available	upon request.			
SHIPPING CUBE					

5-Gallon Pail	1.13 cu.	ft. (0.032	cu.	m)
55-Gallon Drum 1	11.51 cu.	ft. (0.326	cu.	m)
275-Gallon IBC Tote Tank 51	I.11 cu. f	t. (1.1061	cu.	m)

This information is only a general guideline. The company reserves the right to change any portion of this information without notice. Terms and conditions of sale apply and are available on request. 8/04 Printed in U.S.A. (NFC425-ULV.PMD)

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