ASSURANCE
NATIONAL FOAM

Universal®F3 Green 3%-3%

Alcohol Resistant Synthetic

NFC510

- Superior fluorine free, alcohol resistant synthetic formulation to extinguish both hydrocarbon and polar solvent fires.
- GreenScreen certified.
- Formulated without intentionally added (PFAS), (PFOA), fluorosurfactants, fluoropolymers or organohalogens.
- Lower viscosity than some fluorine free foams to ensure easy induction.
- Synthetic Fluorine Free Foam (SFFF) and Fluorine Free Foam (F3)
- 3% induction on both hydrocarbon and polar solvent risks.
- Specifically designed for high hazard facilities and and chemical manufacturing facilities.
- 100% Biodegradable.

GREENSCREEN CERTIFIED™

Universal®F3 Green 3%-3% is a superior quality 3% synthetic fluorine free (FF) foam concentrate, designed for extinguishing and securing all types of flammable liquid fires and Class A incidents. Universal®F3 Green 3%-3% has been designed specifically for general emergency responders who are faced with a variety of risks in a range of situations.

Universal®F3 Green 3%-3% is a patented combination of surfactants and other ingredients to produce a vapor sealing blanket of foam that rapidly spreads over the surface of the fuel to provide rapid control and extinguishment.

- Unique patented formulation only available from National Foam.
- Fluorine free – can be used where traditional fluorinated products cannot be used.

Standards and Approvals

- Underwriters Laboratories, Inc.
- Underwriters Laboratories of Canada.
- LASTFIRE - Good/Good/ Good in both fresh and seawater.
- Meets EN1568 Parts 3 and 4 on all fuels and all water types.
- NFPA 11
- NFPA 16

Applications

Universal®F3 Green 3%-3% is used in high risk situations where hydrocarbons (such as oils, gasoline, diesel fuel, and aviation kerosene) are stored, processed, or transported and/or polar solvents (such as alcohols, ketones, esters, and ethers) are stored, processed, or transported.

Universal®F3 Green 3%-3% provides a vapor suppressing foam blanket on unignited hydrocarbon spills.

Universal®F3 Green 3%-3% can also be used as a wetting agent in combating fires in Class A materials such as wood, paper, and tires.

Typical Physical Properties

Appearance	Pale Yellow Color
Specific Gravity at 68°F(20°C)	1.02-1.04
pH @ 68°F(20°C)	7.0-8.0
Viscosity@ 68°F(20°C)	1,700 cP*
Expansion Ratio	5 - 11**
25% Drainage Time	90 - 300 minutes**
Freezing Point	21°F(-6°C)
Lowest Use Temperature	35°F(2°C)
Max Continuous Storage Temperature	120°F(49°C)

**Brookfield #4 Spindle @ 60 rpm. Viscosity measured under different shear conditions will vary because of pseudoplastic rheology of this non-Newtonian product.*

***Expansion ratio and 25% drainage time are typical values and are affected by accuracy of the foam proportioning device, the type of foam-making device, operating parameters, water quality and type, and atmospheric conditions.*

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Equipment

Universal®F3 Green 3%-3% is intended for use at 3% (3 parts concentrate to 97 parts of water) on hydrocarbons and polar solvents. Universal®F3 Green 3%-3% is readily proportioned using conventional foam proportioning equipment such as portable and fixed (in-line) foam venturi proportioners, handline nozzles with pick-up tubes, balanced pressure variable flow proportioners, balanced pressure bladder tank proportioners, and around-the-pump proportioners.

Universal®F3 Green 3%-3% should be used with air aspirating discharge devices. Devices include low expansion nozzles, monitors and fixed foam discharge devices.

Compatibility

Universal®F3 Green 3%-3% is suitable for use in combination with:

- Soft or hard, fresh, brackish or sea water.
- Expanded protein-based or synthetic foams for application to a fire in sequence or simultaneously.

Environmental

Universal®F3 Green 3%-3% contains no intentionally added PFAS and has been certified "PFAS free" by GreenScreen. Universal®F3 Green 3%-3% is 100% biodegradable.

Universal®F3 Green 3%-3% is biodegradable, however, as with any substance, care should be taken to prevent discharge from entering groundwater, surface water, or storm drains. Disposal of Universal®F3 Green 3%-3% should be made in accordance with federal, state, and local regulations.

Storage

Universal®F3 Green 3%-3% 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 (Type 304L or 316), high density cross-linked polyethylene, or reinforced fiberglass 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 temperature range of 35°F to 120°F (2°C to 49°C). Shade balls (hollow plastic spheres), floated on top of atmospheric tanks, can be used to slow evaporation.

Shelf Life, Inspection, and Testing

The shelf life of any foam concentrate is maximized by proper storage conditions and maintenance. Factors affecting shelf life are wide temperature changes, extreme high or low temperatures, evaporation, dilution, and contamination by foreign materials.

Annual testing of all firefighting foam is recommended by the National Fire Protection Association (NFPA). National Foam provides a Technical Service Program to conduct such tests. Refer to National Foam product data sheet NFC960 for further details on Technical Service program.

Ordering Information

Container	Shipping Weight	Shipping Dimensions	Part Number
5-Gallon Pails (19 liters)	44.1 lb. (20.0 kg)	1.13 cu. ft.^{3} (0.032 cu. m)	2190-3340-0
55-Gallon Drums (208 liters)	492 lb. (223.0 kg)	11.1 cu. ft.^{3} (0.314 cu. m)	2190-3481-0
275-Gallon IBC Reusable Tote Tank (1041 liters)	2494 lb. (1131.0 kg)	48.2 cu. ft.^{3} (1.365 cu. m)	2190-3725-0
330-Gallon IBC Reusable Tote Tank (1249 liters)	2990 lb. (1356.3 kg)	55.8 cu. ft.^{3} (1.580 cu. m)	2190-3733-0

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11/20 NFC510 (Rev I)