

CENTURION 3% AFFF

Environmentally Responsible Foam Concentrate
NFC330

- Low energy input AFFF - requires minimal agitation.
- Excellent fluidity provides rapid "knockdown".
- Suitable for use with fresh or sea water.
- Compatible with standard proportioning and foam making devices.
- Suitable for use with foam compatible dry powder extinguishing agents.



Description

Environmentally Responsible Centurion™ 3% is an aqueous film forming foam (AFFF) which is used at 3% concentration to extinguish fires in hydrocarbon fuels. This new formulation demonstrates National Foam's commitment to superior flexibility, firefighting performance, and environmental responsibility. Centurion 3% is suitable for use with most types of proportioning and discharge equipment.

AFFF foam concentrates are designed for rapid fire knockdown by producing a thin aqueous film which spreads across the surface of the fuel, separating the fuel from oxygen. This is accomplished by allowing the foam solution to quickly drain from the foam bubble which in turn, affects long term sealability and burnback resistance.

The aqueous film is produced by the fluorocarbon surfactant reducing the surface tension of the foam solution to a point where the solution can be supported by the surface tension of the fuel. The effectiveness of the aqueous film is directly influenced by the surface tension of the fuel. The film tends to be more effective on fuels with higher surface tension such as diesel and jet fuels, and less effective on fuels with lower surface tension such as hexane and gasoline.

Features

- Low energy input AFFF - requires minimal agitation.
- Excellent fluidity provides rapid "knockdown".
- Suitable for use with fresh or sea water.
- Compatible with standard proportioning and foam making devices.
- Suitable for use with foam compatible dry powder extinguishing agents.

Applications

Centurion 3% is used at 3% concentration in fire suppression systems and manually to fight fires involving hydrocarbon fuels such as crude oil, gasoline, and fuel oils. It is not 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. Centurion 3% is an excellent agent for use in aircraft rescue and fire fighting (ARFF) or other manual fire fighting applications where polar solvent fuels are not encountered. It is also useful as a wetting agent in combating class A fires.

In general, AFFF foam concentrates may be used with non aspirating nozzles and sprinklers, however, for best foam expansion and 25% drainage time all foam concentrates should be used with aspirating nozzles and foam making discharge devices.

Typical Physical Properties

Appearance.....Pale Yellow Color
Specific Gravity at 77°F(25°C).....1.02
pH.....8.0
Viscosity at 77°F(25°C) 2.0 cST
Freezing Point23°F(-5°C)
Min Usable Temperature35°F(2°C)
Max Usable Temperature.....120°F(49°C)

Approvals and Listings

- Underwriters Laboratories, Inc.
- Underwriters Laboratories of Canada (ULC)

Centurion 3% has successfully passed UL-162 7th Edition test criteria for use at 3% concentration on hydrocarbons. The UL Listings include application through a variety of proportioning and foam making discharge devices using fresh or sea water. See UL Fire Protection Equipment Directory at www.ul.com/database, or consult National Foam for details on compatible equipment listings.

Storage and Handling

Centurion 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)

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Storage and Handling (cont.)

with a vinyl ester resin internal layer coating (50-100 mils). Refer to National Foam Technical Bulletin NFTB100 for further information.

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 with the UL listed temperature range of 35°F to 120°F (2°C to 49°C). When product is stored in atmospheric storage tanks, contents must be covered with 1/4-inch (6.35mm) of National Foam Seal Oil to ensure prevention of air coming into contact with the foam concentrate. Use of Seal Oil is only recommended in stationary storage tanks. Refer to National Foam Technical Bulletin NFTB100 or National Foam product data sheet NFC950 for further information.

Centurion 3% is freeze/thaw stable. Should the product freeze during shipment or storage, no performance loss is expected upon thawing.

It is recommended that Centurion 3% 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 pos-

sible reduction in or loss of firefighting capability. Most expanded foams are compatible for side-by-side application during an incident.

Centurion 3% is suitable for use in combination with foam compatible dry chemical extinguishing agents.

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. Properly stored National Foam AFFF foam concentrates have been tested and shown no significant loss of fire fighting performance, even after 15 years.

Annual testing of all fire fighting 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.

Environmental and Toxicological Information

Centurion 3% 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.

National Foam Concentrates do not contain PFOS.

Centurion 3% is biodegradable. However, as with any substance, care should be taken to prevent discharge from entering ground water, surface water, or storm drains. With advance notice, Centurion 3% 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. Refer to National Foam Technical Bulletin NFTB110 for further information.

Centurion 3% has not been tested for acute oral toxicity, primary skin irritation or primary eye irritation. Repeated skin contact will remove oils from the skin and cause dryness. Centurion 3% is a primary eye irritant, and contact with the eyes should be avoided. Users are advised to wear protective equipment. If Centurion 3% enters the eyes, flush them well with water and seek immediate medical attention. For further details, see the Centurion 3% Material Safety Data Sheet NMS330.

ORDERING INFORMATION

CONTAINER	SHIPPING WEIGHT	SHIPPING DIMENSIONS	PART NUMBER
5-Gallon Pails (19 liters)	45 lb. (20.4 kg)	1.13cu. ft. ³ (0.032 cu. m)	2133-7340-6
55-Gallon Drums (208 liters)	492 lb. (223.2 kg)	11.51 cu. ft. ³ (0.326 cu. m)	2133-7481-6
275-Gallon IBC Reusable Tote Tank (1041 liters)	2481lb. (1125.4 kg)	51.11 cu. ft. ³ (1.1061 cu. m)	2133-7725-6
330-Gallon IBC Reusable Tote Tank (1249 liters)	2970 lb. (1347.2 kg)	55.8 cu.ft. ³ (1.580 cu.m)	2133-7033-6
Bulk	8.53 lb./gal. (1.02 kg/l)		2133-7001-6

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National Foam operates a continuous program of product development. The right is therefore reserved to modify any specification without prior notice and National Foam should be contacted to ensure that the current issues of all technical data sheets are used.

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