



HI-EX[®] 2%

High Expansion
Foam Concentrate

NFC722



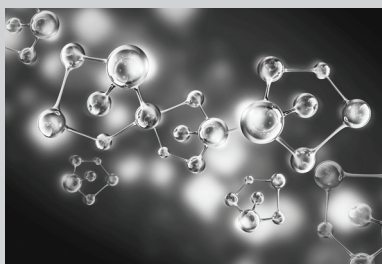
Assurance

Firefighting and environmental performance you can rely on

National Foam prides itself on the open and honest way in which we conduct our business throughout the world. Our foam concentrates are an extension of our ethical beliefs and we pride ourselves in being the responsible foam manufacturer, balancing high performance with minimal environmental impact.

Fluorine Free Formulations

Environmentally Responsible HI-EX 2% is the next generation in high expansion foam concentrates. This unique formulation is free from fluorosurfactants and is a blend of high activity foaming agents formulated to produce an effective firefighting foam concentrate. When minimizing environmental persistence is paramount, National Foam's commitment and long track record of formulating specialty foam concentrates for minimal environmental impact and maximum performance offers Assurance.



- ✓ Environmentally responsible foam concentrate
- ✓ Low temperature stability and performance.
- ✓ Excellent wetting and penetrating capabilities when used in combating Class A fires.
- ✓ Suitable for use with fresh or sea water.
- ✓ Conforms to the corrosion requirements of Boeing D6-17487 Rev P, Fire Extinguishing Foams and Liquids, when used at 2% dilution.
- ✓ Stable, extremely long lasting, uniform bubble structure
- ✓ Underwriters Laboratories, Inc.

This new formulation demonstrates National Foam's commitment to firefighting and environmental responsibility. National Foam HI-EX 2% is a superior quality synthetic foam concentrate used at 2.0% concentration for extinguishing fires where total flooding application is desired. Foam generated from HI-EX 2% effects extinguishment in two ways; total flooding of the involved area limits the amount of oxygen required to support free combustion and provides a slow, continuous release of foam solution for cooling and penetration. HI-EX 2% is UL listed for use on Class A and hydrocarbon fuels when used in conjunction with National Foam High Expansion Foam Generators.

National Foam HI-EX 2% is a low energy foaming agent, designed for use with high expansion equipment. The special surface-active agents in HI-EX 2% give the foam the ability to drain very slowly when used with high expansion generators. This gives the finished foam the ability to travel long distances and retain water to provide effective fire fighting capabilities.

Applications

National Foam HI-EX 2% is suitable for use in combating fires in buildings, process areas, warehouses, aircraft hangar systems, or anywhere total flooding is desired. High expansion foam systems can be used for protection of LNG storage areas by quickly blanketing the flammable liquid surface, and helping to control vapor release.

HI-EX 2% also demonstrates excellent wetting capabilities when used as a wetting agent in combating Class A fires. Although developed for use in high expansion foam generating equipment, HI-EX[®] 2% can be used in both medium and low expansion foam equipment.

Typical Physical Properties

Appearance..... Practically Colorless Liquid
 Specific Gravity at 77°F(25°C).....1.02
 pH.....7.2
 Viscosity at 77°F (25°C).....15 cST
 Min Usable Temperature.....35°F(2°C)
 Max Usable Temperature.....120°F(49°C)
 Freeze Point.....18°F (-8°C)

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Storage and Handling

National Foam HI-EX 2% is ideally stored in its original shipping container or in tanks or other containers that have been designed for such foam storage. Recommended construction materials are stainless steel (Type 304L or 316), high density cross-linked polyethylene, or reinforced fiber-glass polyester (isophthalic polyester resin) 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 within the UL-listed temperature range of 35°F to 120°F (2°C to 49°C).

National Foam HI-EX 2% is freeze/thaw stable. Should the product freeze during shipment or storage, no performance loss is expected upon thawing.

It is recommended that National Foam HI-EX 2% foam 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 its

firefighting capability. Most expanded foams are compatible for side-by-side application during an incident.

National Foam HI-EX 2% 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 High EX-2% expansion foam concentrates have been tested and shown no significant loss of firefighting performance, even after 15 years.

Annual testing of all firefighting foams 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, or contact your National Foam representative.

Environmental and Toxicological Information

High EX-2% 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, High EX-2% 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.

The Biological Oxygen Demand (BOD) and Chemical Oxygen Demand (COD) of HI-EX 2% is:

BOD₅.....534,000 mg/kg
 COD.....1,370,000 mg/kg

HI-EX 2% has not been tested for acute oral toxicity, primary eye, or primary skin irritation.

Repeated skin contact will remove oils from the skin and cause dryness. HI-EX 2% is a primary eye irritant, and contact with the eyes should be avoided. Users are advised to wear protective equipment. If HI-EX 2% enters the eyes, flush them well with water and seek immediate medical attention. For further details, see the HI-EX 2% Safety Data Sheet NMS722.

Ordering Information			
Container	Shipping Weight	Shipping Dimensions	Part Number
5-Gallon Pails (19 liters)	45 lb. (20.4 kg)	1.13 cu. ft. ³ (0.032 cu. m)	2120-2340-6
55-Gallon Drums (208 liters)	490 lb. (222.3 kg)	11.1 cu. ft. ³ (0.314 cu. m)	2120-2481-6
275-Gallon IBC Reusable Tote Tank (1041 liters)	2475 lb. (1122.7 kg)	48.2 cu. ft. ³ (1.365 cu. m)	2120-2725-6
Bulk	8.51 lb./gal. (1.02 kg/l)		2120-2001-6