## **FROTH-PAK**

## Froth-Pak<sup>™</sup> Insulation Spray Foam

Two-Component, Quick Cure, Professional Insulation Kit HFC-Free, Low GWP, No Ozone Depleting Chemicals

## **Features and Benefits**

Froth-Pak<sup>™</sup> Insulation Spray Foam is the complete, all-in-one self-contained and easily portable kit for professional contractors to quickly and efficiently fill larger gaps and penetrations – sealing out moisture, dust, allergens and pests while improving energy efficiency, building resilience and comfort for homeowners.

The new **Froth-Pak**<sup>™</sup> **Insulation** has a GWP reduction of over 99% and contains no ozone depleting chemicals or HFCs while maintaining the performance attributes professional contractors expect.

Froth-Pak<sup>™</sup> Insulation's new patent-pending industry-leading, ergonomic and customizable dispensing system helps ensure consistent flow rate, on-ratio application and complete dispensing of product with minimal to no overspray. Uses include roof and wall junctions, wall and attic, electrical, mechanical and plumbing penetrations in the building envelope, wood bonds, rigid foam, masonry, metal, drywall and more. With a Class-A flame spread rating, Froth-Pak<sup>™</sup> Insulation can be used in a wide range of interior and exterior industrial, commercial, institutional and residential settings, reducing the potential for unwelcome moisture, mold, mildew, allergens and rot.

## TABLE 1: Sizes and Theoretical Yields for Froth-Pak<sup>™</sup> Foam Insulation

Product	Theoretical Yield, <sup>(1)</sup> board ft
Kits	
Froth-Pak <sup>™</sup> 210	210
Froth-Pak <sup>™</sup> 650	650
Refillable Cylinders	
Froth-Pak <sup>™</sup> 17 (gal)	2,150
Froth-Pak <sup>™</sup> 27 (gal)	3,480
Froth-Pak <sup>™</sup> 60 (gal)	7,160
Froth-Pak <sup>™</sup> 120 (gal)	16,110
Froth-Pak <sup>™</sup> 350 (gal)	45,820

<sup>1</sup> The theoretical yield has become an industry standard for identifying certain sizes of twocomponent kits. Theoretical yield calculations are performed in perfect laboratory conditions, without taking into account the loss of blowing agent or the variations in application methods and types. Theoretical Yield is calculated at 1" thick.



## Ease of Use

## Froth-Pak<sup>™</sup> Foam Insulation is:

- Chemically cured foam with reduced curing time
- Tack free in 30 seconds and cures in minutes\*\*
- Available in refillable cylinders or disposable kits
- Useful for commercial applications including spray polyurethane foam roof repair, sealing roof perimeters and parapet walls
- Useful for multiple applications including roof and wall junctions; wall and attic penetrations; basements and crawlspaces; electrical, mechanical and plumbing penetrations and other gaps, cracks or crevices in the building envelope
- Complete and portable two-component, quick-cure polyurethane foam kit that fills cavities, penetrations, cracks and expansion joints
- New anti-crossover nozzle and ergonomic dispensing system results in minimal to no overspray helps ensure consistent flow rate, on-ratio application and complete dispensing of product.
- Contains no ozone depleting chemicals or HFCs
- Blocks air infiltration and helps to meet air change per hour (ACH) code requirements and reduce building energy costs
- Reduces the potential for moisture, mold, mildew, allergens and rot
- One-hour occupant re-entry with proper ventilation after dispensing
- Faster 30 second cure time
- Bonds to wood, rigid foam, masonry, metal, drywall and more
- Formulation and dispensing systems are patent pending
- GreenCircle® Certified; LEED V4 Compliant; ICC listed

<sup>\*</sup> Froth-Pak<sup>™</sup> Foam Insulation is a former product of The Dow Chemical Company.

<sup>\*\*</sup> Actual cure time will depend on temperature, foam thickness, the specific nozzle used, etc.

### **Available Sizes**

**Froth-Pak<sup>™</sup> Insulation** is typically sold as a complete 43 lb. (Froth-Pak<sup>™</sup> 210) or 125 lb. (Froth-Pak<sup>™</sup> 650) portable kit that includes pressurized "A" and "B" cylinders, Insta-Flo<sup>™</sup> dispensing gun/hose assembly and accessories. **Froth-Pak<sup>™</sup> Insulation** is also available in refillable, returnable cylinders for applications requiring a large amount of foam. See Table 1 for yield and size information.

## **Properties**

Review all instructions and Safety Data Sheet (SDS) before use. Please contact DuPont at 1-866-583-2583 when additional guidance is required for writing specifications that include this product.

### TABLE 2: Typical\* Physical Properties of Froth-Pak<sup>™</sup> Foam Insulation

Property and Test Method	Value
Nominal Density, ASTM D1622, lb/ft³	1.75
Thermal Resistance <sup>(1)</sup> per inch, ASTM C518, ft <sup>2</sup> ·h•°F/Btu, R-value, min. Initial Aged 180 days at 75°F – 1.0″ Aged 180 days at 75°F – 2.0″	6.7 6.2 (when sprayed as 1" thickness) 12.2 (6.7/in when sprayed as 2" thickness)
Air Leakage, ASTM E283 0.012 L/sec-m² @ 75Pa ASTM E2178 0.0088 L/sec-m² @ 75Pa	0 0
Water Vapor Permeance, ASTM E96 -40 - 0.3 perm @ 1" thick perm @ 2" thick	5.4 31
Dimensional Stability, ASTM D2126, % volume change 100°F/97% RH @ 2wk 158°F/97% RH @ 2wk -40°F/amb RH @ 2wk 158°F/amb RH @ 2wk	1.5 14 2.8 21

<sup>1</sup> R means resistance to heat flow. The higher the R-value, the greater the insulating power

\* These properties are typical but do not constitute specifications.

## Testing

#### Applicable Standards – ASTM International

- C203 Standard Test Methods for Breaking Load and Flexural Properties of Block-Type Thermal Insulation
- C273 Standard Test Method for Shear Properties of Sandwich Core Materials
- C518 Standard Test Method for Steady-State Thermal Transmission Properties by Means of the Heat Flow Meter Apparatus
- D1621 Standard Test Method for Compressive Properties of Rigid Cellular Plastics
- D1622 Standard Test Method for Apparent Density of Rigid Cellular Plastics
- D1623 Standard Test Method for Tensile and Tensile Adhesion Properties of Rigid Cellular Plastics
- D2842 Standard Test Method for Water Absorption of Rigid Cellular Plastics
- **E96** Standard Test Methods for Water Vapor Transmission of Materials

- **E283** Standard Test Method for Determining Rate of Air Leakage Through Exterior Windows, Curtain Walls and Doors Under Specified Pressure Differences Across the Specimen
- E2178 Standard Test Method for Air Permeance of Building Materials

## Codes

Froth-Pak<sup>™</sup> Insulation complies with the following codes:

- ICC ESR-3228
- Underwriters Laboratories, Inc. (UL) Classified, see Classification Certificate R7813
- National Fire Protection Association per NFPA 286 testing, can be left exposed in non-fire-resistant-rated roof/wall junctures, maximum 6" high and 2" deep (unlimited width)

Contact your DuPont sales representative or local authorities for state and local building code requirements and related acceptances.

## Installation

## **Use Conditions**

- Complete operating instructions are provided with every Froth-Pak<sup>™</sup> Foam Insulation purchase. Read all information and cautions before application.
- Check with local codes prior to use. If used in an exterior setting, a coating must be applied for ultraviolet (UV) protection.

### Application

- Froth-Pak<sup>™</sup> Foam may be used as an air barrier material for wall/floor and roof/wall intersections in the exterior building envelope when installed at a maximum thickness of 2 inches by a width of 6 inches (the length is unlimited). Please see ICC ESR-3228 for a full list of approved applications.
- Avoid overfilling restricted spaces. The reaction of these chemicals causes expansion and may exert enough force to cause an uncontrolled stream of foam, spraying the work area and possibly the operator.
- Re-entry allowed after only one hour post-application with proper ventilation after dispensing.

#### Removal

Cured foam is difficult to remove. Cured foam must be mechanically removed or allowed to wear off in time.

### Equipment

Dispensing gun/hose assembly and accessories included in kit.

\* See full ventilation guidelines at building.dupont.com.

### Safe Handling

WARNING: For Professional Use Only – The Froth-Pak<sup>™</sup> cylinders contain isocyanate, blowing agent and polyols under pressure. Read and follow the product manual and the Safety Data Sheets (SDSs) (formerly MSDSs or Material Safety Data Sheets) carefully before use. The safety precautions and personal protective equipment indicated below are designed to protect the user and allow for the safe use and handling of the spray system. Follow all applicable federal, state, local and employer regulations.

#### **Precautionary Statements**

- Froth-Pak<sup>™</sup> Foam will adhere to most surfaces and skin. Avoid ALL skin contact. Wear gloves and protective clothing. Cured foam is difficult to remove. Cured foam must be mechanically removed or allowed to wear off in time.
- WARNING: CURED FOAM IS COMBUSTIBLE AND WILL BURN IF EXPOSED TO OPEN FLAME OR SPARKS FROM HIGH ENERGY SOURCES. These products should not be sprayed where the foam may come into contact with hot surfaces, such as heaters, furnaces, fireplaces, or recessed lighting fixtures. The foam should NOT be exposed to temperatures over 240°F (116°C).
- Avoid overfilling restricted spaces. The reaction of these chemicals causes expansion and may exert enough force to cause an uncontrolled stream of foam, spraying the work area and possibly the operator.
- Froth-Pak<sup>™</sup> contains isocyanate, blowing agent and polyol. Read all instructions and (M)SDS carefully before use. Wear protective clothing and cover all skin (including long sleeves), gloves, goggles or safety glasses, and proper respiratory protection.
- Froth-Pak<sup>™</sup> Foam will adhere to most surfaces and skin. Avoid ALL skin contact. Wear gloves and protective clothing.
- Do not breathe vapor or mist. Use only with adequate ventilation.
- Isocyanate is irritating to the eyes, skin and respiratory system, and may cause sensitization by inhalation or skin contact.
- Contents are under pressure.

## Personal Protective Equipment (PPE)

Personal protective equipment (PPE) used during the handling of Froth-Pak<sup>™</sup> foam products must at a minimum include:

- Protective clothing or impermeable coveralls, such as a Tyvek<sup>®</sup> coverall suit, including long sleeves (no skin should be exposed)
- Chemical-resistant gloves that are coated with nitrile, butyl rubber, neoprene or PVC Goggles or safety glasses, unless using a full-face respirator
- Proper respiratory protection, see section 2.2 of the manual.

PPE should be worn by:

- Applicator
- Anyone assisting applicator
- Other workers in the room within 25 ft of the applicator
- Anyone entering the spray area less than one hour post spraying with proper ventilation

If PPE is contaminated during application, properly discard and replace immediately. Do not consume or store food or tobacco in the work area. Make sure to wash your hands and face before eating or smoking after application.Protective clothing including long sleeves, gloves, and goggles.

DO NOT breathe vapors or spray. Workers must be respirator fit tested per federal (U.S. OSHA, Canada CCOHS) requirements. Employers must have a documented respiratory and PPE plan per federal requirements including considerations for frequency of fit testing and health exams. Depending on the area of spray, the amount of foam being sprayed, the amount of ventilation and the type of spray nozzle used, respiratory protection equipment may differ in order to offer optimum protection to avoid exceeding established exposure limits of the chemicals. Proper respiratory protection options include: ACGIH, OSHA, WEEL or other applicable limits.

- NIOSH-approved full-face or half-mask airpurifying respirator with an organic vapor sorbent and a P100 particulate filter
- For situations where the atmospheric levels may exceed the level for which an air-purifying respirator is effective at maintaining exposure levels below ACGIH, OSHA, WEEL or other applicable limits, use a positive-pressure, air-supplying respirator (air line or self-contained breathing apparatus) or supplied air.
- Change out respirator cartridges according to your employer's change-out schedule (typically 8 hours or end of shift).

- The spray foam applicator and anyone within 25 feet of the applicator, must use approved respiratory protection.
- If there is ever a doubt as to the potential limits for worker exposure, DuPont always recommends IF ATMOSPHERIC LEVELS EXCEED THE LEVEL FOR WHICH AN AIR-PURIFYING RESPIRATOR IS EFFECTIVE
- A positive-pressure, air-supplying respirator such as an air line or self-contained breathing apparatus.

#### Disposal

Dispose of any residual **Froth-Pak**<sup>™</sup> product, coated debris, or solvent in accordance with applicable federal, state, and local government regulations.

See the Product Manual for details.

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# For more information visit frothpak.com/insulation or call 1-833-338-7668

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#### DuPont Polyurethane Foam Insulation and Sealants

**CAUTION:** When cured, these products are combustible and will burn if exposed to open flame or sparks from high-energy sources. Do not expose to temperatures above 240°F. For more information, consult (M)SDS call DuPont at 1-866-583-2583 or contact your local building inspector. In an emergency, call 1-866-583-2583. When air sealing building, ensure that combustion appliances, such as furnaces, water heaters, wood burning stoves, and stoves and so dryers are properly vented to the outside. See website: http://www.epag.ov/ia/n/omes/hip-ventilation.html. In Canada wisit. http://archive.mrc.crc.arc.gc.ar/an/bp/irc/bsi/83-house-ventilation.html. Froth-Pak" Spray Polyurethane Foam contains isocyanate, blowing agent and polyol. Read all instructions and (M)SDS carefully before use. Wear protective clothing and cover all skin (including long sleeves), gloves, goggles or safety glasses, and proper respiratory protection. Do not breathe vapor or mist. Use only with adequate ventilation. It is recommended that applicators and those working in the spray area wear respiratory protection. Increased ventilation significantly reduces the potential for isocyanate exposure; however, supplied air or an approved air-purifying respirator equipped with an organic vapor sorbent and a particulate filter may still be required to maintain exposure levels below ACGIH, OSHA, WEEL or other applicable limits. For situations where the atmospheric levels may exceed the level for which an air-purifying respirator. Contents under pressure. Building and/or construction practices unrelated to insulation could greatly affect moisture and the potential for modors may require the use of a positive pressure, air-supplying respirator. Contents under pressure. Building and/or construction practices unrelated to insulation could greatly affect moisture and the potential for mold formation. No material supplier including DuPont can give assurance that mold will not develop in any specific system.

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