

# FROTH-PAK

# Froth-Pak™ Foam Sealant

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

#### Features and Benefits

## FOR PROFESSIONAL USE ONLY

Froth-Pak™ Foam Sealant\* 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 Froth-Pak™ Sealant 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™ Sealant's industry-leading, customizable dispensing system helps ensure consistent flow rate, on-ratio application and complete dispensing of product. And unlike one-component foam, Froth-Pak™ Sealant is designed to significantly reduce curing time. It dispenses, expands and becomes tack-free in seconds.

Froth-Pak<sup>™</sup> Sealant can be used safely in a wide range of settings, reducing the potential for unwelcome dust, pests, moisture, mold, mildew, allergens and rot.

TABLE 1: Sizes and Theoretical Yields for Froth-Pak™ Foam Sealant

Product	Theoretical Yield, <sup>(1)</sup> board ft		
Kits			
Froth-Pak™ 12	12 (0.03)		
Froth-Pak™ 120	120 (0.28)		
Froth-Pak™ 200	200 (0.46)		
Froth-Pak <sup>™</sup> 620	620 (1.46)		
Refillable Cylinders			
Froth-Pak™ 17 (gal)	2060 (4.85)		
Froth-Pak™ 27 (gal)	3240 (7.65)		
Froth-Pak™ 60 (gal)	6860 (16.2)		
Froth-Pak™ 120 (gal)	15430 (36.4)		
Froth-Pak <sup>™</sup> 350 (gal)	43890 (103.6)		

<sup>&</sup>lt;sup>1</sup> The theoretical yield has become an industry standard for identifying certain sizes of two-component 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.



#### Ease of Use

### Froth-Pak™ Sealant 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 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
- Helical nozzle and ergonomic dispensing system results in minimal to no overspray helps ensure consistent flow rate, on-ratio application and complete dispensing of product.
- Blocks air infiltration and helps to meet air change per hour (ACH) code requirements and reduce building energy costs
- Helps reduce 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

<sup>\*</sup> Froth-Pak™ Foam Sealant 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> Sealant is typically sold as a complete kit that includes pressurized "A" and "B" cylinders, Insta-Flo™ a dispensing gun/hose assembly and accessories. Froth-Pak™ Sealant is also

available in refillable, returnable tanks for applications requiring a large amount of foam, such as poultry houses. See Table 1 for size and yield information.

# **Properties**

Review all instructions 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™ Foam Sealant

These properties are typical but do not constitute specifications.

	Requirement		
Property and Test Method and units	Minimum	Maximum	Value
Air Permeance at 75 Pa pressure difference, ASTM E2178 $^{(1)}$ L/(m $^2 \cdot$ s)	-	0.02	0.01
Open Cell Content, ASTM D6226, %	-	10	8
Density, ASTM D1622, kg/m³ (lb/ft³)	16 (1)	-	33 (2.06)
Dimensional Stability, ASTM D2126 <sup>(2)</sup> , %			
Volume Change at:			
-20 °C (-4°F)	-	5	0.3
70 °C (158°F), 97 ± 3 % RH	-	16	14
Durability Performance, Air Permeance at 75 Pa pressure difference, per 1m length after aging, Annex A of CAN/ULC S711.1-11, L/s*m	-	0.05	0.01
Tensile Strength and Elongation at Break, ASTM D1623, %			
Strength kPa	130	-	202
Elongation at break %	5	_	5
Long Term Thermal Resistance, CAN/ULC-S770 <sup>(3)</sup>			
(m $^2$ · K)/W RSI (R) at 25 mm thickness	0.70 (3.97)	_	0.76 (4.32)
$(m^2 \cdot K)/W$ RSI (R) at 50 mm thickness			1.61 (9.14)
$(m^2 \cdot K)/W$ RSI (R) at 75 mm thickness			2.5 (14.20)
Surface Burning Characteristics, CAN/ULC-S102 <sup>(4)</sup>			
Class 1 – Flame Spread	-	30	20
Smoke Developed, CAN/ULC-S102			
Class 2	-	250	70
Tack Free Time at 23 °C / 50 % RH, CAN/ULC-S711.1-11 (6.5.9), min.	-	2	1
Volatile Organic Compounds (Time to occupancy), CAN/ULC-S774, h	1	-	1

 $<sup>^{\</sup>mbox{\tiny (1)}}$  There are some exceptions, refers to CAN/ULC-S711.1-11, 6.5.1.1 (A, B & C)

# **Testing**

# Applicable Standards – ASTM International and CAN/ULC, Canada

- ASTM D1622 Standard Test Method for Apparent Density of Rigid Cellular Plastics
- ASTM D1623 Standard Test Method for Tensile and Tensile Adhesion Properties of Rigid Cellular Plastics
- ASTM D2126 Standard Test Method for Response of Rigid Cellular Plastics to Thermal and Humid Aging
- ASTM E2178 Standard Test Method for Determining Air Leakage Rate and Calculation of Air Permeance of Building Materials
- ASTM D6226 Standard Test Method for Open Cell Content of Rigid Cellular Plastics

- CAN/ULC S711.1 Standard for Thermal Insulation- Bead Applied Two Component Polyurethane Air Sealant Foam (Material Specification)
- CAN/ULC S770 Standard Test Method for Determination of Long-Term Thermal Resistance of Closed-Cell Thermal Insulating Foams
- CAN/ULC S774 STANDARD TEST METHOD FOR THE DETERMINATION OF VOLATILE ORGANIC COMPOUND EMISSIONS FROM POLYURETHANE FOAM
- CAN/ULC S102 Standard Method of Test for Surface Burning Characteristics of Building Materials and Assemblies

<sup>(2)</sup> There are some exceptions, refers to CAN/ULC-S711.1-11, 6.5.4.1

<sup>&</sup>lt;sup>(3)</sup> RSI means resistance to heat flow. The higher the R-value, the greater the insulating power.

Values may differ for Froth Pak 12.0 and specialty kits. Contact a DuPont representative for more information.

<sup>(4)</sup> This numerical flame spread rating is not intended to reflect hazards presented by this or any other material under actual fire conditions

#### **Notice**

Froth-Pak™ Foam Sealant complies with the following:

- CCMC 13447-L
- Underwriters Laboratories, Inc. (UL) Classified, see Classification Certificate R13655

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 each Froth-Pak™ Foam Sealant purchase. Read all information and cautions before application.
- Froth-Pak<sup>™</sup> Foam will adhere to most surfaces and skin.
  Avoid ALL skin contact. Wear gloves and protective clothing.
- Check with local codes prior to use. If used in an exterior setting, a coating must be applied for ultraviolet (UV) protection.

#### **Application**

- 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.
- One-hour occupant re-entry with proper ventilation after dispensing.

# Curing

- Cure time will depend on temperature, foam thickness, the specific nozzle used, etc.
- 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™ cylinders contain isocyanate, blowing agent and polyols under pressure. Read and follow product manual and the Safety Data Sheets (SDSs) 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™ 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 116° C (240° F).
- 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.
- 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™ foam products must at a minimum include:

- Protective clothing or impermeable coveralls, such as a Tyvek® 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

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.

- IF ATMOSPHERIC LEVELS EXCEED THE LEVEL FOR WHICH AN AIR-PURIFYING RESPIRATOR IS EFFECTIVE – A positivepressure, air-supplying respirator such as an air line or self-contained breathing apparatus.
- 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 7.6 meters 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 a positive-pressure, air-supplying respirator such as an air line or self-contained breathing apparatus.

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

See the Product Manual section 2 for detailed PPE requirements.

# **Disposal**

Dispose of any residual  $DuPont^{m}$  product, coated debris in accordance with applicable federal, state, and local government regulations.



For more information visit us at frothpak.com/sealant or call 1-866-583-2583

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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 buildings, ensure that combustion appliances, such as furnaces, water heaters, wood burning stoves, gas stoves and gas dryers are properly vented to the outside. See website: http://www.parg.gov/iaq/homes/hip-ventilation.html. In Canada visit: http://archive.nrc-cnrc.gc.ca/eng/ibp/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 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 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 is effective, use a positive-pressure, air-supplying respirator is effective, use a positive-pressure, air-supplying respirator is effective, use a positive-pressure, air-supplying respirator is effective, use a positive pressure, air-supplying respirator is effective, use a positive pressure, air-supplying respirator is effective, use a positive pressure, air-supp