

VFI®-727 HFC SPRAY POLYURETHANE FOAM

VFI-727 HFC Spray Polyurethane Foam is a two-component system of isocyanate and polyol that combines to form a closed-cell, 3 pounds per cubic foot density, HFC-blown roofing foam. VFI-727 has excellent adhesion to standard substrates and creates a seamless layer to protect and insulate the roof. It can also be used to taper areas on the roof where ponding water may be an issue. SPF is designed to be easily top-coated with an acrylic or silicone commercial roof coating. This product is **NOT APPROVED** for use in the states of California, Colorado, Connecticut, Delaware, Maine, Maryland, Massachusetts, New Jersey, New York, Oregon, Rhode Island, Vermont, Virginia, and Washington. It is also not approved for use in Canada.

- Can be repeatedly recoated to extend the roof's life
- Limits hot and cold airflow into a building, helping decrease HVAC usage and energy costs
- Regular, winter, & summer speeds for convenience no matter where or when you spray
- Creates a watertight seal to protect the roof from physical impacts and natural wear and tear
- Coats the entire roof to protect vulnerable areas from leaks and wind uplift
- Quick and non-intrusive application, resulting in minimal downtime for building owners

PHYSICAL PROPERTIES	TEST METHOD	TEST RESULTS
Tensile Strength	ASTM D412	101 psi
Solid Material Density	N/A	2.75 PCF
Closed Cell Content	ASTM D2856	98%
Thermal Resistance	ASTM C518	6.6
Water Vapor Permeability	ASTM E96	1.1 perm
Water Absorption	ASTM D2842	<1.00

LIQUID PROPERTIES	TEST METHOD	TEST RESULTS
Liquid Density A Side	ASTM D2939	10.25 lbs/gal
Liquid Density B Side	ASTM D2939	9.50 lbs/gal
Mixed Liquid Density	ASTM D2939	9.83 lbs/gal
Specific Gravity A Side	N/A	1.23 g/mL
Specific Gravity B Side	N/A	1.14 g/mL
Mixed Specific Gravity	N/A	1.18 g/mL
Ratio by Volume (A:B)	N/A	1A:1B
Viscosity A Side	ASTM D2196	1,500 cps
Viscosity B Side	ASTM D2196	950 cps
Cream Time	N/A	6 seconds
Rise Time	N/A	12 seconds



Cements and coatings for roofing systems
as to an external fire exposure only 84GM

MANUFACTURER OF HIGH PERFORMANCE POLYMERS

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EQUIPMENT

VFI recommends spraying with a two-component air, electric, or hydraulically driven spray rig capable of providing a minimum constant pressure of 1,500 psi and temperature between 115°F-125°F. To run the machines, you will also need an appropriately sized generator and air compressor. Equipment capable of higher outputs (above 2,000 psi), like rigs used to spray polyurea coatings, can be used but are not necessary. Graco and Polyurethane Machinery Corporation have several entry-level or mid-production systems that we recommend:

- Graco E-20 or Reactor 2 E-30 can provide 2,000 psi of constant pressure and a maximum fluid temperature of 190°F with hose lengths of 210-310 ft and outputs of 20 or 28 lb/min.
- Graco Reactor 2 E-XP2 is a high-pressure rig that can provide 3,500 psi of constant pressure and a maximum fluid temperature of 190°F with a 310 ft hose and an output of 2 gal/min.
- PMC "Classic" PH-25 is capable of providing 2,000 psi of constant pressure and a maximum fluid temperature of 190°F at 30 lb/min with a 310 ft hose.

SURFACE PREPARATION

Remove dirt, dust, debris, and other substances detrimental to adhesion with a broom. Existing structural components should be examined and repaired, including vents, ducts, gutters, flashing, and other penetrations. Repair all gaps to be tight and flush by installing additional screws or rivets, restricting them to ¼" or less. Loose or backed-out fasteners must be tightened or replaced with oversized fasteners.

Power wash the roof as needed. Use VFI-1009 Cleaning Detergent to scrub areas containing grease, oil, or other contaminants. A concentrated chlorine solution can treat mildew, fungus, or algae spots. Rinse off all cleaning agents and allow the substrate to dry.

MIXING

Before spraying, you must premix VFI-727 Poly (B side) components until uniform. Mix times may vary depending on volume and mixing method.

APPLICATION REQUIREMENTS

The substrate temperature should be between 50°F - 120°F, but the pot life will shorten past 72°F. Protect objects from overspray and move portable objects out of the spray area. Turn off and cover all intake air vents. The material should be brought to a minimum of 65°F before use.

Spray the polyurethane foam in a minimum of 1-inch-thick passes per square over the entire roof. The foam should be at least 1.5 inches once sprayed, except around areas leveled or tapered for proper drainage. It should end neatly about 4 inches above the surface at penetrations. Apply foamed-in-place can't strips for a smooth transition from horizontal to vertical surfaces. Application should be completed in a single day.

Once cured, the surface texture should be free of voids, pinholes, and depressions (smooth to orange-peel). "Verge of popcorn" texture is acceptable if the foam can be thoroughly coated. Popcorn and tree bark textures are not acceptable and must be removed and re-foamed before coating.

CLEANING

To clean spray equipment, VFI recommends using xylene or MEK. When flushing spray lines, VFI recommends using VFI-8005 Pump Flush or VFI-8011 Pump Lube. Flush the cleaning solvent through spray lines until the chemical mixture is removed.

STORAGE/SHELF LIFE

The material shelf life is 12 months from the date of manufacture. Store in a dry, temperature-controlled space in sealed and unopened containers between 40°F - 75°F. Material contains a chemical blowing agent that will boil with temperatures in excess of 80°F, which will decrease the expansion rate of the foam and cause pressure to build within closed containers.

PRECAUTIONS

VFI-727 is not a UV color stable product with no long-term UV testing. Apply a roof coating within 24 hours after it has cured to protect the foam from UVs. It also contains a chemical blowing agent and should be kept out of direct sunlight to prevent pressure buildup. Before use, release the drum bungs slowly to relieve any built-up pressure within the container. Isocyanate in the A side may irritate the skin and is toxic if inhaled. Avoid prolonged breathing of vapors and use only with adequate ventilation. Do not thin or add foreign material to the product. See Safety Data Sheet for complete safety data.

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