Acu-SPF: HFO

Spray Polyurethane Foam

DESCRIPTION

A sprayed-in-place, high compressive strength, rigid, Low GWP, closed-cell spray polyurethane foam (SPF) roofing system. This two-component SPF consists of side-A and side-B. Acu-SPF:HFO provides an R-value of 6.2 - 6.8 per inch and a continuous insulation without thermal breaks.

USES

SPF roofing systems can be used in most retrofit and new construction roofing applications. This SPF insulation can also be used for exterior tank and vessel insulation applications. It is used as a roofing system in conjunction with roof coatings also available from Energy Seal Coatings.

FEATURES & BENEFITS

- ✔ Closed-cell SPF provides a fully adhered, sustainable air barrier and thermal insulation
- ✔ Lightweight
- ✔ Superior yield reduces cost and amount of material required
- ✔ Enhanced wind uplift resistance- fully adhered roof system
- ✔ Excellent adhesion to most surfaces
- ✔ Low global warming potential (LGWP)
- ✔ Meets state and US or Canadian federal regulation

PRECAUIONS

In addition to reading and understanding the A and B Components Safety Data Sheet (SDS), all applicators must use appropriate respiratory protection as well as Personal Protective Equipment (PPE) when handling and processing polyurethane chemical systems.

Large masses of SPF should be removed to outside safe area, cut into smaller pieces, and allowed to cool before discarding to prevent heat buildup and potential fire hazard.

SPF is combustible. Heat sources such as welding, cutting, or roofing torches must not be used in contact with or in close proximity to Acu-SPF:HFO or any SPF.

Protect A and B Components from moisture contamination. Application should not take place within 5°F (-15°C) of the dew point.

APPROVALS and CERTIFIICATIONS

Complies with requirements in IBC 1507.14 and IRC R905.14 Spray Polyurethane Foam Roof Coatings, ASTM C1029-Type III, Type IV, and D7425.

- Meets ICC Acceptance Criteria 377
- Meets IBC/IRC building code requirements for foam plastic roofing systems
- UL 790 – R26705 Listings
- UL 790 – R26705 Certified for Canada
- California BEARHFTI Listed
- UL GreenGuard and GreenGuard Gold Certified

Acu-SPF: HFO

Acu-SPF: HFC

Technical Data

Property	ASTM	Result
Compressive Strength:	D 1621	45-55 psi
Tensile Strength:	D 1623	50-60 psi
Dimensional Stability (70°C, 97% RH):	D 2126	< +5.0 % vol.
Water Absorption:	C 2842	0.9% vol.
Water Vapor Permeance:	E 96 – B	<2.0 perm (1 inch)
Density (Core):	D 1622	2.6 – HFC pcf
Open Cell Content:	D 6226	< 6%
Closed Cell Content:	D 6226	>94%
Surface Buring Characteristics:	E 84	20 FSI/450 SDI
Coverage:	3,000 board feet per set.	
Thermal Resistance (aged 180 days)	6.5°F·ft2·h/Btu at mean temperature 24°C (75°F)	
Min. Surface Application Temp.:	7.2°C / 45°F. Do not allow to freeze.	
Ozone Depleting Blowing Agent:	Does not contain any CFC, HCFC, HFC agents.	
Packaging:	Side-A and Side-B in 55-gallon drums.	

Temperature parameters for correct reactivity rates:

Acu-SPF: HFC Reactivates	**Recommended Ambient Temperature Range:**
VS (Very Slow)	100F - 125°F (38° - 52° C)
S (Slow)	85° - 110° F (29.5° - 43° C)
R (Regular)	65° - 90° F (18° - 32° C)
F (Fast)	45° - 70° F (7° - 21° C)

Application:

SPF roof systems should be processed through commercially available spray equipment designed for that purpose by a qualified professional applicator. It is the responsibility of the professional applicator to thoroughly understand all equipment technical information and safe operating procedures that pertain to the processing and application of plural component polyurethane foam.

All surfaces to be sprayed with Acu-SPF: HFC should be clean, dry, and free of all oil, grease, dirt, and contaminants. Acu-Base Coat should be used as a primer on the properly prepared substrate surface.

Prior to application of the Acu-SPF: HFC, the substrate should be between 45° – 160°F (7° – 71°C). Service temperatures for any surface to be sprayed with SPF should not exceed 180° (82°C). Moisture, such as, rain, fog, frost, dew, or high humidity (>85% R.H.) will adversely affect the SPF formation and physical properties of the finished product. Wind velocities in excess of 15 mph may affect the SPF surface texture, cure, and physical properties, as well as cause possible overspray problems.

A and B Component material heater temperatures should be set according to ambient temperature and substrate conditions. A typical starting range is 110°F (43°C) for the A component and 120°F (49°C) on the B component; hose heat should be set to maintain these temperatures. Set the dynamic fluid pressure at 1,000 to 1,200 psi. Mixing ratio through the Proportioner is 1:1 by volume. 2:1 transfer pumps are recommended to provide positive feed from the material to the proportioner. These are recommended initial settings and may vary based on specific equipment and project conditions.

Each “pass” or layer of the SPF should be at least 0.5 inches (13 mm) and no more than 1.5-2.0 inches (38-51 mm) thick. Allow at least 10 minutes between each pass for cure and cooling. Multiple layers can be applied to reach the desired thickness and insulation value, as well as to facilitate positive drainage.

The surface of the Acu-SPF: HFC polyurethane foam must be protected from the adverse effects of sunlight (UV), which can cause discoloration and degradation. The protective coating or covering should be applied over the SPF the same day as the SPF is applied, or within 24 hours. Acu-Base Coat is recommended as a protective UV protective coating, before the application of Acu-Flex silicone top coat.

Liquid Properties and Characteristics

Packaging: A Component is packaged at 551 lbs. (250 kg) per drum
B Component is packaged at 500 lbs. (227 kg) per drum
1,051 lbs. (477kg) per set A & B net

Shelf life: 12 months for A Component when stored in original unopened containers in dry area between 50°F (10°C) and 80°F (26.7°C) 6 months for B Component when stored in original unopened containers in dry area between 50°F (10°C) and 80°F (26.7°C).

Product size/packaging

Container Size	Gross Weight	Class
55-gallon drum (208.2L) –	A Component – 591 lbs. (268 Kg)	55
55-gallon drum (208.2L) –	B Component – 540 lbs. (245 Kg)	55

D.O.T. Classification: Liquid Plastic Material – NOIBN

Protect from freezing (>40°F/4.5°C) during shipping and storage

Storage
Protect from freezing (40°F/4.5°C) during shipping and storage.

CAUTION: Do not apply within one hour of sunset, rain, fog or freezing temperatures. All coatings must be completely dry before exposure to water or foot traffic. Keep all containers covered when not in use. Dispose of all containers in accordance with state and local environmental regulations. Keep away from children. If ingested, DO NOT induce vomiting. Call Physician immediately.

Our technical data and suggestions are based on information from laboratory and field testing which we believe to be reliable and correct. However, the accuracy and completeness of said tests are not guaranteed and not to be construed as a warranty, either expressed or implied. Since the use of the material is beyond manufacturer's control, buyer assumes all risk whatsoever as to their use or results obtained. We guarantee our products conform to Advanced Coating Systems, Inc. quality control. Advanced Coating Systems, Inc. warrants only the standard quality of material. Advanced Coating Systems, Inc.'s sole responsibility shall be to replace that portion of our product, which proved to be defective. The installer is responsible to test adhesion and product compatibility with substrate of all Energy Seal Coatings products prior to application.