

PremiSEAL™ 40

Spray Polyurethane Foam

Overview

PremiSEAL 40 is a sprayed-in-place, nominal 40 psi compressive strength, rigid, HFC-blown, closed-cell spray polyurethane foam (SPF) roofing system. This two-component SPF consists of Carlisle A Component and PremiSEAL 40 B Component resin. PremiSEAL 40 provides an R-value of 6.3 per inch and a continuous insulation without thermal breaks. PremiSEAL 40 SPF roofing systems provide excellent wind uplift resistance, are self-flashing and seamless, and the closed-cell nature provides a durable, leak-resistant roof.

Intended Uses

PremiSEAL 40 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 from Carlisle Roof Foam and Coatings (CRFC). This product is intended for use by qualified contractors trained in the processing and application of SPF.

Features and Benefits

- Closed-cell SPF provides a fully adhered, monolithic, sustainable air and thermal barrier
- Lightweight
- Easy to maintain
- Quick installation time
- Enhances wind uplift resistance
- Yields a smooth surface, reducing the need for extra coating
- Excellent adhesion to most surfaces
- Self-flashing, seamless application

Installation

1. SPF roofing 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 SPF.
2. All surfaces to be sprayed with PremiSEAL 40 should be clean, dry, and free of all dirt and contaminants. All metal to which the SPF is applied must be free of oils, grease, etc.
3. Prior to application of the PremiSEAL 40, the substrate should be between 45°–120°F (7°–49°C). Service temperatures for any surface to be sprayed with SPF should not exceed 180°F (82°C). Moisture in the form of rain, fog, frost, dew, or high humidity (>85%R.H.) will adversely affect the polyurethane foam formation and physical properties of the finished product. Wind velocities of excess of 15 mph may affect the foam surface texture, cure, and physical properties, as well as cause possible overspray problems.
4. A and B Component Preheater temperatures should be set according to ambient temperature and substrate conditions. A typical starting range is 125°–130°F (51°–54°C); 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 feedback from the material to the Proportioner. These are recommended initial settings and may vary based on specific conditions.
5. Each “pass” or layer of the SPF should be at least 0.5 inches (13 mm) thick and no more than 1.5 inches (38 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.
6. The finished surface of the PremiSEAL 40 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 application or within 24 hours. A variety of protective coatings designed for use with PremiSEAL 40 are available from CRFC.

Review Carlisle Roof Foam and Coatings' specifications and details for complete installation information. Please contact CRFC for more information.

Reactivities

PremiSEAL 40 Reactivities	Recommended Ambient Temp Range
PremiSEAL 40 VS (Very Slow)	100° – 125°F (38° – 52°C)
PremiSEAL 40 S (Slow)	85° – 110°F (29.5° – 43°C)
PremiSEAL 40 R (Regular)	65° – 90°F (18° – 32°C)
PremiSEAL 40 F (Fast)	50° – 75°F (10° – 24°C)
PremiSEAL 40 VF (Very Fast)	40° – 55°F (4.5° – 13°C)

Precautions

- PremiSEAL 40 is not designed for interior insulation applications.
- In addition to reading and understanding the A and B Component 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 build-up 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 PremiSEAL 40 or any SPF.
- Protect the A and B Components from moisture contamination.
- Application should not take place within 5°F (-15°C) of the dew point.

Typical Physical Properties

Property	Test Method	PremiSEAL 40
Compressive Strength	ASTM D1621	40 – 45 psi
Tensile Strength	ASTM D1623	55 – 70 psi
Thermal Resistance (R-Value)	ASTM C518	0.158 k (6.3 per inch)
Dimensional Stability	ASTM D2126	< 4%
Water Vapor Permeability	ASTM E96 (A)	1.4 perms @ 1 inch
Water Absorption	ASTM C2842	0.6%
Closed Cell Content	ASTM D6226	94%
Core Density	ASTM D1622	2.4 – 2.6 lbs. /cu. ft.
Surface Burning Characteristics	ASTM E84	40 FSI

Typical properties and characteristics are based on samples tested and are not guaranteed for all samples of this product. This data and information is intended as a guide and does not reflect the specification range for any particular property of this product.

Liquid Properties and Characteristics

Packaging	A Component is packaged at 551 lbs. per 55-gallon drum B Component is packaged at 500 lbs. per 55-gallon drum
Shelf Life	12 months for A Component when stored in original unopened containers in dry area between 40°F (4.5°C) and 80°F (26.7°C) 6 months for B Component

Ratings and Approvals

Meets ASTM C1029 – Type III Standard criteria
Meets TAS 110 criteria
UL 790 – R26705 Listings
UL 790 – R26705 Certified for Canada
UL EX R26705 Evaluation Report
CA BEARHFTI Listed

LEED® Information

Pre-Consumer Recycled Content	2.5%
Post-Consumer Recycled Content	6.5%
Manufacturing Location	Cartersville, GA
Rapidly Renewable Resources	0%

Shipping Information

Container Size	Gross Weight	Class
1051 lbs. set A & B net – 55-gallon drum (208.2L)	A Component – 591 lbs. (268 Kg) 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.	

