

# TEXAS DEPARTMENT OF INSURANCE

Engineering Services Program / MC 103-3A 333 Guadalupe Street P.O. Box 149104 Austin, Texas 78714-9104  
Phone No. (512) 322-2212 Fax No. (512) 463-6693

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## PRODUCT EVALUATION RC-350

Effective October 1, 2012

*The following product has been evaluated for compliance with the wind loads specified in the **International Residential Code (IRC)** and the **International Building Code (IBC)**. This product shall be subject to reevaluation **September 2016**.*

*This product evaluation is not an endorsement of this product or a recommendation that this product be used. The Texas Department of Insurance has not authorized the use of any information contained in the product evaluation for advertising, or other commercial or promotional purpose.*

*This product evaluation is intended for use by those individuals who are following the design wind load criteria in Chapter 3 of the IRC and Section 1609 of the IBC. The design loads determined for the building or structure shall not exceed the design load rating specified for the products shown in the limitations section of this product evaluation. This product evaluation does not relieve a Texas licensed engineer of his responsibilities as outlined in the Texas Insurance Code, the Texas Administrative Code, and the Texas Engineering Practice Act.*

**The Bayseal Spray Applied Polyurethane Foam Roof Systems (SPUF)**, supplied by

**Bayer Material Science LLC  
BaySystems Spray Insulation & Roofing Materials  
2400 Spring Stuebner Road  
Spring, TX 77389  
(281) 350-9000**

is acceptable for use in designated catastrophe zones along the Texas Gulf Coast when installed in accordance with the manufacturer's installation instructions and this product evaluation.

## PRODUCT DESCRIPTION

Bayseal™ spray-applied polyurethane foam roofing systems are comprised of Bayseal™ 2.5/3.0 Series spray-applied polyurethane foam system covered by Bayblock™ Series acrylic coatings or Momentive SCM 3400 Series silicone coatings. This report includes the following roofing systems:

Bayseal 2.5/3.0 Series:	Bayblock Series:	Momentive SCM 3400 Series:
Bayseal™ 2.5	Bayblock™ II	SCM 3402 – White
Bayseal™ 2.7	Bayblock™ HT	SCM 3404 – Medium Gray
Bayseal™ 3.0		SCM 3405 – Tan
		SCM 3408 – Dark Gray

**Roof Deck:** The spray-applied polyurethane foam systems may be applied to wood, concrete and steel substrates. Refer to the approved assemblies for description of acceptable substrates.

**Polyurethane Foam Plastic Insulation:** Bayseal™ 2.5/3.0 Series (Bayseal™ 2.5, Bayseal™ 2.7 and Bayseal™ 3.0) are two-component, spray-applied foam plastic insulations complying with ASTM C 1029, and are produced in densities of 2.5, 2.7 and 3.0 pcf, respectively. The foam plastic ingredients (Component A and Component B) are available in 55-gallon containers and have a shelf life of 6-months when stored at temperatures between 50°F and 80°F.

**Coatings:** The coatings recognized in this report for use in the Bayseal™ spray-applied polyurethane foam roof covering systems are Bayer MaterialScience LLC Bayblock™ II, Bayblock™ HT, Momentive Performance Materials SCM 3402, SCM 3404 SCM 3405 and SCM 3408.

Bayblock™ Series acrylic coatings are single-component, liquid-applied, 55% percent solids coating complying with ASTM D6083. It is available in 5 gallon and 55 gallon containers and has a shelf life of 12 months when stored in factory sealed containers between 50°F and 100°F

Momentive SCM 3400 Series silicone roof coating are single component, liquid applied, 69% solids coating and is available in 5 gallon and 55 gallon containers. The coating complies with ASTM D 6694.

### LIMITATIONS

**Design Wind Pressures:** The Bayseal™ spray-applied polyurethane foam roof covering systems, when installed in accordance with this evaluation report, shall have the allowable uplift wind pressure specified in each assembly.

**Roof Slope:** The roof decks shall have a minimum slope of ¼" in 12".

**Installation Over an Existing Roof Covering:** Installation of Bayseal™ spray-applied polyurethane foam roof systems over an existing roof covering is not within the scope of this evaluation report.

**Spray-applied Polyurethane Foam Product Identification:** Each container of the Bayseal™ 2.5/3.0 Series spray applied polyurethane foam is labeled with the manufacturer name and address, the product name (Bayseal™ 2.5, Bayseal™ 2.7, Bayseal™ 3.0 or Bayseal™ Roof ISO) and the lot number.

**Elastomeric Coating Product Identification:** Each container of the Bayblock™ Series and Momentive SCM 3400 Series elastomeric coatings is labeled with the manufacturer name and address, the product name (Bayblock™ II, Bayblock™ HT, SCM 3402, SCM 3404 SCM 3405 or SCM 3408) and the lot number.

**Application Conditions:** The Bayseal™ spray-applied polyurethane foam system should be applied when the ambient temperature is above 45°F and relative humidity is below 80%. All substrates should be clean and dry, free of grease, oil, loose particles, moisture or other foreign matter. The Bayblock™ Series and Momentive SCM 3400 Series elastomeric coatings must be applied when ambient temperature is above 50°F and the surface must be free of dew, condensation, precipitation or freezing temperatures are anticipated prior to completion of the coating application.

### INSTALLATION INSTRUCTIONS

**General:** All International Residential Code (IRC) and the International Building Code (IBC) requirements must be satisfied and manufacturer's installation instructions followed, unless otherwise specified by this product evaluation.

**Roof Deck:** The roof deck may be plywood, concrete and steel. The decks must be free of all grease, oil, loose particles, moisture and other foreign materials. Primers shall be applied in accordance with the manufacturer's installation instructions. All primers must be thoroughly dry and cured prior to foam application.

### WOOD DECK ASSEMBLIES

#### Assembly No. 1:

**Design Pressure:** -80 psf

**Assembly No. 1 (Continued):**

- Roof Deck:** Minimum  $1\frac{5}{32}$ " thick plywood deck. The roof framing members (rafters or trusses) shall be spaced a maximum of 24" o.c.
- Insulation:** A minimum of 1" thickness of Bayseal™ 2.5/3.0 series spray applied polyurethane. The polyurethane foam plastic insulation is applied in a 1:1 ratio by volume of the A and B components using foam spraying equipment recommended by Bayer MaterialScience LLC.
- Coating:** The coating must be one of the following:
1. Bayer MaterialScience Bayblock™ II or HT applied in two coats at  $1\frac{1}{2}$ " gallons per 100 ft<sup>2</sup> per coat.
  2. Momentive SCM 3402, SCM 3404 SCM 3405 or SCM 3408 applied in two coats at  $1\frac{1}{2}$ " gallons per 100 ft<sup>2</sup> per coat.

**CONCRETE DECK ASSEMBLIES**

**Assembly No. 2:**

- Design Pressure:** -445 psf
- Roof Deck:** Minimum 2500 psi primed structural concrete.
- Foam Application:** A minimum of 1" thickness of Bayseal™ 2.5/3.0 series applied polyurethane over the insulation board. The polyurethane foam plastic insulation is applied in a 1:1 ratio by volume of the A and B components using foam spraying equipment recommended by Bayer MaterialScience LLC.
- Coating:** The coating must be one of the following:
1. Bayer MaterialScience Bayblock™ II or HT applied in two coats at  $1\frac{1}{2}$ " gallons per 100 ft<sup>2</sup> per coat.
  2. Momentive SCM 3402, SCM 3404 or SCM 3405 applied in two coats at  $1\frac{1}{2}$ " gallons per 100 ft<sup>2</sup> per coat.

**STEEL DECK ASSEMBLIES**

**Assembly No. 3:**

- Design Pressure:** -105 psf
- Roof Deck:** Painted or galvanized steel deck is secured to min  $\frac{1}{4}$  in. (6-mm) supports, maximum of 6 ft (1.8 m) o.c., with ITW Buildex Teks 4 or Teks 5 fasteners at 6-in. (152 mm) o.c. (every rib). Side laps are secured with ITW Buildex Teks 1 fasteners maximum of 30 in. (762 mm) o.c. Deck is washed with a trisodium phosphate (TSP) and water solution, rinsed, and allowed to dry.
- Foam Application:** The deck flutes are filled with Bayseal™ 2.5/3.0 series spray applied polyurethane. The polyurethane foam plastic insulation is applied in a 1:1 ratio by volume of the A and B components using foam spraying equipment recommended by Bayer MaterialScience LLC.

**Assembly No. 3 (Continued):**

**Coating:** The coating must be one of the following:

1. Bayer MaterialScience Bayblock™ II or HT applied in two coats at 1 ½" gallons per 100 ft<sup>2</sup> per coat.
2. Momentive SCM 3402, SCM 3404, SCM 3405 or SCM 3408 applied in two coats at 1 ½" gallons per 100 ft<sup>2</sup> per coat.

**Note:** Manufacturer's installation instructions shall be available on the job site during the application process. Only accredited applicators certified by Bayer Material Science LLC shall be allowed to perform the application. All fasteners shall be corrosion resistant as specified in the International Residential Code (IRC), the International Building Code (IBC), and the Texas Revisions.