

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

PRODUCT EVALUATION

Effective December 1, 2011

SHU-121

*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 **November 2015**.*

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.

Storm Shield Hurricane Barriers manufactured by:

Exeter Architectural Products
242 W. 8th Street
Wyoming, PA 18644
Telephone: (800) 972-2478

will be accepted for use in designated catastrophe areas along the Texas Gulf Coast when installed in accordance with this product evaluation, the approved drawings referenced in this evaluation report, and this product evaluation.

PRODUCT DESCRIPTION

The Storm Shield Hurricane Barriers are perforated panels that are used for windborne debris protection. The Hurricane Barriers are comprised of the following components:

Frame: The frame members are constructed from extruded aluminum. The frame corners are mitered and welded. The aluminum extrusions are constructed of either 6063-T5 or 6063-T6 aluminum alloy, unless otherwise specified on the approved drawings. The finish is weather resistant, high performance electro-static applied coating on both the stainless steel and the galvanized perforated metal

Screen: The screen is constructed of either 0.079" thick galvanized steel ASTM A642, structural quality, Grade A minimum or 0.075" thick Series 300 stainless steel. The perforations are $\frac{3}{16}$ " diameter holes spaced $\frac{1}{4}$ inch on center in staggered lines, providing 51 percent open area. The screen is secured to the sub-frame with screws.

Configurations: The hurricane barriers are available in the following configurations:

- 4 x 6 side-hinged units (face mount and inset mount)
- 5 x 7 side-hinged units (face mount and inset mount)
- 4 x 6 single and triple ready mount (face mount and inset mount)

General Description:

System	Unit Description	Overall Size	Panel Size	Pressure Rating (psf)
1	4 x 6 Side Hinge 1 x 2	102 $\frac{3}{4}$ " x 75 $\frac{3}{8}$ "	Two: 48" x 72"	±50
2	5 x 7 Side Hinge	127 $\frac{3}{4}$ " x 84"	Two: 60" x 84"	±60
3	4 x 6 Single (Ready Mount)	48" x 72"	One: 48" x 72"	±100
4	4 x 6 Triple (Ready Mount)	145 $\frac{1}{2}$ " x 74 $\frac{1}{4}$ "	Three: 48" x 72"	±80

Mount Conditions: The hurricane barriers may be face mounted (secured to structure on the outside of the opening) or inset mounted (secured to the structure on the inside of the opening).

Maximum Span: The maximum span for mounting the hurricane barriers shall be in accordance with the overall size specified in the General Description section this evaluation report.

Minimum Separation from Glazed Opening: The hurricane barrier shall be offset from the glazed opening in accordance with the following:

- System 1: Minimum 2 $\frac{5}{8}$ inches.
- System 2: Minimum 2 $\frac{3}{4}$ inches
- System 3: Minimum 2 $\frac{3}{4}$ inches
- System 4: Minimum 2 $\frac{3}{4}$ inches

Allowable Design Pressure: The allowable design pressure for the hurricane barriers are as specified in the General Description section of this evaluation report.

LIMITATIONS

Design Drawings: The hurricane barriers shall be installed in accordance with Drawing No. TDI, "Storm Shield Hurricane Barriers," sheets 1 through 12 of 12, dated October 20, 2010, revised July 6, 2011, signed, sealed, and dated July 13, 2011 by Joseph A. Reed, PE. The stated drawings will be referred to as the approved drawings in this evaluation report.

Product Identification: An Exeter label shall be applied to the hurricane barrier. The label includes the manufacturer's name; the product name: Storm Shield Hurricane Barrier; the barrier model; the design pressure rating; the maximum size; and the applicable test standards: ASTM E 330, ASTM E 1886, ASTM E 1996, TAS-201, TAS-202, and TAS-203.

Impact Resistance: These shutter assemblies satisfies the Texas Department of Insurance's criteria for protection from windborne debris in both the **Inland I zone** and the **Seaward zone**. The shutter assemblies passed an impact resisting standard equivalent to Missile Level D specified in ASTM E 1996-02. The shutter assemblies may be installed at any height on the structure as long as the design pressure rating for the assemblies is not exceeded.

INSTALLATION INSTRUCTIONS

General Installation Requirements: The hurricane barriers shall be installed in accordance with the manufacturer's installation instructions, the approved drawings referenced in this evaluation report, and this product evaluation report.

Wall Construction: The hurricane barriers may be mounted to the following types of wall framing:

- Grout-filled concrete masonry units (CMU), C-90, Grade N, Type 1 (or greater)
- Wood (minimum Southern Yellow Pine dimension lumber)

Anchorage:

Attachment to Grout-Filled Concrete Block Structures: Concrete block shall have a minimum compressive strength of 1,500 psi. The frame shall be secured to the grout-filled concrete block substrate with minimum $\frac{1}{4}$ " x $1\frac{3}{4}$ " diameter ITW Tapcon fasteners. The fasteners shall have a minimum embedment depth of $1\frac{1}{4}$ inches and a minimum edge distance of $1\frac{1}{4}$ inches. Refer to the approved drawings for installation of the hurricane barriers.

Attachment to Wood Frame Structures: The wall framing shall be minimum Southern Yellow Pine dimension lumber. The frame shall be secured to wood framing with minimum No. 12 x 2" wood screws. The fasteners shall have a minimum embedment depth of $1\frac{3}{8}$ inches. Refer to the approved drawings for installation of the hurricane barriers.

Note: The manufacturer's installation instructions and the approved drawings shall be available on the job site during installation. All fasteners shall be corrosion resistant as specified in the International Residential Code (IRC), the International Building Code (IBC), and the Texas Revisions.