

TEXAS DEPARTMENT OF INSURANCE

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PRODUCT EVALUATION

SHU-206

Effective June 1, 2012
Revised August 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 **February 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.

Patio Enclosure Hurricane Screen manufactured by:

Crimsafe North America, LLC
3020 Reynolds Road
Suite 1-3
Lakeland, Florida 33803
Telephone: (866) 740-3888

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

PRODUCT DESCRIPTION

The Crimsafe Patio Enclosure Hurricane Screen is a permanently mounted impact protective screen that is secured over a window frame system. The aluminum frame impact screen consists of the following components:

Frame: The frame is constructed from extruded aluminum. The frame corners are mitered, aluminum keyed, and secured together with screws through each side of each corner and into the aluminum corner key. An aluminum mid-rail may be used between screens. The mid-rail is secured to the frame with screws.

Protective Screen: The protective screen is constructed with minimum Type 304 stainless steel 10 x 10 mesh x 0.035" diameter. The screen is interior set onto a vinyl gasket. A layer of Tesa tape is applied to an extruded aluminum hurricane clamp that I secure around the perimeter with No. 8 x $\frac{3}{8}$ " screws spaced 1 inch from each corner and 2 inches on center through the hurricane clamp and screen into the aluminum frame members.

LIMITATIONS

Design Drawings: The hurricane screen shall be installed in accordance with "Patio Enclosure Hurricane Screen", drawing no. MD-101-POE, sheets 1 of 4 thru 4, dated March 2, 2012, signed and sealed by Robert L. Clark, P.E. on April 17, 2012. The referenced drawings will be referred to as the "approved drawings" in this product evaluation report.

Product Identification: A label will be affixed to each impact screen. The label includes the manufacturer's name, the product name, the maximum size of the product (61 x 96), the design pressure rating for the product, and the applicable standards: ASTM E 1886, ASTM E 1996, and ASTM E 330.

Impact Resistance: This shutter assembly 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 1996-05. 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.

Maximum Panel Size: The maximum panel width in an assembly is 61" and the maximum panel height in an assembly is $96 \frac{3}{8}$ ".

Maximum Screen Daylight Opening Size: The maximum screen daylight opening size shall not exceed $41 \frac{5}{8}$ " x $93 \frac{3}{4}$ ".

Allowable Design Pressure: ± 50 psf

Separation Distance from Glazed Openings: The screen shall be separated a minimum of $3 \frac{1}{2}$ inches from the glazed opening at its closest point.

Wall Construction: The impact screen may be mounted to the following types of wall framing:

- Pre-cast concrete, cast-in-place concrete (minimum compressive strength 2,700 psi)
- Grout-filled concrete masonry units (CMU), C-90, Grade N, Type 1 (or greater)
- Wood (minimum Southern Yellow Pine dimension lumber)
- Aluminum, minimum 6063-T5, 0.063" thick

INSTALLATION INSTRUCTIONS

General Installation Requirements:

The shutter assembly shall be installed in accordance with this evaluation report and the approved drawings referenced in this product evaluation report.

Anchorage:

The shutter assembly shall be mounted to the wall framing in accordance with the mounting details on the approved drawings.

The aluminum frame shall be secured to either concrete, hollow concrete block, steel, aluminum, or wood substrate.

Attachment to Wood Frame Substrates: The wall framing shall be minimum Southern Yellow Pine dimension lumber. The aluminum frame shall be secured to wood framing with minimum No. 12 wood screws. The fasteners shall be spaced a maximum of 2 inches from each corner and a maximum of 6 inches on center along the perimeter. Each vertical mullion is secured at the head and the sill to the wall framing with two (2) 2" x 2" x 4" aluminum angles. The angles are secured to the mullion with three (3) No. 12 x 1" screws and to the wall framing with three (3) No. 12 screws. The fasteners shall have a minimum embedment depth of $1 \frac{3}{8}$ inches. The fasteners shall have a minimum edge distance of $1 \frac{3}{8}$ inches. Refer to Sheets 1 of 4 thru 4 of 4 of the approved drawings.

Attachment to Aluminum Frame Substrates: The wall framing shall be minimum 6063-T5 aluminum with a minimum thickness of 0.063". The aluminum frame shall be secured to wall framing with minimum No. 12 self drilling sheet metal screws. The fasteners shall be spaced a maximum of 2 inches from each corner and a maximum of 6 inches on center along the perimeter. Each vertical mullion is secured at the head and the sill to the wall framing with two (2) 2" x 2" x 4" aluminum angles. The angles are secured to the mullion with three (3) No. 12 x 1" screws and to the wall framing with three (3) No. 12 x 1" screws. The fasteners shall have a minimum embedment depth of $\frac{3}{4}$ inches. The fasteners shall have a minimum edge distance of $1\frac{3}{8}$ inches. Refer to Sheets 1 of 4 thru 4 of 4 of the approved drawings.

Attachment to Concrete or Hollow Concrete Block Structures: Concrete shall have a minimum compressive strength of 2,700 psi. Concrete block shall have a minimum compressive strength of 1,500 psi. The aluminum frame shall be secured to the concrete or to the concrete block substrate with minimum $\frac{3}{16}$ " x $2\frac{1}{2}$ " Tapcon fasteners. The fasteners shall be spaced a maximum of 2 inches from each corner and a maximum of 6 inches on center along the perimeter. Each vertical mullion is secured at the head and the sill to the wall framing with two (2) 2" x 2" x 4" aluminum angles. The angles are secured to the mullion with three (3) No. 12 x 1" screws and to the wall framing with two (2) $\frac{1}{4}$ " x $2\frac{1}{2}$ " Tapcon fasteners. The fasteners shall have a minimum embedment depth of $1\frac{3}{8}$ inches. The fasteners shall have a minimum edge distance of $2\frac{1}{2}$ inches. Refer to Sheets 1 of 4 thru 4 of 4 of the approved drawings.

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.