

# TEXAS DEPARTMENT OF INSURANCE

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## PRODUCT EVALUATION

SHU-199

Effective January 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 **July 2013**.*

*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.*

**Safe-S-Cape Window 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 Safe-S-Cape Window Hurricane Screen is a permanently mounted impact protective screen that is secured over an individual window frame. The aluminum frame impact screen consists of the following components:

**Frame:** The frame is constructed from extruded aluminum. The frame corners are mitered, butted, and secured together with screws.

**Protective Screen:** The screen frame is constructed of extruded aluminum. The screen corners are mitered and secured with aluminum corner keys. The protective screen is constructed with minimum Type 304 stainless steel 10 x 9.5 mesh x 0.035" diameter. The screen is interior set onto a vinyl gasket and secured with aluminum pinch plates that are secured with screws. An aluminum interior screen panel surround is secured with screws. An aluminum full length snap lock with cover is secured to the frame with screws. The screen is secured to the hurricane build out frame using the aluminum hurricane clamp with No. 8 x  $1\frac{3}{32}$ " stainless steel countersunk screws spaced 2 inches on center.

## LIMITATIONS

**Design Drawings:** The hurricane screen shall be installed in accordance with "Safe-S-Cape Hurricane Screen", drawing no. MD-100-SSC, sheets 1 of 5 thru 5, dated October 19, 2011, signed and sealed by Robert L. Clark, P.E. on October 26, 2011. The referenced drawings will be referred to as the "approved drawings" in this product evaluation report.

**Product Identification:** A label will be affixed to the impact screen. The label includes the manufacturer's name, the product name, the maximum size of the product, 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 Width and Panel Height:** The maximum panel width is 55" and the maximum panel height is 85".

**Maximum Screen Daylight Opening Size:** The maximum screen daylight opening size shall not exceed  $51 \frac{3}{16}$ " x  $81 \frac{3}{16}$ ".

**Allowable Design Pressure:**  $\pm 75$  psf

**Separation Distance from Glazed Openings:** The screen shall be separated a minimum of  $3 \frac{3}{16}$  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 Spruce-Pine-Fir 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 x  $2 \frac{3}{4}$ " wood screws. The fasteners shall be spaced a maximum of  $2 \frac{1}{4}$  inches from each corner and a maximum of 4 inches on center along the perimeter of the protective screen. 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 5 thru 3 of 5 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  $2 \frac{1}{4}$

inches from each corner and a maximum of 4 inches on center along the perimeter of the protective screen. 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 5 thru 3 of 5 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  $\frac{1}{4}$ " x  $2\frac{1}{4}$ " Tapcon fasteners. The fasteners shall be spaced a maximum of  $2\frac{1}{4}$  inches from each corner and a maximum of 4 inches on center along the perimeter of the protective screen. The fasteners shall have a minimum embedment depth of  $1\frac{3}{4}$  inches. The fasteners shall have a minimum edge distance of  $2\frac{1}{2}$  inches. Refer to Sheets 1 of 5 thru 3 of 5 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.