

TEXAS DEPARTMENT OF INSURANCE

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PRODUCT EVALUATION SHU-170

Effective May 1, 2009

*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 **April 2011**.*

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.

Series 28OP/Egress Aluminum Frame Impact Screen manufactured by:

Fort Hurricane Products/Hurricane Screens & Security, Inc.
1100 25th Street Unit 7A
West Palm Beach, Florida 33407
(800) 367-8395

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 Series 28OP/Egress aluminum frame impact screen is a permanently mounted operable impact protective screen that is secured to an aluminum frame and mounted over an individual exterior opening. The aluminum frame impact screen consists of the following components:

Frame: The frame head, sill, and side jambs are constructed from 6005-T5 extruded aluminum. The corners of the frame are mitered and secured with three (3) corner keys at each corner. The corners are crimped on the interior side of the panel. Two rail stiffeners consisting of extruded aluminum tubes, with dimensions of 1" x 2" x 1/2" are located 46 1/2 inches from the top and the bottom rail. They are secured to each frame stile with two (2) self-tapping screws per end.

Screen: The screen is constructed with minimum 0.028" or optional 0.032" 304 stainless steel strands with 12 strands by 12 strands per square inch. The screen is secured to the frame using an extruded aluminum "U" shaped sharks tooth retainer bar measuring 1.0" x 0.487". The retainer is secured to the frame with No. 12 x 3/4" screws located approximately 2 inches from each corner and approximately 4 inches on center. The screen is secured to the aluminum tube rail stiffeners using an extruded aluminum "U" shaped sharks tooth retainer bar measuring 1.0" x 0.487". The retainer is secured to the retainer with No. 10 x 1/2" screws located approximately 6 inches on center. Each retainer bar is capped with a rigid vinyl cap.

Aluminum Tubes: Aluminum tubes are constructed of 6005-T5 extruded aluminum. The aluminum tubes are secured to the wall framing. The screen frame is secured to the aluminum tubes. The aluminum tubes shall be minimum 1" x 1" x 1/16". Optional 2" x 2" x 1/16" aluminum tubes may be used.

PRODUCT DESCRIPTION (Continued)

Hardware:

- Egress snap lock system; One (1) required; Located on the lock stile. Secured to the stile with No. 10 x $\frac{1}{2}$ " screws located 3 inches from each end and 4 inches on center.
- Concealed tamper proof wrap around leaf hinges; Seven (7) required; Each hinge is secured to the panel with three (3) No. 10 x $\frac{1}{2}$ " screws and to the sub frame with two (2) oil lite brass bushings.

LIMITATIONS

Design Drawings: The Series 28OP/Egress aluminum frame impact screen shall be installed in accordance with Fort Hurricane Products, Inc., drawing no. HSS0008, sheets 1-5 of 5, dated July 17, 2006, Revision A, signed and sealed by L. Roberto Lomas, P.E. on November 30, 2006. The referenced drawings will be referred to as the "approved drawings" in this product evaluation report.

Product Identification: A certification program label (NAMI) will be affixed to the impact screen. The certification program label includes the manufacturer's name; product name; performance characteristics; the maximum size tested; the approved inspection agency (NAMI); and the applicable standards: ASTM E 330-02, ASTM E 1886-02, and ASTM E 1996-02.

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 1996-02. 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.

Maximum Overall Size: The impact screen dimensions shall not exceed 64 $\frac{1}{2}$ " x 147 $\frac{1}{2}$ ".

Daylight Opening Size: The daylight opening dimensions shall not exceed 56 $\frac{1}{2}$ " x 139 $\frac{1}{2}$ ".

Allowable Design Pressure: +47.0 psf / -53.0 psf

Separation Distance from Glazed Openings: The screen shall be separated a minimum of 4 inches from the glazed opening at its closest point.

Wall Framing Construction: The impact screen may be secured to concrete, hollow concrete block, or wood dimension lumber (minimum Southern Yellow Pine).

Mulled Assemblies: This evaluation report is for installation of individual impact screens only.

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.

INSTALLATION INSTRUCTIONS (Continued)

Aluminum Tube to Substrate

The aluminum tubes shall be fastened to either a concrete, hollow concrete block, or wood substrate.

Attachment to Concrete or Hollow Concrete Block Structures: Concrete shall have a minimum compressive strength of 3,000 psi. Concrete block shall have a minimum compressive strength of 1,500 psi. The aluminum tubes shall be secured to the concrete or to the concrete block substrate with minimum $\frac{1}{4}$ " diameter x $2\frac{1}{4}$ " long Elco Tapcon fasteners. The fasteners shall be located a maximum of 6 inches from each end and spaced a maximum of 9 inches on center around the perimeter of the frame. The fasteners shall have a minimum embedment depth of $1\frac{1}{4}$ inches and a minimum edge distance of 2 inches.

Attachment to Wood Frame Structures: The wall framing shall be minimum Southern Yellow Pine dimension lumber. The fasteners shall penetrate into the wall framing a minimum of $1\frac{1}{2}$ inches. The aluminum tubes shall be secured to wood framing with a minimum No. 12 x $1\frac{1}{2}$ " long wood screws. The fasteners shall be located a maximum of 6 inches from each end and spaced a maximum of 9 inches on center around the perimeter of the frame. The fasteners shall have a minimum embedment depth of $1\frac{1}{2}$ inches and a minimum edge distance of 2 inches.

Screen Frame to Aluminum Tubes

The screen frame is secured to the aluminum tubes with minimum No. 12 x $\frac{3}{4}$ " long hex head sheet metal screws. The fasteners shall be located a maximum of 4 inches from each end and spaced a maximum of 6 inches on center around the perimeter of the frame.

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.