

TEXAS DEPARTMENT OF INSURANCE

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PRODUCT EVALUATION DR-448

Effective November 1, 2010

*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 2014**.*

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.

400-HD Aluminum Full View Security Screen Door, Impact Resistant manufactured by:

Tapco, Inc.
1815 McCullough Blvd.
Tupelo, MS 38801
(800) 737-8274

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 400-HD full view hurricane security screen door is a permanently mounted operable impact protective screen. The aluminum frame impact screen consists of the following components:

Frame: The Main frame is constructed from extruded Aluminum 6063-T5 with mitered corners using a corner key and two #8 x 1" square drive sheet metal screws at each corner. Panel stiles, rails and mid rail horizontal brace are constructed from extruded Aluminum 6063-T5 with mitered corners using a corner key and two #8 x 1" square drive sheet metal screws at each corner. Stiles, rails and horizontal brace are reinforced with extruded aluminum 6063-T5 reinforcements.

Screen: The screen is constructed with minimum 0.033" thick 304 stainless steel strands with 12 strands by 12 strands per square inch. Stainless steel mesh screen was held in place with #7 x 11/32" square drive SMS through an aluminum "U" channel.

Hardware:

- The door has a Wartian #1850 hardware kit with deadbolt located at midheight of the door.
- The door has a Wright #640 deadbolt kit located at a maximum of 13" from the bottom of the door.
- The door has six (6) 4" spring loaded hinges assembled by Tapco.

LIMITATIONS

Design Drawings: The 400-HD full view hurricane security screen door shall be installed in accordance with Tapco drawing no. 08-00941, sheets 1-5 of 5, dated February 17, 2010, Revision B dated September 27, 2010, signed and sealed by Luis R. Lomas, P.E. on September 27, 2010. 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 door dimensions shall not exceed 38" x 87".

Screen Opening Size: The screen opening dimensions shall not exceed 29" x 77".

Allowable Design Pressure: +60.0 psf / -65.0 psf

Wall Framing Construction: The impact screen may be secured to wood (minimum Southern Yellow Pine specific gravity of $G=0.55$), 16 gauge steel stud framing and 2" x 2" x 0.80" thick 6063-T5 aluminum framing.

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.

Screen Frame to Substrate

The aluminum tubes shall be fastened to either a wood, steel or aluminum framing as specified on the drawings.

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 $1\frac{3}{16}$ inches for fasteners through the jamb or $1\frac{1}{2}$ inches for fasteners through the outside frame as shown in the section details. The door shall be secured to wood framing with a minimum No. 8 long wood screws. The fasteners around the perimeter frame shall be located a maximum of 3 inches from each end and spaced a maximum of 12 inches on center around the perimeter of the frame. The fasteners securing the door through the jamb shall be located a maximum of $4\frac{3}{4}$ inches from each end and spaced a maximum of 12" on center.

Screen Frame to Aluminum and Steel framing

The screen frame is secured to either aluminum or steel framing with minimum No. 8 x $\frac{3}{4}$ " long tek screws. The screws shall penetrate 3 threads beyond the framing member. The fasteners around the perimeter frame shall be located a maximum of 3 inches from each end and spaced a maximum of 12 inches on center around the perimeter of the frame. The fasteners securing the door through the jamb shall be located a maximum of $4\frac{3}{4}$ inches from each end and spaced a maximum of 12" on center.

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.