

TEXAS DEPARTMENT OF INSURANCE

Engineering Services Program / MC 103-3A 333 Guadalupe Street P.O. Box 149104 Austin, Texas 78714-9104
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PRODUCT EVALUATION

DR-546

Effective Date: August 2012

Reevaluation Date: **January 2015**

*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 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.

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

Tapco, Inc.
1815 McCullough Blvd.
Tupelo, MS 38801
(800) 737-8272

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-FV 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 and Sash: The frame and sash is constructed from 6063-T5 extruded aluminum. The frame is comprised of a header Z-bar with a jamb facing strip hinge rail. The sash uses a main frame and a door expander mounted at the bottom of the door. The sash is reinforced all around using an insert filler.

Horizontal Mullion: The horizontal mullion is constructed using a #900 mullion bar with an I-beam reinforcement.

Screen: The screen is constructed with minimum 0.035" thick 304 stainless steel strands with 12 strands by 12 strands per square inch. Stainless steel mesh screen was held in place with #8 x 0.50" square drive SMS.

Hardware:

- The door has a Wartian #1650 latch set with the deadbolt.
- The door has three (3) Wright #643 deadbolt kit located at a maximum of 13", 42" and 72" from the bottom of the door.
- The door has six (6) 4" spring loaded hinges assembled by Tapco.

LIMITATIONS

Design Drawings: The 450-HD-FV full view hurricane security screen door shall be installed in accordance with Tapco drawing no. 08-01374, sheets 1-4 of 4, dated October 11, 2011, revision A dated July 8, 2012, signed and sealed by Luis R. Lomas, P.E. on July 9, 2012. 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 (**450-HD-Full View Door**); performance characteristics; the maximum size tested; the approved inspection agency (NAMI); and the applicable standards: TAS 201/202/203-94.

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 35 $\frac{3}{4}$ " x 87".

Screen Opening Size: The screen opening dimensions shall not exceed 32 $\frac{1}{8}$ " x 83".

Allowable Design Pressure: +50.0 psf / -50.0 psf

Separation Distance from Glazed Openings: The screen shall be separated a minimum of 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:

- Wood (minimum Spruce-Pine-Fir dimension lumber)
- Steel, minimum 18 gauge
- Aluminum, minimum 6063-T5, $\frac{1}{8}$ " 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.

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 Spruce-Pine-Fir dimension lumber. The aluminum frame shall be secured to wood framing with a minimum No. 8 wood screws. The fasteners shall have a minimum embedment depth of 1 $\frac{1}{2}$ inches. Refer to the approved drawings for anchorage requirements.

Attachment to Steel or Aluminum Frame Structures: For steel framing, minimum 18 gauge 33 ksi steel is required. For aluminum framing, minimum $\frac{1}{8}$ " thick 6063-T5 aluminum is required. The aluminum framing shall be secured to the wall framing with minimum No. 8 Tek screws. The fasteners shall penetrate a minimum of 3-thread pitch beyond substrate. Refer to the approved drawings for anchorage requirements.

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.