

# TEXAS DEPARTMENT OF INSURANCE

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## PRODUCT EVALUATION

DR-411

Effective Date: September 1, 2013

Reevaluation Date: **June 2017**

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.

**Chem-Pruf FRP Outswing Double Doors with Transom Panel and Louvers, Impact Resistant**  
manufactured by

**Chem-Pruf Door Co., Ltd.**  
**5224 FM 802**  
**Brownsville, TX 78523**  
**(800) 444-6924**

will be acceptable in designated catastrophe areas along the Texas Gulf Coast when installed in accordance with the manufacturer's installation instructions and this product evaluation.

## PRODUCT DESCRIPTION

Chem-Pruf corrosion resistant doors are manufactured of fiberglass reinforced polymer (FRP) door faces permanently bonded to a one-piece stile and rail system. The assembly consists of two side hinged doors with a transom panel. The side hinged doors contain glazing and louvers. The interior cavity of the door and the transom panel is filled with a polyurethane honey comb. This product evaluation report is for fiberglass outswing double doors with a transom panel and louvers based on the following tested construction:

### General Description:

System	Description	Design Pressure Rating
1	Fiberglass Outswing Double Doors with Transom Panel and Louver; (O.XX)	±55 psf

### Product Dimensions:

System	Overall Size	Door Panel Size	Glazing Size	Transom Panel Size
1	76" x 120"	Two: 35 <sup>3</sup> / <sub>4</sub> " x 93 <sup>1</sup> / <sub>8</sub> "	22" x 36"	71 <sup>3</sup> / <sub>4</sub> " x 21 <sup>1</sup> / <sub>2</sub> "

### Glazing Description:

System	Glass Construction	Glazing Method
1	SG-1	GM-1

Note: <sup>1</sup> See the "Glass Description Key" for the glazing construction.

<sup>2</sup> See the "Glazing Method Key" for the glazing method description.

**Glass Description Key:**

SG-1: Laminated glass units. The laminated glass units are comprised of two double strength ( $\frac{1}{8}$ " annealed glass lites separated by a 0.090" PVB interlayer. The glass thickness and type in the tested assembly and in smaller assemblies shall comply with ASTM E 1300-04.

**Glazing Method Description Key:**

GM-1: The laminated glass units are interior glazed with glazing tape and silicone. The exterior perimeter of the laminated glass unit is tape glazed to the exterior retainer and sealed to the exterior with a cap bead of silicone. The laminated glass units are secured in place with a fiberglass retainer and glazing tape and silicone.

**Frame Construction:** The door frame is constructed of fiberglass reinforced polymer composite frame. The frame header and jambs are molded in one continuous piece. The frame corners are miter jointed and mechanically fastened with screws. The threshold is a Zero 5" x  $\frac{1}{2}$ " x 36" aluminum saddle 655A.

**Panel Construction:** The door leaf is manufactured of fiberglass reinforced polymer (FRP) door faces permanently bonded to a one-piece stile and rail system. The interior cavity of the door is filled with a polyurethane honey comb core material. The exterior panel surface contains a Trimco 634 304SS kickplate.

**Transom Construction:** The transom is manufactured of fiberglass reinforced polymer (FRP) panel faces that are permanently bonded to a one-piece stile and rail system. The interior cavity of the panel is filled with a polyurethane honey comb core material. The panel is secured to the stiles and rails with L-brackets, six (6) each on the horizontals and two (2) each on the verticals, located approximately 5 inches from each corner and spaced evenly thereafter.

**Louver Construction:** Inverted "V" FRP louvers,  $1\frac{1}{4}$ " high x  $1\frac{7}{16}$ " deep. The louver is set in a 24" x 24" opening and siliconed into position. A  $27\frac{1}{2}$ " x  $27\frac{1}{2}$ " fiberglass louver cover plate with an adhesive-backed hollow bulb seal to the back side is secured to the exterior of the door with  $\frac{1}{4}$ " x  $1\frac{1}{2}$ " long machine screws that are set into thread inserts. The screws are located 4 inches from each corner with one centered on each perimeter edge.

**Mullion:** An FRP mullion, 72" wide x  $5\frac{3}{4}$ " deep is centered on the frame jambs and secured to the frame jambs with FRP L-brackets. The FRP L-brackets are secured to the frame and to the mullion with screws.

**Reinforcements:** The door panel is reinforced with interior fiberglass blocking in accordance with Chem-Pruf drawing STD 3-29A, dated March 18, 2003. High compressive polypropylene core material is used as reinforcement for the kickplate, locksets, and the push-pulls. A 2" x 6" x 24" wood reinforcement is used for the panic devices.

**Hardware:**

- Assa Abloy Panic device SGT 8713 ETL; One (1) required; Located  $39\frac{7}{8}$  inches up from the bottom edge of the door. A  $\frac{1}{2}$ " diameter hollow rod extends vertically to the top and bottom of the door from the push bar of the panic device, fastened to the face of the door  $27\frac{1}{4}$  inches from the top and  $19\frac{3}{4}$  inches from the bottom edge of the door with a metal clip that is secured to the door with screws. The ends of the locking device are secured at either end with screws. A square bolt engages a hole cut out of the aluminum sill threshold. A square bolt at the top engages with a metal strike that is fastened to the bottom edge of the horizontal mullion.

**Hardware (continued):**

- Flush bolt, Trimco 3917; One (1) required;  $1\frac{5}{32}$ " diameter bolt,  $1\frac{1}{16}$ " in length, set in a fiberglass square channel of the stile interior. Secured to the lateral edge of the stile with four (4) No. 8 x 1" screws. The support plate for the bolt on the top edge of the door is fastened with two (2) No. 8 x 1" screws.
- Chem-Pruf 304  $4\frac{1}{2}$ " x  $4\frac{1}{2}$ " hinges; Four (4) required per door; Secured to the door panel stile with three (3) No. 12 x 3" stainless steel screws and one (1) No. 14 x  $3\frac{3}{4}$ " stainless steel screw. Secured to the door frame side jambs with three (3) No. 12 x  $1\frac{1}{4}$ " stainless steel screws and one (1) No. 14 x  $3\frac{3}{4}$ " long stainless steel screw.
- Astragal; One (1) required; Fiberglass, fastened to the face of the panel with No. 10 x  $1\frac{1}{2}$ " screws.
- Strike plate; One (2) required; Metal,  $2\frac{1}{4}$ " wide x  $1\frac{5}{16}$ " high, set in a mortise pocket in the bottom edge of the mullion, fastened with two No. 8 x 1" screws, engaging the flush bolt.
- Surface bolt, Trimco 3922; One (1) required; 12" high, fastened to the interior face of the bottom edge of the passive panel, centered 2 inches from the stile edge. The bolt is secured with two (2) slide brackets that each fastened to the exterior panel with two (2) No. 10 x 2" screws.

**Product Identification:** A label will be affixed to the door units. The label shall include the manufacturer's name, the design pressure rating, TAS 201, TAS 202, and TAS 203.

**LIMITATIONS**

**Design pressures (DP):**

System	Maximum Width (in.)	Maximum Height (in.)	Design Pressure (psf)
1	76	120	± 55

**Impact Resistant:** This door assembly satisfies the Texas Department of Insurance's criteria for protection from windborne debris in both the **Inland I zone** and the **Seaward zone**. This door assembly passed an impact criteria equivalent to Missile Level D specified in ASTM E 1996-04. The door assemblies may be installed at any height on the structure as long as the design pressure rating for the assemblies is not exceeded.

**Acceptance of Smaller Systems:** Door assemblies with dimensions equal to or smaller than those specified are acceptable within the limitations of this report.

**INSTALLATION INSTRUCTIONS**

**General:** The door assemblies shall be installed according to the manufacturer's installation instructions and this product evaluation.

**Wall Framing:** The wood framing members shall be minimum Spruce-Pine-Fir dimension lumber.

**Installation:**

**Jamb:** No. 12 x 3" long stainless steel sheet metal screws; Located approximately 11 inches from the sill and 5 inches from the head and approximately 15 inches on center along the length of the each side jamb.

**Head:** No. 10 x 2 1/2" long stainless steel sheet metal screws; Located approximately 4 inches from each end and 5 additional screws equally spaced along the length of the head, approximately 3 inches in from the interior face.

**Sill:** No. 10 x 1 3/4" long stainless steel sheet metal screws; Located approximately 4 inches from each end and 5 additional screws equally spaced along the length of the sill, approximately 2 1/2 inches in from the interior face.

**Hinges:** Hinges to door leaf: One (1) No. 14 x 3 3/4" long stainless steel sheet metal screw for each hinge and three (3) No. 12 x 3" long stainless steel sheet metal screws for the remaining screws in each hinge.

Hinges to door frame: one (1) No. 14 x 3 3/4" long stainless steel sheet metal screws for each hinge and three (3) No. 12 x 1 1/4" long stainless steel sheet metal screws for the remaining screws in each hinge.

The fasteners shall be long enough to penetrate a minimum of 1 1/2 inches into the wood wall framing. For masonry and concrete applications, a 1/4" diameter Crete-Flex SS4 410 stainless steel masonry anchor, 3 3/4" long may be substituted for the fasteners specified above. The fasteners shall penetrate a minimum of 1 1/4 inches into the concrete.

**Note:** The manufacturer's installation instructions shall be available on the job site during installation. Fasteners shall be corrosion resistant as specified in the International Residential Code (IRC); the International Building Code (IBC); and the Texas Revisions.