TEXAS DEPARTMENT OF INSURANCE

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PRODUCT EVALUATION Effective August 1, 2011
CWSF-13 Revised November 1, 2011

*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 **November 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.

5000 ST Infold and Outfold Thermally Broken Aluminum Glass Door Panels, Impact Resistant, manufactured by

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

PRODUCT DESCRIPTION

The 5000 ST infold and outfold door panels are aluminum folding glass door panels. The aluminum folding glass door panels evaluated in this report are impact resistant glass doors. This evaluation report is for aluminum folding glass door panels based on the following tested constructions:

General Description:

System	Description	Label Rating
1	5000 ST Infolding Thermally Broken Aluminum Glass Door Panels; XXXXXX	TAS-201, TAS-202, TAS-203 ASTM E 1886, ASTM E 1996 Design Pressure: +60/-60 psf Maximum Size Tested: 18'8" x 8'5"
2	5000 ST Outfolding Thermally Broken Aluminum Glass Door Panels; XXXXXX	TAS-201, TAS-202, TAS-203 ASTM E 1886, ASTM E 1996 Design Pressure: +60/-60 psf Maximum Size Tested: 18'8" x 8'5"

Product Dimensions:

System	Overall Size	Panel Size	Panel Daylight Opening Size
1	223 1/16" x 100 1/2"	Six: 36" x 96"	Six: 29 1/4" x 89 1/4"
2	223 1/16" x 100 1/2"	Six: 36" x 96"	Six: 29 1/4" x 89 1/4"

Glazing Description:

System	Glass Construction [1]	Glazing Method [2]
1	IG-1 or SG-1	GM-1
2	IG-1 or SG-1	GM-1

Note: [1] See the "Glass Construction Key" for the glazing construction.
[2] See the "Glazing Method Key" for the glazing method description.

Glass Construction Key:

SG-1: The panels contain laminated glass units. The laminated glass units consist of two $\frac{3}{16}$" heat strengthened glass lites with Old Castle "Storm 0.090" interlayer. The glass thickness used in the tested assembly and in smaller assemblies shall comply with ASTM E 1300-04.

IG-1: The panels contain sealed insulating glass units. The sealed insulating glass units are comprised of a $\frac{3}{16}$" fully tempered glass lite and a laminated glass unit separated by an aluminum spacer system. The laminated glass units consist of two $\frac{3}{16}$" heat strengthened glass lites with Old Castle "Storm"0.075" interlayer. The glass thickness used in the tested assembly and in smaller assemblies shall comply with ASTM E 1300-04.

Glazing Method Key:

GM-1: The glass units are glazed with a structural silicone face seal on both surfaces. The glazing channel is back-filled with a silicone sealant. The glass units are secured in place with an extruded aluminum glazing bead at the interior and the exterior.

Frame Construction: The frame members consist of extruded aluminum. The frame head, sill, and side jambs are thermally broken. The frame corners are secured together with screws.

Panel Construction: The panel members consist of extruded aluminum. The panel corners are secured together with screws.

Hardware:

- Butt hinges; (4) four required on the interior of the first and third panels from each frame jamb and on the exterior of the second panel from each frame jamb. Each hinge is secured to each panel with four (4) No. 10-32 x $\frac{3}{4}$" screws.
- Handle and deadbolt lock assembly; one (1) required; located 33 inches from the bottom rail of the right center door panels on the meeting stile.
- Pull handle and keeper assembly; located 33 inches from the bottom rail of the left center door panel on the meeting stile.
- 13" throw bolt; one (1) required; located 13 $\frac{1}{2}$ inches from the bottom rail from jamb panels and meeting panels.
- 22 $\frac{1}{2}$ throw bolt; one (1) required; located 21 $\frac{1}{2}$ inches from the top rail from jamb panels and meeting panels.

Reinforcement: None.

Product Identification: A certification program label (NAMI) will be affixed to the assembly. The certification program label shall include the manufacturer's name; the product name: **5000 ST / 5000 ST All Wall Infolding & Outfolding Aluminum Door Panels**; performance characteristics; the approved inspection agency (NAMI); and the applicable standards: TAS-201, TAS-202, TAS-203, ASTM E 1886-02/05, and ASTM E 1996-02/06

LIMITATIONS

Design pressures:

System	Maximum Width (in.)	Maximum Height (in.)	Design Pressure (psf)
1	223 11/16	100 1/2	+60/-60
2	223 11/16	100 1/2	+60/-60

Impact Resistance: These assemblies satisfy the Texas Department of Insurance's criteria for protection from windborne debris in the **Inland I** and the **Seaward zone**. The assemblies passed Missile Level D specified in ASTM E 1996-02/06. The assemblies may be installed at any height on the structure as long as the design pressure rating for the assemblies is not exceeded. These assemblies will not need to be protected with an impact protective system.

Acceptance of Smaller Assemblies: Assemblies with dimensions equal to or smaller than those specified above are acceptable within the limitations specified in this report.

INSTALLATION INSTRUCTIONS

General: The assembly shall be installed in accordance with the manufacturer's installation instructions and this product evaluation. Detailed drawings and installation instructions are available from the manufacturer.

Design Drawings:

System 1: The glass door panels shall be installed in accordance with Drawing No. 08-01072, titled "5000 ST All Wall Infolding Door 36" x 96" Panels, dated August 05, 2010, signed and sealed by Luis R. Lomas., P.E on July 12, 2011. The stated drawings will be referred to as the approved drawings in this evaluation report.

System 2: The glass door panels shall be installed in accordance with Drawing No. 08-01073, titled "5000 ST All Wall Outfolding Door 36" x 96" Panels, dated August 05, 2010, signed and sealed by Luis R. Lomas., P.E on July 12, 2011. The stated drawings will be referred to as the approved drawings in this evaluation report.

Wall Framing Construction: The glass door panels may be mounted to several types of wall framing construction. The types of wall framing construction allowed include:

- Concrete (minimum compressive strength: 3,192 psi)
- Wood dimension lumber (minimum Spruce-Pine-Fir)
- Masonry – (ASTM C-90, Grade N, Type 1 or greater)

Installation:

- Refer to Sheet 1 of 6 of the approved drawings for the anchor layout and fastener requirement notes.

- Refer to Sheets 3 of 6 thru 6 of 6 of the approved drawings for installation details.

- The approved drawings indicate the minimum embedment depths for the fasteners and the minimum edge distances (minimum distance fastener must be from the edge of the substrate material) for the fasteners.

Note: The manufacturer's installation instructions 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.