

TEXAS DEPARTMENT OF INSURANCE

Engineering Services / MC 103-3A 333 Guadalupe Street P.O. Box 149104 Austin, Texas 78714-9104
Phone No. (512) 322-2212 Fax No. (512) 463-6693

PRODUCT EVALUATION DR-330

Effective August 1, 2008

*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 3 years after the effective date.*

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.

6'8" Height, "Smooth Star", "Fiber Classic", "Classic Craft" and "Classic Craft Rustic" Glazed, Impact-Resistant, Fiberglass Single & Double Doors with and without Impact-Resistant Sidelites, Inswing / Outswing, manufactured by:

**Therma-Tru Corporation
118 Industrial Drive
Edgerton, OH 43517
Tel. (419) 298-1740**

will be acceptable in designated catastrophe areas along the Texas Gulf Coast when installed in accordance with engineering drawings TX-3180, TX-3181, TX-3182, TX-3183 and TX-3184 (dated 7-9-08, signed and sealed by Wendell W. Haney, P.E., on 7-23-08), the manufacturer's installation instructions, and this product evaluation report.

PRODUCT DESCRIPTION

This product consists of glazed fiberglass side-hinged doors hung in wood frames. This product evaluation report is for door assemblies based on tested constructions to provide the following assemblies:

General Description:

Assembly	Description	Label Rating
1	3'0" x 6'8" Glazed Fiberglass Single Door, Inswing / Outswing; (X)	Inswing +47 / -53 PSF Outswing +50 / -50 PSF
2	6'0" x 6'8" Glazed Fiberglass Single Door with Sidelite, Inswing / Outswing; (XO, OX)	Inswing +49.2 / -50 PSF Outswing +49.2 / -50 PSF
3	9'0" x 6'8" Glazed Fiberglass Single Door with Sidelites, Inswing / Outswing; (OXO)	Inswing +49.2 / -50 PSF Outswing +49.2 / -50 PSF
4	6'0" x 6'8" Glazed Fiberglass Double Door, Inswing / Outswing; (XX)	Inswing +47 / -53 PSF Outswing +50 / -50 PSF
5	12'0" x 6'8" Glazed Fiberglass Double Door with Sidelites, Inswing / Outswing; (OXXO)	Inswing +47 / -53 PSF Outswing +50 / -50 PSF

Product Dimensions:

Assembly	Overall Frame Assembly Size	Fixed/Operable Panel Sizes
1	37 3/4" x 82"	Door 36" x 79 1/4"
2	75" x 82"	Door 36" x 79 1/4" Sidelite 36" x 79 1/4"
3	113 1/4" x 82"	Door 36" x 79 1/4" Sidelite 36" x 79 1/4"
4	74 1/2" x 82"	Door 36" x 79 1/4" Sidelite 36" x 79 1/4"
5	149 3/4" x 82"	Door 36" x 79 1/4" Sidelite 36" x 79 1/4"

Glazing Description:

Assembly	Glass Construction ¹	Glazing Method ²
1	IG-1	GM-1
2	IG-1	GM-1
3	IG-1	GM-1
4	IG-1	GM-1
5	IG-1	GM-1

Note: ¹ See the "Glass Description Key" for the glazing construction.

² See the "Glazing Method Key" for the glazing method description.

Glazing Description Key:

IG-1: 1" overall thick sealed insulating glass unit. The 1" thick sealed insulating glass units are comprised of an interior lite constructed of two lites of double strength (1/8") thick sheets of annealed glass with a 0.090" PVB interlayer by Solutia. The exterior lite is double strength (1/8") tempered glass.

Glazing Method Key:

GM-1: The glass is set from the exterior against DOW 995 or SIKA 552 glazing compound backbedding. The aluminum lip-lite frame is screwed together with sheet metal screws.

Frame Construction: The frame head, sill, and jambs consist of fingerjoint pine wood members. The frame corners are dado-cut and fastened together with (4) 1/2" crown, 2" long 16 ga. staples per corner at the head and sill.

Door Panel Construction:

"Smooth Star": The panel members consist of 0.065" minimum thickness fiberglass skins with PVC composite top & bottom rail, wood hinge stile and a LVL latch stile. The door panel is filled with polyurethane foam, 2.0 lbs/ft³ minimum density. Door panels are glazed with IG-1 glazing construction and GM-1 glazing method.

"Fiber Classic": The panel members consist of 0.065" minimum thickness fiberglass skins with PVC composite top & bottom rail, wood hinge stile and a LVL with oak cap latch stile. The door panel is filled with polyurethane foam, 2.0 lbs/ft³ minimum density. Door panels are glazed with IG-1 glazing construction and GM-1 glazing method.

"Classic Craft": The panel members consist of 0.090" minimum thickness fiberglass skins with PVC composite top & bottom rail, LSL with oak cap hinge stile and a LSL with oak cap latch stile. The

door panel is filled with polyurethane foam, 2.0 lbs/ft³ minimum density. Door panels are glazed with IG-1 glazing construction and GM-1 glazing method.

“Classic Craft Rustic”: The panel members consist of 0.090” minimum thickness fiberglass skins with PVC composite top & bottom rail, LSL with oak cap hinge stile and a LSL with oak cap latch stile. The door panel is filled with polyurethane foam, 2.0 lbs/ft³ minimum density. Door panels are glazed with IG-1 glazing construction and GM-1 glazing method.

Sidelite Panel Construction:

“Smooth Star” & “Fiber Classic”: The panel members consist of 0.065” minimum thickness fiberglass skins with PVC composite top & bottom rail, wood hinge stile and latch stile. The sidelite panel is filled with polyurethane foam, 2.0 lbs/ft³ minimum density. Sidelite panels are glazed with IG-1 glazing construction and GM-1 glazing method.

“Classic Craft” & “Classic Craft Rustic”: The panel members consist of 0.090” minimum thickness fiberglass skins with PVC composite top & bottom rail, wood hinge stile and latch stile. The sidelite panel is filled with polyurethane foam, 2.0 lbs/ft³ minimum density. Sidelite panels are glazed with IG-1 glazing construction and GM-1 glazing method.

Reinforcement: None.

Hardware:

<u>Description</u>	<u>Location</u>
Kwikset 780 Series Single Cylinder Deadbolt	40 ³ / ₈ ” from top of active panel.
Kwikset Ultramax 740 Series Passage Lock	45 ⁷ / ₈ ” from top of active panel.
4” Butt Hinges (3 total)	10 ³ / ₈ ” from top of active panel to centerline of top hinge and maximum 29 ¹ / ₄ ” centerline to centerline.

Product Identification: A label will be affixed to the assembly. The label includes the manufacturer's name, door assembly size and configuration along with the design pressure rating of the assembly.

LIMITATIONS

Design pressures (DP):

Assembly	Overall Width (in.)	Overall Height (in.)	Design Pressure (psf)
1	37 ³ / ₄ ”	82”	Inswing +47 / -53 PSF Outswing +50 / -50 PSF
2	75”	82”	Inswing +49.2 / -50 PSF Outswing +49.2 / -50 PSF
3	113 ¹ / ₄ ”	82”	Inswing +49.2 / -50 PSF Outswing +49.2 / -50 PSF
4	74 ¹ / ₂ ”	82”	Inswing +47 / -53 PSF Outswing +50 / -50 PSF
5	149 ³ / ₄ ”	82”	Inswing +47 / -53 PSF Outswing +50 / -50 PSF

Impact Resistance: These door systems satisfy the Texas Department of Insurance's criteria for protection from windborne debris in both the **Inland I zone** and the **Seaward zone**. The door systems

may be installed at any height on the structure as long as the design pressure rating for the systems is not exceeded. These door systems will not need to be protected with an impact protective system.

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

INSTALLATION INSTRUCTIONS

Assembly #1: 3068 Single Door, Glazed Full Lite; X

Wall Framing: Minimum Spruce-Pine-Fir (SPG \geq 0.42).

Fasteners: Head, Sill and jambs: Minimum No. 10 x 2 $\frac{1}{2}$ " long PFH wood screws.

Attachment: Install in accordance with engineering drawing TX-3180 (dated 7-9-08), signed & sealed by Wendell W. Haney, P.E. on 7-23-08. The doors shall be mounted to the wood framing members. The fasteners shall penetrate through the door frame and into the wood framing members. If the sill is secured to a concrete foundation, then minimum $\frac{1}{4}$ " diameter concrete anchors shall be used. The concrete anchors shall embed a minimum of 1 $\frac{3}{8}$ " into the concrete.

Assembly #2: 3068 Single Glazed Door with Sidelite; OX and XO

Wall Framing: Minimum Spruce-Pine-Fir (SPG \geq 0.42).

Fasteners: Head, Sill and jambs: Minimum No. 10 x 2 $\frac{1}{2}$ " long PFH wood screws.

Attachment: Install in accordance with engineering drawing TX-3181 (dated 7-9-08), signed & sealed by Wendell W. Haney, P.E. on 7-23-08. The doors shall be mounted to the wood framing members. The fasteners shall penetrate through the door frame and into the wood framing members. If the sill is secured to a concrete foundation, then minimum $\frac{1}{4}$ " diameter concrete anchors shall be used. The concrete anchors shall embed a minimum of 1 $\frac{3}{8}$ " into the concrete.

Assembly #3: 3068 Single Glazed Door with Sidelites; OXO

Wall Framing: Minimum Spruce-Pine-Fir (SPG \geq 0.42).

Fasteners: Head, Sill and jambs: Minimum No. 10 x 2 $\frac{1}{2}$ " long PFH wood screws.

Attachment: Install in accordance with engineering drawing TX-3182 (dated 7-9-08), signed & sealed by Wendell W. Haney, P.E. on 7-23-08. The doors shall be mounted to the wood framing members. The fasteners shall penetrate through the door frame and into the wood framing members. If the sill is secured to a concrete foundation, then minimum $\frac{1}{4}$ " diameter concrete anchors shall be used. The concrete anchors shall embed a minimum of 1 $\frac{3}{8}$ " into the concrete.

Assembly #4: 6068 Glazed Double Door; XX

Wall Framing: Minimum Spruce-Pine-Fir (SPG \geq 0.42).

Fasteners: Head, Sill and jambs: Minimum No. 10 x 2 $\frac{1}{2}$ " long PFH wood screws.

Attachment: Install in accordance with engineering drawing TX-3183 (dated 7-9-08), signed & sealed by Wendell W. Haney, P.E. on 7-23-08. The doors shall be mounted to the wood framing members. The fasteners shall penetrate through the door frame and into the wood framing members. If the sill is secured to a concrete foundation, then minimum $\frac{1}{4}$ " diameter concrete anchors shall be used. The concrete anchors shall embed a minimum of 1 $\frac{3}{8}$ " into the concrete.

Assembly #5: 6068 Glazed Double Door with Sidelites; OXXO

Wall Framing: Minimum Spruce-Pine-Fir (SPG \geq 0.42).

Fasteners: Head, Sill and jambs: Minimum No. 10 x 2 $\frac{1}{2}$ " long PFH wood screws.

Attachment: Install in accordance with engineering drawing TX-3184 (dated 7-9-08), signed & sealed by Wendell W. Haney, P.E. on 7-23-08. The doors shall be mounted to the wood framing members. The fasteners shall penetrate through the door frame and into the wood framing members. If the sill is secured to a concrete foundation, then minimum $\frac{1}{4}$ " diameter concrete anchors shall be used. The concrete anchors shall embed a minimum of 1 $\frac{3}{8}$ " into the concrete.

August 1, 2008
DR-330

Note: The manufacturer's installation instructions and engineering drawings TX-3180, TX-3181, TX-3182, TX-3183 and TX-3184 (dated 7-9-08, signed and sealed by Wendell W. Haney, P.E., on 7-23-08), 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.