

TEXAS DEPARTMENT OF INSURANCE

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PRODUCT EVALUATION DR-211

Effective August 1, 2006

*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" Opaque Premium Fiberglass Doors, Inswing / Outswing, Impact Resistant Door Panels, With and Without Non-Impact Resistant Sidelites, Singles & Doubles, manufactured by:

Trinity Glass International
4621 192nd Street
East Tacoma, WA 98446
Tel. (253) 875-7300

will be acceptable in designated catastrophe areas along the Texas Gulf Coast when installed in accordance with this product evaluation report and engineering drawings TX-586, TX-587, TX-589 and TX-590 (Revision #1 dated June 28, 2006, sheets 1-5 of 5), TX-588 (Revision #1 dated June 28, 2006, sheets 1-6 of 6), signed and sealed by Wendell W. Haney, P.E. on June 30, 2006.

PRODUCT DESCRIPTION

This product consists of opaque fiberglass side hinged doors, with and without sidelites, single and double configurations, 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"x6'8" Opaque Premium Fiberglass Single Door, Inswing / Outswing with Boxed Sidelite, Combination Mullion (OX, XO)	Inswing \pm 55 PSF Outswing \pm 55 PSF
2	3'0"x6'8" Opaque Premium Fiberglass Single Door, Inswing / Outswing with Boxed Sidelite, Combination Mullion, (OXO)	Inswing \pm 55 PSF Outswing \pm 55 PSF

PRODUCT DESCRIPTION (Continued)

General Description (cont.):

3	6'0"x6'8" Opaque Premium Fiberglass Double Door, Inswing / Outswing with Boxed Sidelites, Combination Mullion (OXXO)	Inswing ± 55 PSF Outswing ± 55 PSF
4	3'0"x6'8" Opaque Premium Fiberglass Single Door, Inswing / Outswing with Sidelite, Integral Mullion, CHS (OX, XO)	Inswing & Outswing ± 55 PSF with 6.84" DLO width sidelite glass. Inswing +60 / -70 PSF with 5.84" DLO width sidelite glass. Outswing +60 / -60 PSF with 5.84" DLO width sidelite glass.
5	3'0"x6'8" Opaque Premium Fiberglass Single Door, Inswing / Outswing with Sidelite, Integral Mullion, CHS (OXO)	Inswing & Outswing ± 55 PSF with 6.84" DLO width sidelite glass. Inswing +60 / -70 PSF with 5.84" DLO width sidelite glass. Outswing +60 / -60 PSF with 5.84" DLO width sidelite glass.

Product Dimensions:

Assembly	Overall Frame Assembly Size	Fixed/Operable Panel Sizes
1	53" x 81 $\frac{5}{8}$ "	Door 35 $\frac{3}{4}$ " x 79" Sidelite 13 $\frac{7}{8}$ " x 79"
2	68 $\frac{1}{2}$ " x 81 $\frac{5}{8}$ "	Door 35 $\frac{3}{4}$ " x 79" Sidelite 13 $\frac{7}{8}$ " x 79"
3	105" x 81 $\frac{5}{8}$ "	Door 35 $\frac{3}{4}$ " x 79" Sidelite 13 $\frac{7}{8}$ " x 79"
4	52 $\frac{1}{2}$ " x 81 $\frac{5}{8}$ "	Door 35 $\frac{3}{4}$ " x 79" Sidelite 13 $\frac{7}{8}$ " x 79"
5	67 $\frac{1}{2}$ " x 81 $\frac{5}{8}$ "	Door 35 $\frac{3}{4}$ " x 79" Sidelite 13 $\frac{7}{8}$ " x 79"

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: Sealed insulating glass unit. The sealed insulating glass unit is comprised of two (2) double strength ($\frac{1}{8}$ ") fully tempered glass lites separated by a Swiggle Seal spacer system.

PRODUCT DESCRIPTION (Continued)

Glazing Method Key:

GM-1: The glass is set from the interior against hotmelt glazing compound backbedding. Plastic lite frame is screwed together with self-threading fasteners.

Frame Construction: The frame head, sill, and jambs consist of fingerjoint pine wood members. The frame corners are rabbet-cut and fastened together with (4) ½" crown, 2" long 16 ga. staples per corner at the head and square-cut and kerfed at the bottom to receive a molded plastic sill key. The sill key is fastened to the bottom of the frame with (2) #6x1-1/4" fine thread drywall screws. The bottom of the jamb / sill key assembly is fastened to the sill with (3) #6x1-1/4" fine thread drywall screws.

Panel Construction: The panel members consist of 0.079" minimum thickness fiberglass skins with LVL and PVC stiles and rails. The door panel is filled with polyurethane foam, 2.5 lbs/ft³ minimum density.

PVC Astragal: The extruded PVC astragal is attached to the normally inactive door with (7) #9 x 2 ¼" PFH wood screws. The latch and deadbolt strike plates are attached to the astragal with (2) # 8 x 2" PFH wood screws in each strike plate. The metal throw bolt, located at the top and bottom of the astragal, has a 0.853" throw and is attached with (2) #9 x 2 ¼" PFH wood screws each.

Integral Mullion: The integral mullion consists of a fingerjoint pine wood member fastened to the frame head with (2) #9 x 2-1/4" wood screws. The bottom connection of the integral mullion to the sill is accomplished by either direct mating of the mullion to the sill or by use of a molded mullion base kit. If direct mating is used, the mullion is fastened to the sill using (2) #9 x 2 ½" wood screws. If the molded plastic mullion base kit is used, the base kit is fastened to the bottom of the mullion using (3) #6 x 1-1/4" fine thread drywall screws and the mullion base kit is fastened to the sill using (2) #9 x 2-1/4" wood screws.

Reinforcement: None.

Hardware:

<u>Description</u>	<u>Location</u>
• Kwikset "Security" 660 Series Deadbolt (Grade II) <u>or</u>	40 ⅜" from top of active panel
• Schlage "Maximum Security" Series Deadbolt (Grade II)	
• Kwikset "Security" 660 Series Passage Lock (Grade II) <u>or</u>	45 ⅞" from top of active panel
• Schlage "Maximum Security" Series Passage Lock (Grade II)	
• Endura "Ultimate" Astragal	
• (3) 4" Steel Butt Hinges	8 ½" from top of active panel to centerline of top hinge and maximum 31" centerline to centerline.

Product Identification: A label will be affixed to the assembly. The label includes the manufacturer's name, performance characteristics and the design pressure rating of the assembly.

LIMITATIONS

Design pressures (DP):

Assembly	Overall Width (in.)	Overall Height (in.)	Design Pressure (psf)
1	53"	81 $\frac{5}{8}$ "	Inswing \pm 55 PSF Outswing \pm 55 PSF
2	68 $\frac{1}{2}$ "	81 $\frac{5}{8}$ "	Inswing \pm 55 PSF Outswing \pm 55 PSF
3	105"	81 $\frac{5}{8}$ "	Inswing \pm 55 PSF Outswing \pm 55 PSF
4	52 $\frac{1}{2}$ "	81 $\frac{5}{8}$ "	Inswing & Outswing \pm 55 PSF with 6.84" DLO width sidelite glass. Inswing +60 / -70 PSF with 5.84" DLO width sidelite glass. Outswing +60 / -60 PSF with 5.84" DLO width sidelite glass.
5	67 $\frac{1}{2}$ "	81 $\frac{5}{8}$ "	Inswing & Outswing \pm 55 PSF with 6.84" DLO width sidelite glass. Inswing +60 / -70 PSF with 5.84" DLO width sidelite glass. Outswing +60 / -60 PSF with 5.84" DLO width sidelite glass.

Impact Resistance:

Assembly #1, #2, #3, #4 & #5 glazed sidelites do not satisfy the Texas Department of Insurance's criteria for protection from windborne debris. The sidelites will require an impact protective system.

Assembly #1, #2, #3, #4 & #5 opaque door panels satisfy the Texas Department of Insurance's criteria for protection from windborne debris in the **Seaward zone**. The opaque door panel passed Missile Level D specified in ASTM E 1996-02. The door panels may be installed at any height on the structure as long as the design pressure rating for the assemblies is not exceeded. The door panels will not need to be protected with an impact protective system but the sidelite will require an impact protective system as noted above.

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 with Boxed Sidelite & Combination Mullion; OX, XO

Wall Framing: Minimum Spruce-Pine-Fir.

Fasteners: Head, Sill and jambs to rough framing: Minimum No. 10 x 3" long PFH wood screws.

Attachment: Install in accordance with engineering drawing TX-586, signed & sealed by Wendell W. Haney, P.E. on June 30, 2006. 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 $\frac{3}{16}$ " diameter concrete anchors shall be used. The concrete anchors shall embed a minimum of 1 $\frac{1}{4}$ " into the concrete.

Assembly #2: 3068 Single Door with Boxed Sidelite and Combination Mullion: OXO

Wall Framing: Minimum Spruce-Pine-Fir.

Fasteners: Head, Sill and jambs to rough framing: Minimum No. 10 x 3" long PFH wood screws.

INSTALLATION INSTRUCTIONS

Attachment: Install in accordance with engineering drawing TX-587, signed & sealed by Wendell W. Haney, P.E. on June 30, 2006. 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 $\frac{3}{16}$ " diameter concrete anchors shall be used. The concrete anchors shall embed a minimum of $1\frac{1}{4}$ " into the concrete.

Assembly #3: 6068 Double Door with Boxed Sidelite & Combination Mullion; OXXO

Wall Framing: Minimum Spruce-Pine-Fir.

Fasteners: Head, Sill and jambs to rough framing: Minimum No. 10 x 3" long PFH wood screws.

Attachment: Install in accordance with engineering drawing TX-588, signed & sealed by Wendell W. Haney, P.E. on June 30, 2006. 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 $\frac{3}{16}$ " diameter concrete anchors shall be used. The concrete anchors shall embed a minimum of $1\frac{1}{4}$ " into the concrete.

Assembly #4: 3068 Single Door with Sidelite & Integral Mullion (CHS): OX / XO

Wall Framing: Minimum Spruce-Pine-Fir.

Fasteners: Head, Sill and jambs to rough framing: Minimum No. 10 x 3" long PFH wood screws.

Attachment: Install in accordance with engineering drawing TX-589, signed & sealed by Wendell W. Haney, P.E. on June 30, 2006. 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 $\frac{3}{16}$ " diameter concrete anchors shall be used. The concrete anchors shall embed a minimum of $1\frac{1}{4}$ " into the concrete.

Assembly #5: 3068 Single Door with Sidelite & Integral Mullion (CHS); OXO

Wall Framing: Minimum Spruce-Pine-Fir.

Fasteners: Head, Sill and jambs to rough framing: Minimum No. 10 x 3" long PFH wood screws.

Attachment: Install in accordance with engineering drawing TX-590, signed & sealed by Wendell W. Haney, P.E. on June 30, 2006. 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 $\frac{3}{16}$ " diameter concrete anchors shall be used. The concrete anchors shall embed a minimum of $1\frac{1}{4}$ " into the concrete.

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.