

# 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-209

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, Singles & Doubles, manufactured by:**

**Trinity Glass International**  
**4621 192<sup>nd</sup> 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-584 (Revision #1 dated June 28, 2006, sheets 1-5 of 5) and TX-585 (Revision #1 dated June 28, 2005, sheets 1-5 of 5), 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; (X)	Inswing $\pm$ 75 PSF Outswing $\pm$ 75 PSF
2	6'0"x6'8" Opaque Premium Fiberglass Double Door, Inswing / Outswing; (XX)	Inswing $\pm$ 55 PSF Outswing $\pm$ 55 PSF

#### **Product Dimensions:**

Assembly	Overall Frame Assembly Size	Fixed/Operable Panel Sizes
1	37 $\frac{1}{2}$ " x 81 $\frac{5}{8}$ "	Door 35 $\frac{3}{4}$ " x 79"
2	74" x 81 $\frac{5}{8}$ "	Door 35 $\frac{3}{4}$ " x 79"

**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)  $\frac{1}{2}$ " 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.

### PRODUCT DESCRIPTION (Continued)

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/ft<sup>3</sup> minimum density.

**PVC Astragal:** The extruded PVC astragal is attached to the normally inactive door with (7) #9 x 2 1/4" 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 1/4" 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 1/2" 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 3/8" from top of active panel
• Schlage "Maximum Security" Series Deadbolt (Grade II)	
• Kwikset "Security" 660 Series Passage Lock (Grade II) <u>or</u>	45 7/8" from top of active panel
• Schlage "Maximum Security" Series Passage Lock (Grade II)	
• Endura "Ultimate" Astragal	
• (3) 4" Steel Butt Hinges	8 1/2" 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	37 1/2"	81 5/8"	Inswing ± 75 PSF Outswing ± 75 PSF
2	74"	81 5/8"	Inswing ± 55 PSF Outswing ± 55 PSF

#### Impact Resistance:

Assembly #1 & #2 opaque door assemblies satisfy the Texas Department of Insurance's criteria for protection from windborne debris in the **Seaward zone**. The opaque door assemblies passed Missile Level D specified in ASTM E 1996-02. 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. These door assemblies 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; X

**Wall Framing:** Minimum Spruce-Pine-Fir.

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

**Attachment:** Install in accordance with engineering drawing TX-584, 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 3/16" diameter concrete anchors shall be used. The concrete anchors shall embed a minimum of 1 1/4" into the concrete.

#### Assembly #2: 6068 Double Door; XX

**Wall Framing:** Minimum Spruce-Pine-Fir.

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

**Attachment:** Install in accordance with engineering drawing TX-585, 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 3/16" diameter concrete anchors shall be used. The concrete anchors shall embed a minimum of 1 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.