

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-453

Effective November 1, 2010

*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 **July 2013**.*

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.

Series 8100 Aluminum Sliding Glass Doors, Reinforced and Non-reinforced, Small Missile Impact Rated, Impact Resistant, manufactured by

WinDoor Incorporated
7500 Amsterdam Drive
Orlando, Florida 32832
Telephone: (407) 481-8400
www.windowinc.com

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 design drawings that are referenced in this product evaluation report.

PRODUCT DESCRIPTION

The Series 8100 door is an aluminum sliding glass door. The aluminum sliding glass doors evaluated in this report are impact resistant doors tested in accordance with the small missile test criteria in ASTM E 1996. The assemblies may be reinforced or non-reinforced. The doors may be slid into a pocket. The pocket is not part of this evaluation report. This product evaluation report is for aluminum sliding glass doors based on the following tested constructions:

General Description:

System	Description	Label Rating
1	Series 8100 Aluminum SGD; Non-Reinforced; XXXXXXP	SD-C70 359 x 98 ASTM E 1886, ASTM E 1996
2	Series 8100 Aluminum SGD; Non-Reinforced; XXXXXXP	SD-C70 287 x 120 ASTM E 1886, ASTM E 1996
3	Series 8100 Aluminum SGD; Reinforced; XXXXXXP	SD-C90 359 x 98 (Neg DP=110) ASTM E 1886, ASTM E 1996
4	Series 8100 Aluminum SGD; Reinforced; XXXXXXP	SD-C90 287 x 120 (Neg DP=110) ASTM E 1886, ASTM E 1996

Component Dimensions:

System	Overall Door Size	Maximum Panel Size	Maximum Panel Daylight Opening Size
1	358 1/2" x 98"	61 15/16" x 96 1/4"	52 1/4" x 86 1/2"
2	286 1/2" x 120"	49 15/16" x 118 1/16"	40 1/4" x 108 3/8"
3	358 1/2" x 98"	61 15/16" x 96 1/4"	52 1/4" x 86 1/2"
4	286 1/2" x 120"	49 15/16" x 118 1/16"	40 1/4" x 108 3/8"

Glazing Description:

System	Glass Construction ¹	Glazing Method ²
1	SG-1 or SG-2 or SG-03 IG-1 or IG-2 or IG-3	GM-1
2	SG-1 or SG-2 or SG-03 IG-1 or IG-2 or IG-3	GM-1
3	SG-1 or SG-2 or SG-03 IG-1 or IG-2 or IG-3	GM-1
4	SG-1 or SG-2 or SG-03 IG-1 or IG-2 or IG-3	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 door panels are single glazed with a laminated glass unit. The laminated glass unit is comprised of two 1/4" heat strengthened glass lites with a 0.060 PVB interlayer by DuPont.

SG-2: The door panels are single glazed with a laminated glass unit. The laminated glass unit is comprised of two 1/4" heat strengthened glass lites with a 0.035 SGP interlayer by DuPont.

SG-3: The door panels are single glazed with a laminated glass unit. The laminated glass unit is comprised of two 1/4" heat strengthened glass lites with a 0.060 PVB interlayer by Solutia.

IG-1: The door panels contain a sealed insulating glass unit. The insulating glass unit is comprised of a 3/16" fully tempered glass lite and a laminated glass unit separated by a desiccant-filled metal spacer system. The laminated glass unit is comprised of two 3/16" heat strengthened glass lites with a 0.060 PVB interlayer by DuPont.

IG-2: The door panels contain a sealed insulating glass unit. The insulating glass unit is comprised of a 3/16" fully tempered glass lite and a laminated glass unit separated by a desiccant-filled metal spacer system. The laminated glass unit is comprised of two 3/16" heat strengthened glass lites with a 0.035 SGP interlayer by DuPont.

IG-3: The door panels contain a sealed insulating glass unit. The insulating glass unit is comprised of a 3/16" fully tempered glass lite and a laminated glass unit separated by a desiccant-filled metal spacer system. The laminated glass unit is comprised of two 3/16" heat strengthened glass lites with a 0.060 PVB interlayer by Solutia.

Glazing Method Key:

GM-1: The single glazed lites and the insulating glass units are glazed with Sika 552 sealant backbedding compound. Aluminum extruded glazing stops secure the glass units in place from the interior and the exterior.

Frame Construction: The frame members are manufactured from extruded aluminum. The frame members are not thermally broken. The frame corners are coped, butted, and attached with screws. Frame members are not thermally broken.

Panel Construction: The panels are manufactured from extruded aluminum. The panel corners are coped and attached with two (2) screws per corner.

Sill Riser:

Systems 1 and 2: A minimum 3" aluminum sill riser is snap fit to the interior leg of the frame sill.

Systems 3 and 4: A minimum 3" aluminum sill riser is snap fit to the interior leg of the frame sill.

Hardware:

- Adjustable tandem wheel roller assembly; One (1) required; Located at each end of each active panel.
- Two-point mortise type locks; One (1) required; Located on the lock stile.
- Dual-point keepers; One (1) required; Located on the stiles at the lock positions.

Reinforcement:

Systems 1 and 2: Extruded aluminum reinforcement is utilized in the offset butt stile. The reinforcement extends the length of the members.

Systems 3 and 4: Extruded aluminum reinforcement is utilized in each interlock and in the offset butt stiles. The reinforcement extends the length of the members.

Product Identification: Two certification program labels (Keystone) will be affixed to the sliding glass door. The certification program labels include the manufacturer's CAR number; product name; performance characteristics; and the approved inspection agency (Keystone). One label includes the following applicable standard: AAMA/WDMA/CSA 101/I.S.2/A440-05. The second label includes the following applicable standards: ASTM E 1886-05 and ASTM E 1996-05.

Each certification label contains a Certification Authorization Report (CAR) number located on the top right side of the label and a model name for the sliding glass door. The following CAR numbers and model names are located on each label:

Label Identification:

System	Model	Label with AAMA/WDMA/CSA 101/I.S.2/A440-05	Certification Authorization Report (CAR) number
			Label with ASTM E 1886-05 / ASTM E 1996-05 Missile Level A
1	8100 2, 3, 4 Track Alum Non-Reinforced Impact SGD	167-195	167-220
2	8100 2, 3, 4 Track Alum Non-Reinforced Impact SGD	167-197	167-224
3	8100 2, 3, 4 Track Reinforced Impact SGD	167-196	167-222
4	8100 2, 3, 4 Track Reinforced Impact SGD	167-198	167-226

LIMITATIONS

Design pressures:

System	Maximum Width (in.)	Maximum Height (in.)	Design Pressures (psf)
1	358 ½	98	± 70
2	286 ½	120	± 70
3	358 ½	98	+90/-110
4	286 ½	120	+90/-110

Impact Resistance: These door assemblies satisfy the Texas Department of Insurance's criteria for protection from windborne debris in the **Inland I zone** and the **Seaward zone**. The door assemblies passed Missile Level A specified in ASTM E 1996-04. The door assemblies shall only be installed 30 feet or higher above grade 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.

Tested to Higher Negative Design Pressure: The label indicates that the product was tested to a higher negative design pressure rating. The higher negative design pressure rating is specified in the table above.

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

INSTALLATION INSTRUCTIONS

General: The door assembly shall be prepared and installed in accordance with the manufacturers recommended installation instructions, the approved drawings referenced below, and this evaluation report. Detailed installation instructions and component drawings are available from the manufacturer.

Design Drawings: The doors shall be installed in accordance with Drawing No. 08-00879, Revision B, titled "8100 Series LMI Reinforced & Non-Reinforced," sheets 1 through 22 of 22, dated December 07, 2009, and revised June 16, 2010, signed and sealed by Luis R. Lomas., P.E. The stated drawings will be referred to as the approved drawings in this evaluation report.

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

- Concrete (minimum compressive strength: 2,700 psi)
- Hollow concrete block; ASTM C-90, Grade N, Type 1 (or greater)
- Wood dimension lumber (minimum Spruce-Pine-Fir)
- Wood backed (minimum Spruce-Pine-Fir) steel (minimum 20 gauge)

Installation:

- Refer to Sheets 7 of 22, 8 of 22, and 9 of 22 of the approved drawings for the anchor layout and notes.
- Refer to Sheets 17 of 22, 18 of 22, and 19 of 22 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.