

TEXAS DEPARTMENT OF INSURANCE

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PRODUCT EVALUATION WIN-1003

Effective November 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 **June 2011**.*

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 55/255 Vinyl Double Hung Windows, Individual and Mulled, Impact Resistant, manufactured by:

Atrium Windows and Doors
9001 Ambassador Row
Dallas, Texas 75247
(214) 637-2696

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

PRODUCT DESCRIPTION

The Series 55/255 window is a vinyl double hung window. The vinyl double hung windows evaluated in this report are individual and mulled, impact resistant windows. This product evaluation report is for vinyl double hung windows based on the following tested constructions:

General Description:

System	Description	Label Rating
1	Series 55/255 Vinyl Double Hung Window; (XX)	H-R50 36 x 72 ASTM E 1886/ASTM E 1996
2	Series 55/255 Vinyl Double Hung Windows; Twin (XX XX)	Each Window: H-R50 36 x 72 ASTM E 1886 / ASTM E 1996

Product Dimensions:

System	Overall Size	Top Sash Size	Bottom Sash Size
1	36" x 72"	31 $\frac{7}{8}$ " x 34 $\frac{3}{8}$ "	32 $\frac{7}{8}$ " x 35 $\frac{1}{2}$ "
2	72 $\frac{1}{2}$ " x 69"	Each: 31 $\frac{7}{8}$ " x 32 $\frac{1}{2}$ "	Each: 33" x 34"

Glazing Description:

System	Glass Construction ¹	Glazing Method ²
1	IG-1	GM-1
2	IG-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:

IG-1: Both operable sashes contain a sealed insulating glass unit. The sealed insulating glass unit is comprised of a laminated glass unit and a double strength ($\frac{1}{8}$ ") annealed glass lite separated by a steel reinforced butyl spacer system. The laminated glass unit is comprised of two double strength ($\frac{1}{8}$ ") annealed glass lites with a Dupont Butacite 0.090" interlayer.

Glazing Method Key:

GM-1: The insulating glass units are set from the exterior using a backbedding compound of either Sika-Flex 552 or Tremco S-700 at the interior. A vinyl snap-in glazing bead secures the insulating glass units from the exterior.

Frame Construction: The frame members are manufactured from extruded vinyl (PVC). The frame corners are mitered and welded construction.

Sill Extender: The sill extender is sealed to the interior leg of the sill full length using a bead of silicone sealant.

Sash Construction: The sash members are manufactured from extruded vinyl (PVC). The sash corners are mitered and welded construction.

Mullion Construction: Each mullion contains a custom shaped extruded aluminum reinforcement. The reinforcement extends the length of the mullion. The reinforcement is secured to each frame jamb with screws located 6 inches from the head and sill and 20 inches on center. Angle brackets are inserted into the interior channel of the aluminum reinforcement at each end and are used to secure the mullion to the wall framing.

Reinforcement: Custom shaped aluminum reinforcement is located in the sash stiles and the sash rails. The reinforcement extends the length of the members.

Hardware (per window):

- Locks; Two (2) required; Located on the top rail of the top sash, 6 inches from each end.
- Keepers; Two (2) required; Secured to the interior face of the top sash bottom rail, 6 inches from the head and the sill.
- Block and tackle balance; Two (2) per sash required; Located in the jamb pocket of each jamb.
- Tilt pins; Two (2) per sash required; Inserted into the bottom corners of the bottom rail of each sash.
- Tilt latch; Two (2) required; Inserted into the top rail corners of the top and bottom sash.

Product Identification: A certification program label (Keystone) will be affixed to each window. The certification program label includes the product name: **Model 55/255 Double Hung**; performance characteristics; and the approved inspection agency (Keystone). The certification program label also contains Certification Authorization Report (CAR) numbers located on the right side of the label. The following CAR numbers and test standards are included on the label:

Label Identification:

Certification Authorization Report (CAR) number	Test Standard
5-202	ASTM E 1886/1996-02; Missile Level D, Wind Zone 3
5-103	AAMA/WDMA/CSA 101/I.S.2/A440-05

LIMITATIONS

Design pressures:

System	Maximum Width (in.)	Maximum Height (in.)	Design Pressures (psf)
1	36	72	± 50
2	72 ½	69	± 50

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

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

INSTALLATION INSTRUCTIONS

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

Installation:

System 1: The wood wall framing members shall be minimum Spruce-Pine-Fir (SPF) dimension lumber. The window assembly shall be secured to the wall framing using the nailing fin of the window with minimum No. 8 screws. The fasteners shall be located approximately 3 inches from each corner and approximately 8 inches on center along the perimeter of the window. The fasteners shall be long enough to penetrate a minimum of 1 ½" into the wall framing.

System 2: The wood wall framing members shall be minimum Spruce-Pine-Fir (SPF) dimension lumber. The window assembly shall be secured to the wall framing using the nailing fin of the window with minimum No. 8 screws. The fasteners shall be located approximately 3 inches from each corner and approximately 8 inches on center along the perimeter of the window. Each mullion angle bracket is secured to the wall framing with two (2) No. 8 screws. The fasteners shall be long enough to penetrate a minimum of 1 ½" into the wall framing.

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.