TDI | Texas Department of Insurance

PO Box 12030 | Austin, TX 78711 | 800-578-4677 | tdi.texas.gov

Product Evaluation

WIN2691 | 1122

Engineering Services Program

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 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.

For more information, contact TDI Engineering Services Program at (800) 248-6032.

Evaluation ID: WIN-2691

Effective Date: November 1, 2022
Re-evaluation Date: October 2024

Product Name: Ultimate Aluminum Clad Wood Double Hung Windows, G2, Impact Resistant

Manufacturer: Marvin
P.O. Box 100
Highway 11 West
Warroad, MN 56763
(218) 386-4021

General Description:

System	Description	Label Rating	Design Pressure Rating
1	Ultimate Clad Wood Double Hung Windows	LC-PG65 (45.25 x 79.5) Missile Level D	+65 / -65 psf
2	Ultimate Clad Wood Double Hung Windows	LC-PG65 (49.25 x 107.5) Missile Level D	+65 / -65 psf
3	Ultimate Clad Wood Double Hung Windows	LC-PG65 (47.25 x 119.51) Missile Level D	+65 / -65 psf
4	Ultimate Clad Wood Double Hung Windows	LC-PG65 (53.26 x 103.51) Missile Level D	+65 / -65 psf
5	Ultimate Clad Wood Double Hung Windows	LC-PG65 (42.37 x 92.09) Missile Level D	+65 / -65 psf

Product Dimensions:

System	Overall Size	Exterior Sash Size	Interior Sash Size
1	45-1/4" x 79-1/2"	42-1/16" x 39"	42-1/16" x 39-3/4"
2	49-1/4" x 107-1/2"	46-1/16" x 53"	46-1/16" x 53-3/4"
3	47-1/4" x 119-1/2"	44-1/16" x 58-7/8"	44-1/16" x 59-3/4"
4	53-1/4" x 103-1/2"	50-1/16" x 50-7/8"	50-1/16" x 51-3/4"
5	42-3/8" x 92-3/32"	38-3/4" x 59"	38-3/4" x 32"

Product Identification (Certification Label on Window):

System		
1-2	Certification Agency	WDMA
	Manufacturer's Name or Code Name	Marvin
	Product Name	UL DBLHNG G2 IZ3
	Test Standards	AAMA/WDMA/CSA 101/I.S.2/A440-08,11 ASTM E1886-05/E1996-12 Missile Level D
3-4	Certification Agency	WDMA
	Manufacturer's Name or Code Name	Marvin
	Product Name	UL DBLHNG G2 IZ3
	Test Standards	AAMA/WDMA/CSA 101/I.S.2/A440-11 ASTM E1886-13a/E1996-14a Missile Level D
5	Certification Agency	WDMA
	Manufacturer's Name or Code Name	Marvin
	Product Name	UL DBLHNG G2 IZ3
	Test Standards	AAMA/WDMA/CSA 101/I.S.2/A440-11,17 ASTM E1886-13a/E1996-17 Missile Level D

Compliance: The products comply with AAMA/WDMA/CSA 101/I.S.2/A440-17, ASTM E 1886-13a, and ASTM E 1996-14a as referenced in the 2018 IRC and 2018 IBC.

Impact Resistance:

System	Impact Resistant	Requirement
1-5	Yes	These products have been tested for windborne debris resistance. They satisfy Missile Level D requirements specified in ASTM E 1996-14a.

Installation:

Systems 1 and 2:

Option 1: The wood wall framing members must be minimum Southern Yellow Pine dimension lumber. The window assembly is secured to the wall framing through an aluminum nailing fin.

The nailing fin is secure to the wall framing with 1-3/4" long, 12-gauge, galvanized roofing nails. Locate the nails approximately 4" from each corner and 4" on center along the perimeter. In addition, along the side jambs, locate No. 8 x 3" screws at the midspan of each jamb. Fasteners must be long enough to penetrate a minimum of 1-1/2" into the wall framing members.

Option 2: The wood wall framing members must be minimum Southern Yellow Pine dimension lumber. The window assembly is secured to the wall framing with No. 8 x 3" screws. Locate the screws approximately 6" from each corner and 15" on center along the perimeter. Fasteners must be long enough to penetrate a minimum of 1-1/2" into the wall framing members.

Option 3: The wood wall framing members must be minimum Southern Yellow Pine dimension lumber. The window assembly is secured to the wall framing with galvanized steel structural brackets (1-9/16" x 6"-8" x 0.050"). Locate the brackets approximately 6" from each corner and 13" on center along the perimeter. Secure the brackets to the window frame with two (2) No. 8 x 5/8" screws and to the wall framing with two (2) No. 8 screws. Fasteners must be long enough to penetrate a minimum of 1-/2" into the wall framing members.

Systems 3 and 4:
Option 1: The wood wall framing members must be Spruce-Pine-Fir or Douglas-Fir dimension lumber. The window assembly is secured to the wall framing through the aluminum nailing fin. The nailing fin is secured to the wall framing with 2" long, 12-gauge, galvanized smooth shank roofing nails. Locate the nails approximately 4" from each corner and 8" on center along the perimeter. In addition, along the side jambs, locate No. 8 x 3" screws at each jamb performance bracket location and at the fixed location at midpoint of each jamb. Fasteners must be long enough to penetrate a minimum of 1-1/2" into the wall framing members.

Option 2: The wood wall framing members must be minimum Spruce-Pine-Fir or Douglas-Fir dimension lumber. The window assembly is secured to the wall framing with galvanized steel structural brackets (1-9/16" x 6"-8" x 0.050"). Locate the brackets approximately 6" from each corner and 13" on center along the head and side jambs. Secure the brackets to the window frame with two (2) No. 8 x 5/8" screws and to the wall framing with two (2) No. 8 screws. Fasteners must be long enough to penetrate a minimum of 1-1/2" into the wall framing members.

Option 3: The wood wall framing members must be minimum Spruce-Pine-Fir or Douglas-Fir dimension lumber. The window assembly is secured to the wall framing with No. 8 x 3" screws along the head and side jambs. Locate the screws at each jamb performance bracket location, at fixed location at mid-point of each jamb, and approximately 6" from each corner and 15" on center. Fasteners must be long enough to penetrate a minimum of 1-1/2" into the wall framing members.

System 5:
Option 1: The wood wall framing members must be Spruce-Pine-Fir or Douglas-Fir dimension lumber. The window assembly is secured to the wall framing through the aluminum nailing fin. The nailing fin is secured to the wall framing with 2" long, 12-gauge, galvanized smooth shank

roofing nails. Locate the nails approximately 4" from each corner and 8" on center along the perimeter. In addition, along the side jambs, locate No. 8 x 3" screws at each jamb performance bracket location and at the fixed location at midpoint of each jamb. Fasteners must be long enough to penetrate a minimum of 1-1/2" into the wall framing members.

Option 2: The wood wall framing members must be minimum Spruce-Pine-Fir or Douglas-Fir dimension lumber. The window assembly is secured to the wall framing with galvanized steel structural brackets (1-9/16" x 6"-8" x 0.050"). Locate the brackets approximately 6" from each corner and 13" on center along the head and side jambs. Secure the brackets to the window frame with two (2) No. 8 x 5/8" screws and to the wall framing with two (2) No. 8 screws. In addition, along the side jambs, locate No. 8 x 3" screws at each jamb performance bracket location. Fasteners must be long enough to penetrate a minimum of 1-1/2" into the wall framing members.

Option 3: The wood wall framing members must be minimum Spruce-Pine-Fir or Douglas-Fir dimension lumber. The window assembly is secured to the wall framing with No. 8 x 3" screws along the head and side jambs. Locate the screws at each jamb performance bracket location, at fixed location at mid-point of each jamb, and approximately 6" from each corner and 15" on center. In addition, along the side jambs, locate No. 8 x 3" screws at each jamb performance bracket location. Fasteners must be long enough to penetrate a minimum of 1-1/2" into the wall framing members.

Note: Keep the manufacturer's installation instructions available on the job site during installation. Use corrosion resistant fasteners as specified in the IRC and the IBC.