TEXAS DEPARTMENT OF INSURANCE

Engineering Services Program / 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 Effective December 1, 2011
WIN-1499

*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 2014**.*

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.

Ultra Sterling Aluminum Clad Wood Double Hung Window with Transom as a Mulled Assembly, Impact Resistant, manufactured by

Kolbe & Kolbe Millwork Co., Inc.
1323 South Eleventh Avenue
Wausau, WI 54401
(715) 842 - 5666

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 aluminum clad wood double hung window with transom mulled assembly evaluated in this report are impact resistant windows. This product evaluation report is for an aluminum clad wood double hung window with transom based on the following tested constructions:

General Description:

System	Description	Rating	Hallmark Certification
1	Ultra Sterling Double Hung Window with Transom; Missile Level D, Wind Zone 4	LC-PG65 36x114-H H-LC65 36 x 114	413-H-1104.08 413-H-1104.09 413-H-1104.10 413-H-1104.11 413-H-1104.12 413-H-1104.13 413-H-1104.14 413-H-1104.15

Product Dimensions:

Overall Size: 35 ½" x 114 ¼"

Double Hung Windows:

System	Double Hung Size	Top Sash Size	Bottom Sash Size	Glass Size (Both Sashes)
1	35 ½" x 90"	32 3/16" x 43"	32 3/16" x 44 3/8"	30" x 40 13/16"

Transom Window:

System	Transom Size	Transom Glass Size
1	35 ½ x 24"	30" x 18 ½"

Glazing Description:

System	Glass Construction [1]	Glazing Method [2]
1	IG-1 or IG-2	Double Hung: GM-1 Transom: IG-2

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: The double hung window is glazed with sealed insulating glass units. The sealed insulating glass units are comprised of a laminated glass unit and a double-strength (⅛") annealed glass lite separated by a desiccant-filled stainless steel spacer system. The laminated glass unit is comprised of two double strength (⅛") annealed glass lites with a 0.090" PVB + 0.007' PET interlayer. The transom window is a glazed with an insulating glass unit that is comprised of a laminated glass unit and a double-strength (⅛") annealed glass lite separated by a desiccant-filled stainless steel spacer system. The laminated glass unit is comprised of two 5/32" annealed glass lites with a 0.090" SGP interlayer. The glass thickness and type used in the insulating glass units of the tested assembly and in smaller assemblies shall comply with ASTM E 1300-02.

IG-2: The double hung window is glazed with sealed insulating glass units. The sealed insulating glass units are comprised of a laminated glass unit and a double-strength (⅛") fully tempered glass lite separated by a desiccant-filled stainless steel spacer system. The laminated glass unit is comprised of two double strength (⅛") annealed glass lites with a 0.090" PVB + 0.007' PET interlayer. The transom window is a glazed with an insulating glass unit that is comprised of a laminated glass unit and a 5/32" fully tempered glass lite separated by a desiccant-filled stainless steel spacer system. The laminated glass unit is comprised of two 5/32" annealed glass lites with a 0.090" SGP interlayer. The glass thickness and type used in the insulating glass units of the tested assembly and in smaller assemblies shall comply with ASTM E 1300-02.

Glazing Method Key:

GM-1: The insulating glass units are set from the interior onto a bed of silicone sealant backbedding. Another interior bead of structural silicone sealant is applied at the interior edge of the insulating glass unit along the perimeter and a vinyl glass stop with a kerf fit is applied. Wood interior glazing stops are secured with fasteners.

GM-2: The insulating glass units are set from the interior onto k-glaze tape and a bed of silicone sealant backbedding. Another interior bead of structural silicone sealant is applied at the interior edge of the insulating glass unit along the perimeter and a vinyl glass stop with a kerf fit is applied. Wood interior glazing stops are secured with fasteners.

Double Hung Frame and Transom Frame Construction: The frame members consist of molded pine. The frame corners are rabbeted, butted, sealed with silicone, and secured with fasteners. Interior wood stops are secured at the head and side jambs with fasteners. **Aluminum Cladding:** Extruded aluminum is used at the head, sill, and side jambs and snap-fit onto the wood frame members. The aluminum corners are joined with corner key and fasteners.

Double Hung Sash and Transom Sash Construction: The sash members consist of molded pine sections. The sash corners are mortise and tenon construction and are secured with fasteners. **Aluminum Cladding:** Extruded aluminum is secured with fasteners to the wood sash members.

Horizontal Mullion: The mullion is reinforced with a steel mull stiffener. The mull stiffener is secured to the sill of the transom unit with screws. The transom above is secured with screws driven through the transom sill frame, through the holes in the steel stiffener, and into the double hung head jamb below. One end of the mull stiffener is fastened with a 3S Anchor that is secured with an anchor plate and an 18 gauge galvanized sheet metal anchor clip. The mull stiffener is interlocked at the end to the anchor plate with one bolt. The sheet metal anchor clip and plate are attached to the side jambs with screws. The anchor clip is attached to the wall framing with minimum No. 8 x 1 $\frac{1}{4}$" screws. The other end of the mull stiffener is fastened with a Strip Anchor that is secured to the wall framing with four (4) No. 12 x 1 $\frac{3}{4}$" screws. The mullion stiffener is interlocked at the end to the galvanized strip anchor plate that has a stainless steel pin.

Hardware:

- Vinyl jamb liners w/ sash balances; Two (2) required; Located on the side jambs.
- Aluminum hardware channel w/ polycarbonate interlock and angle screw keeper; One (1) required; Located on the meeting rail.
- Metal pivot pins; Four (4) required; Located on the bottom corners of each sash.
- Tilt latches; Two (2) required; Each end of top rail sash.

Product Identification: A certification program label (WDMA) will be affixed to the window. The certification program label includes the manufacturer's name; product name; performance characteristics; the approved inspection agency (WDMA); and the applicable standards: AAMA/WDMA/CSA 101/I.S.2/A440-05, AAMA/WDMA/CSA 101/ I.S.2/A440-08, ASTM E 1886 and ASTM E 1996.

LIMITATIONS

Design pressures (DP):

System	Maximum Width (in.)	Maximum Height (in.)	Design Pressure (psf)
1	45 $\frac{1}{2}$	109 $\frac{15}{16}$	$\pm$ 65

Impact Resistance: These window assemblies satisfy the Texas Department of Insurance's criteria for protection from windborne debris in both the **Inland I** and **Seaward** zones. These window assemblies have passed Missile Level D specified in ASTM E 1996-08. These window assemblies may be installed at any height on the structure as long as the design pressure rating for the assembly is not exceeded. These window assemblies will not need to be protected with an impact protective system when installed in areas where windborne debris protection is required.

Acceptance of Smaller Assemblies: Windows 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 prepared and installed in accordance with the manufacturers recommended installation instructions. Detailed installation drawings are available from the manufacturer.

Installation: The windows shall be fastened to minimum Southern Yellow Pine dimension lumber. All fasteners shall be long enough to penetrate a minimum of 1 ½ inches into the wall framing.

Option 1: The unit is secured to the wall framing using galvanized steel installation clips (1 5/8" x 10 1/16" x 0.04"). For the transom, the clips are spaced 12 inches from each corner along the side jambs and 11 13/16 inches from each corner and on center along the head. For the double hung, the clips are spaced 15 inches from each corner and on center along each side jamb. No clips are required in the sill. The clips are attached to the windows with two (2) No. 8 x ¾ screws and to the wall framing with one (1) No. 8 screw. The perimeter of the window is secured with minimum 12 gauge smooth shank roofing nails spaced 7 inches on center penetrating through the nailing flange.

Option 2: The unit is secured to the wall framing using No. 10 x 2 ½" screws. For the transom, the fasteners are spaced 12 inches from each corner along the side jambs and 8 7/8 inches from each corner and on center along the head. For the double hung, the fasteners are spaced 11 ¼ inches from each corner and on center along each side jamb. No clips are required in the sill. The perimeter of the window is secured with minimum 12 gauge smooth shank roofing nails spaced 7 inches on center penetrating through the nailing flange.

Mullion Attachment: The mullions are secured to the wall framing as indicated in the **Horizontal Mullion** section of this evaluation report.

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.