TEXAS DEPARTMENT OF INSURANCE

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PRODUCT EVALUATION Effective February 1, 2009
WIN-1042

*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 **October 2010**.*

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 02 Aluminum Clad Wood Axiom Casement Vent Windows, Non-impact Resistant, manufactured by:

Eagle Window and Door
2045 Kerper Blvd
Dubuque, IA 52001
563-556-2270
www.eaglewindow.com

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 Casement Vent Windows are extruded aluminum clad wood casement windows. The aluminum clad wood casement vent windows evaluated in this report are individual, non-impact resistant windows based on the following tested constructions.

General Description:

System	Description	Label Rating
1	Aluminum Clad Wood Casement Window; (X)	C-C55 (36 x 36)
2	Aluminum Clad Wood Casement Window; (X)	C-C60 (36 x 60)
3	Aluminum Clad Wood Casement Window; (X)	C-C50 (30 x 72)
4	Aluminum Clad Wood Casement Window; (X)	C-C50 (32 x 66)
5	Aluminum Clad Wood Casement Window; (X)	C-C40 (28 x 66)
6	Aluminum Clad Wood Casement Window; (X)	C-C40 (28 x 72)
7	Aluminum Clad Wood Casement Window; (X)	C-R70 (36 x 66)

Product Dimensions:

System	Overall Frame Size	Sash Size
1	36" x 36"	34 1/2" x 34 1/2"
2	36" x 60"	34 1/2" x 58 1/2"
3	30" x 72"	28 1/2" x 70 1/2"
4	32" x 66"	30 1/2" x 64 1/2"
5	28" x 66"	26 1/2" x 64 1/2"
6	28" x 66"	26 1/2" x 70 1/2"
7	36" x 66"	34 1/4" x 64 1/2"

Glazing Description:

System	Glass Construction [1]	Glazing Method [2]
1	IG-1	GM-1 or GM-2
2	IG-2	GM-1 or GM-2
3	IG-2	GM-1 or GM-2
4	IG-2	GM-1 or GM-2
5	IG-2	GM-1 or GM-2
6	IG-2	GM-1 or GM-2
7	IG-2	GM-1 or GM-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 window contains a sealed insulating glass unit. The sealed insulating glass unit is comprised of one sheet of single-strength (3/32") Low-E annealed glass at the exterior and one sheet of double-strength (1/8") annealed glass at the interior separated by an aluminum spacer system. The glass thickness and type used in the insulating glass unit of the tested assembly and in smaller assemblies shall comply with ASTM E 1300-04.

IG-2 The window contains a sealed insulating glass unit. The sealed insulating glass unit is comprised of two sheets of double-strength (1/8") annealed glass separated by an aluminum spacer system. The glass thickness and type used in the insulating glass unit of the tested assembly and in smaller assemblies shall comply with ASTM E 1300-04.

Glazing Method Key:

GM-1: The insulating glass unit is set from the interior against butyl rubber mastic and silicone. Wood glazing stops secure the insulating glass units in place from the interior. The wood glazing stops are secured to the frame with brads spaced 1 inch from each corner and 6 to 8 inches on center.

GM-2: The insulating glass unit is set from the interior against hot melt silicone glazing sealant. Wood glazing stops secure the insulating glass units in place from the interior. The wood glazing stops are secured to the frame with brads spaced 2 inches from each corner and 6 to 8 inches on center.

Frame Construction: The wood frame is comprised of laminated veneer lumber with corners rabbet jointed, butted, sealed with silicone and secured with two staples per corner. The head stop is secured with staples spaced approximately 6 inches on center. The side stops are secured with glue and a vinyl spline. The sill operator cover was secured with three No. 8 screws.

Aluminum Cladding: The extruded aluminum cladding is slip-fit over the wood frame members with the corners miter cut, silicone sealed, nylon corner keyed, and secured with two screws per corner.

Sash Construction: The wood sash is composed of molded pine with mortise and tenon construction and is fastened with glue and a No. 7 screw at each corner.

Aluminum Cladding: Extruded aluminum cladding was slip-fit over the wood sash members with the corners miter cut, silicone sealed with a nylon corner key and one No. 5 x 1 ½" screw per corner.

Hardware Description:

System	Hinge Construction	Lock Construction	Sash Retainer Construction
1	H-1	L-1	SR-1
2	H-1	L-2	SR-1
3	H-1	L-3	SR-1
4	H-1	L-2	SR-1
5	H-2	L-2	SR-2
6	H-2	L-3	SR-2
7	H-3	L-3	SR-2

Hardware:

H-1 Description	Quantity	Location
Casement operator with track	1	Frame sill/bottom rail
Casement operator bracket	1	Bottom rail of sash
Metal sash retainer	1	Frame jamb at midspan
Single point lock system with keeper	1	Locking jamb/stile 22 ½ inches from bottom rail
10" metal hinge with track	2	Frame head and sill/rails

H-2 Description	Quantity	Location
Casement operator with track and limit stop	1	Frame sill/bottom rail
Casement operator bracket	1	Bottom rail of sash
Snubber	1	Frame jamb at midspan
Three point lock system with keepers	1	Locking jamb/stile 12 ½ inches, 35 ½ inches, and 58 ½ inches from bottom rail
10" metal hinge with track	2	Frame head and sill/rails

H-3 Description	Quantity	Location
Casement operator with track	1	Frame sill/bottom rail
Casement operator bracket	1	Bottom rail of sash
Metal sash retainer	1	Frame jamb at midspan
Two point lock system with keeper	1	Locking jamb/stile 12 inches and 52 ½ inches from bottom rail
10" metal hinge with track	2	Frame head and sill/rails

Lock Construction:

L-1: Casement lock actuator mounted to the lock jamb with single locking point attached to the sash.

L-2: Single casement lock actuator mounted to the lock jamb with two locking points attached to the sash.

L-3: Single casement lock actuator mounted to the lock jamb with three locking points attached to the sash.

Sash Retainer Construction:

SR-1: Metal sash retainer mounted to the hinge jamb that protrudes into a route in the sash when in the closed position.

SR-2: No sash retainer applied.

Product Identification:

Systems 1-6: A certification program label (WDMA) will be affixed to the window. The certification program label includes the manufacturer's name, product name: **Clad Axiom Casement Aluminum Clad Frame**; performance characteristics; the approved inspection agency (WDMA); and the applicable standard: AAMA/WDMA/CSA I.S.2/A440-05 and ANSI/AAMA/WDMA101/I.S.2-97.

System 7: A certification program label (WDMA) will be affixed to the window. The certification program label includes the manufacturer's name, product name: **Clad Axiom Casement Aluminum Clad Frame**; performance characteristics; the approved inspection agency (WDMA); and the applicable standard: AAMA/WDMA/CSA I.S.2/A440-05.

LIMITATIONS

Design pressures (DP):

System	Maximum Width (in.)	Maximum Height (in.)	Design Pressure (psf)
1	36	36	± 55
2	36	60	± 60
3	30	72	± 50
4	32	66	± 50
5	28	66	± 40
6	28	72	± 40
7	36	66	± 70

Impact Resistance: These window assemblies do not satisfy the Texas Department of Insurance's criteria for protection from windborne debris. These window assemblies will 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 instructions and drawings are available from the manufacturer.

Installation:

System 1: The wall framing shall be minimum Spruce Pine Fir dimension lumber. The window is secured to the wall framing with the nailing fin of the window attached to the window frame. The nailing fin is secured to the wall framing with minimum 0.120 inch diameter smooth shank nails spaced approximately 6 inches from each corner and approximately 6 inches on center. All fasteners shall be long enough to penetrate a minimum of 1 ½ inches into the wall framing.

Systems 2, 3, and 4: The wall framing shall be minimum Spruce Pine Fir dimension lumber. The window is secured to the wall framing with the nailing fin of the window attached to the window frame and with masonry clips. The nailing fin is secured to the wall framing with minimum 0.120 inch diameter smooth shank nails spaced approximately 6 inches from each corner and approximately 6 inches on center. The masonry clips (1 ½"x 6 ½"x 0.05" galvanized steel) are located approximately 24 inches from each end of the side jambs. Masonry clips are secured to the window frame with four (4) No. 8 x ⅝" screws and to the wood surround with two No. 8 x 1 ½" screws. All fasteners shall be long enough to penetrate a minimum of 1 ½ inches into the wall framing.

Systems 5 and 6: The wall framing shall be minimum Southern Yellow Pine dimension lumber. The window is secured to the wall framing with the nailing fin of the window attached to the window frame and with masonry clips. The nailing fin is secured to the wall framing with minimum 0.120 inch diameter smooth shank roofing nails spaced approximately 6 inches from each corner and approximately 6 inches on center. The masonry clips (1 ½"x 6 ½"x 0.05" galvanized steel) are located approximately 24 inches from each end of the side jambs. The masonry clips are secured to the window frame with four (4) No. 8 x ½" screws and to the wood surround with two (2) No. 8 x 1 ½" screws. All fasteners shall be long enough to penetrate a minimum of 1 ½ inches into the wall framing.

System 7: The wall framing shall be minimum Southern Yellow Pine dimension lumber. The window is secured to the wall framing using installation straps. The installation straps are made of galvanized steel and are approximately 12" x 1 ½" x 0.04". The installation straps are secured to the interior side of the wall framing with two No. 8 x 1 ½" screws. The straps are attached to the window using two No. 8 x ⅝" wood screws. The installation straps were additionally secured on the exterior side of the wall framing through the flange, then though the installation strap with two No. 8 x 1 ½" screws. The installation straps are located 6 inches from each corner and at the midspan of each jamb. In addition, the nail flange is secured with minimum 12 gauge smooth shank roofing nails spaced approximately 4 inches from each corner and approximately 8 inches on center. The fasteners shall be long enough to penetrate a minimum of 1 ½ inches 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.