

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

CWSF-05

Effective May 1, 2009

*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 February 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 5000 Aluminum Window Wall System, Impact Resistant, manufactured by

Arch Aluminum & Glass Co., Inc.
10200 N.W. 67th Street
Tamarac, Florida 33321
(800) 432 - 8132

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 5000 window wall system is an aluminum frame window wall system used for commercial storefront installations. The aluminum frame windows are fixed windows. The perimeter frame members are 2 ½" x 5" and the mullions are 2 ½" x 5". The aluminum frame window wall system evaluated in this report is an impact resistant window wall system. This product evaluation report is for an aluminum frame window wall system based on the following tested constructions:

General Description:

System 1: Series 5000 Aluminum Frame Window Wall System; Comprised of three fixed window assemblies (Each: 60" x 120") mullied together along their side jambs (vertical mull); Two assemblies have daylight opening sizes of 57 ½" x 115"; The third assembly is comprised of two fixed windows (Each: 60" x 58 ¾") stacked (horizontal mull) with daylight opening size of 57 ½" x 56 ½" each; The overall dimension is 182 ½" x 120".

Glazing Description:

System	Glass Construction ¹	Glazing Method ²
1	SG-1, SG-2 or SG-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: Single glazed with a laminated glass unit. The lamination includes two $\frac{1}{4}$ " heat strengthened glass lites with a 0.090" SentryGlas Plus interlayer. The glass thickness and type used in the laminated glass unit shall comply with ASTM E 1300-04.

SG-2: Single glazed with a laminated glass unit. The laminated glass unit is comprised of two $\frac{1}{4}$ " heat strengthened glass lites with a 0.100" Safeflex HP interlayer. The glass thickness and type used in the laminated glass unit shall comply with ASTM E 1300-04.

SG-3: Single glazed with a laminated glass unit. The laminated glass unit is comprised of two $\frac{1}{4}$ " heat strengthened glass lites with a 0.090" Safeflex Keepsafe Maximum interlayer. The glass thickness and type used in the laminated glass unit shall comply with ASTM E 1300-04.

Glazing Method Key:

GM-1: The laminated glass unit is exterior glazed using Dow 995 structural silicone and an adhesive foam tape. There is an extruded snap on glazing bead with a vinyl wedge between the glass and the bead. There is a neoprene setting block between the glass on the bottom and the aluminum at each section of the glass unit.

Frame Construction: The frame members consist of hollow and solid extruded aluminum with various wall thickness. The frame members are equal leg type with butt joints and a white, green, and mill finish. The frame corners are secured with screws. The frame corners are sealed with silicone.

Vertical Mullions: Two piece vertical mullion. The frame members consist of hollow and solid extruded aluminum with various wall thickness. Each section of the mullion is secured with screws. The mullions are sealed with silicone.

Horizontal Mullions: The frame members consist of hollow and solid extruded aluminum with various wall thickness. The mullion corners have a 1 inch long shear block fastened to vertical members with screws. The mullions are sealed with silicone.

Reinforcement: None.

Product Identification: A label will be affixed to the window wall system. The label includes the manufacturer's name; the product name; the design pressure rating.

LIMITATIONS

Allowable dimensions:

System 1:

Overall Dimensions: $182\frac{1}{2}$ " x 120".

Maximum Individual Window Dimensions: 60" x 120"

Maximum Vertical Mullion Length: 120"

Maximum Horizontal Mullion Length: $57\frac{1}{2}$ "

Design pressures (DP):

System 1: ± 85 psf

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 an impact criteria equivalent to Missile Level D specified in ASTM E 1996-04. 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 instructions and drawings are available from the manufacturer.

Installation: The wood wall framing shall be minimum Southern Yellow Pine Dimension lumber. The window assembly shall be installed using the assembly frame head and sill with minimum No. 14 x 3" wood screws. The assembly frame head and sill are secured to the wall framing with a single row of fasteners spaced approximately 4 inches, 8 inches, and 12 inches from each corner and approximately 3 inches, 7 inches, and 11 inches on each side of each vertical mullion. 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.