

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-14

Effective August 1, 2011

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 **January 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.

Poly Wall Twin Aluminum Window with Polycarbonate Infill, Impact Resistant, manufactured by

Solar Innovations
31 Roberts Road
Pine Grove, Pennsylvania 17963
Telephone: (570) 915-1500

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

PRODUCT DESCRIPTION

The poly wall twin window with polycarbonate infill is an aluminum fixed window assembly. The aluminum fixed window assembly evaluated in this report is an impact resistant window assembly. This evaluation report is for an aluminum fixed window assembly based on the following tested construction:

General Description:

System	Description	Label Rating
1	Poly Wall Twin Aluminum Window with Polycarbonate Infill; (OO)	ASTM E 283-04, ASTM E 330-02, ASTM E 331-00, ASTM E 547-00, TAS-201, TAS-202, TAS-203 Design Pressure: +60/-60 psf Maximum Size Tested: 99" x 99"

Product Dimensions:

System	Overall Size	Fixed Daylight Opening Size
1	99 1/4" x 99 1/4"	Two: 44 1/2" x 44 1/2"

Glazing Description:

System	Glass Construction ¹	Glazing Method ²
1	SG-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:

SG-1: The fixed windows are single glazed with 60 mm polycarbonate.

Glazing Method Key:

GM-1: The glazing infill is exterior glazed with structural silicone and a gasket backbedding. The glazing infill is held in place with a curb cap and a pressure cap which were secured with screws.

Frame Construction: The frame members consist of extruded aluminum. The frame corners are mitered with corner gussets and secured together with screws. At the interior mid-span of the head and the sill, one (1) aluminum U-lug is secured with screws. An aluminum tube is secured to each U-lug with screws. An aluminum tube mullion is secured to the tube with screws. At the exterior frame perimeter, an aluminum curb cap is secured with screws. At the exterior of the mullion, an aluminum pressure cap is secured with screws.

Hardware: N/A

Reinforcement: None.

Product Identification: A certification program label (NAMI) will be affixed to the window. The certification program label shall include the manufacturer's name; the product name: **Poly Wall Twin Fixed Aluminum Window and Wall Lite**; performance characteristics; the approved inspection agency (NAMI); and the applicable standards: ASTM E 283-04, ASTM E330-02, ASTM E331-00, ASTM E 547-00, and TAS-201, TAS-202, TAS-203.

LIMITATIONS

Design pressures:

System	Maximum Width (in.)	Maximum Height (in.)	Design Pressure (psf)
1	99 1/4	99 1/4	±60

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 a missile impact standard that is equivalent to Missile Level D specified in ASTM E 1996-02/05. 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: 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 installed in accordance with the manufacturer's installation instructions and this product evaluation. Detailed drawings and installation instructions are available from the manufacturer.

Design Drawings: The windows shall be installed in accordance with Drawing No. 08-01047, titled "Poly Wall Aluminum Fixed Lite with Polycarbonate Infill - Impact, sheets 1 through 5 of 5, dated August 04, 2010, signed and sealed by Luis R. Lomas., P.E on July 12, 2011. The stated drawings will be referred to as the approved drawings in this evaluation report.

Wall Framing Construction: The windows may be mounted to several types of wall framing construction. The types of wall framing construction allowed include:

- Concrete (minimum compressive strength: 3,200 psi)
- Wood dimension lumber (minimum Spruce-Pine-Fir)
- Masonry – (ASTM C-90, Grade N, Type 1 or greater)
- Steel framing (minimum 16 gauge)

Installation:

- Refer to Sheets 2 of 5 thru 5 of 5 of the approved drawings for installation details.
- The approved drawings indicate the minimum embedment depths for the fasteners and the minimum edge distances (minimum distance fastener must be from the edge of the substrate material) for the fasteners.

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.