

TEXAS DEPARTMENT OF INSURANCE

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PRODUCT EVALUATION
WIN-1546

Effective Date: March 1, 2012
Reevaluation Date: **July 2014**

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.

Series 9043 Aluminum Stacked Double Hung Window Assemblies (Fixed Over Double Hung and Double Hung Over Fixed), Non-Impact Resistant, manufactured by

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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 9043 aluminum stacked double hung window assemblies are an aluminum fixed window over an aluminum double hung window and an aluminum double hung window over an aluminum fixed window. The window assemblies evaluated in this report consists of non-impact resistant windows. This product evaluation report is for aluminum stacked double hung window assemblies based on the following tested constructions:

General Description:

System	Description	Label Rating
1	Series 9043 Aluminum Double Hung Window Over a Fixed Window; (X.X/O)	H-C90 60 x 144; Neg DP=150 psf
2	Series 9043 Aluminum Fixed Window Over a Double Hung Window; (O/X.X)	H-C90 60 x 144; Neg DP=150 psf

Product Dimensions:

System	Overall Size	Double Hung Window - Top Sash Size	Double Hung Window - Bottom Sash	Fixed Window – Daylight Opening Size
1	60" x 144"	56 $\frac{7}{16}$ " x 48 $\frac{5}{8}$ "	56 $\frac{7}{16}$ " x 48 $\frac{13}{16}$ "	50 $\frac{3}{8}$ " x 38 $\frac{5}{16}$ "
2	60" x 144"	56 $\frac{7}{16}$ " x 48 $\frac{5}{8}$ "	56 $\frac{7}{16}$ " x 48 $\frac{13}{16}$ "	50 $\frac{3}{8}$ " x 38 $\frac{5}{16}$ "

Glazing Description:

System	Glass Construction ¹	Glazing Method ²
1	IG-1	GM-1
2	IG-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:

IG-1: The window contains an insulating glass unit. The insulating glass unit is comprised of a two $\frac{3}{16}$ " heat strengthened glass lites separated by desiccant filled aluminum spacer system. The glass thickness used in the tested assembly and in smaller assemblies shall comply with ASTM E 1300-04.

Glazing Method Key:

GM-1: The insulating glass units are interior wet glazed with Sika 552 sealant backbedding compound. An aluminum glazing stop with a vinyl impact glazing strip secures the insulating glass units in place.

Frame Construction: The frame members are manufactured from extruded aluminum. The frame corners are attached with screws.

Sash Construction: The sash members are manufactured from extruded aluminum. The sash corners are attached with screws.

Horizontal Mullion: The mullion is manufactured from aluminum. The mullion is secured to each frame jamb with screws.

Reinforcement: None.

Hardware:

- Snap locks; Four (4) required; Two (2) per sash
- Spiral balances; Four (4) required; One (1) in each side of sash.
- Sash guide bracket: One (1) required; Attached to the upper and lower sash top rails
- Flush (shoot) bolt assembly; Two (2) required; Located on the upper sash.
- Flush sash lock; Two (2) required; Located on the lower sash.

Product Identification: A certification program label (Keystone) will be affixed to the window. The certification program label includes the manufacturer's CAR, performance characteristics and approved inspection agency to indicate compliance with the requirements of AAMA/WDMA/CSA 101/I.S.2/A440-05.

The label contains a Certification Authorization Report (CAR) number located on the top right side of the label and a model name for the window. The following CAR numbers and model names are located on each label:

Label Identification:

System	Model	Certification Authorization Report (CAR) number
		Label with AAMA/WDMA/CSA 101/I.S.2/A440-05
1	9043 Aluminum DH with Fixed Transom Window Wall	167-486
2	9043 Aluminum DH Over Fixed Window Wall	167-487

LIMITATIONS

Design pressures:

System	Maximum Width (in.)	Maximum Height (in.)	Design Pressures (psf)
1	60	144	+90/-150
2	60	144	+90/-150

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.

Tested to Higher Negative Design Pressure: The Keystone label indicates that the product was tested to a higher negative design pressure rating. The higher negative design pressure rating is specified in the table above.

Acceptance of Smaller Assemblies: Window 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. Detailed installation instructions and drawings are available from the manufacturer.

Design Drawing: The window assembly shall be installed in accordance with Drawing No. 08-01146, titled " Series 9043 Thermally Broken Aluminum Window Wall – Non-Impact," sheets 1 through 13 of 13, dated January 07, 2011, signed, sealed, and dated January 19, 2012 by Luis R. Lomas, P.E. The stated drawings will be referred to as the approved drawings in this evaluation report.

Installation:

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: 3,192 psi)
- Hollow concrete block (ASTM C-90, Grade N, Type 1 or greater)
- Wood dimension lumber (minimum Douglas Fir-Larch)
- Wood backed (minimum Spruce-Pine-Fir) minimum 20 gauge steel

Installation:

- Refer to Sheets 1 of 13 and 2 of 13 of the approved drawings for the anchor layout.
- Refer to Sheets 6 of 13 thru 11 of 13 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.