

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 MU-15

Effective June 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 **May 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.

Mulled Window Assemblies for Vinyl Windows, Non-Impact Resistant and Impact Resistant,
manufactured by:

Wincore Windows and Doors
250 Staunton Turnpike
Parkersburg, WV 26104
Telephone: (304) 485-7460

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

This evaluation report is for mulled window assemblies using vinyl windows manufactured by Wincore Windows and Doors. The mulled window assemblies evaluated in this report are for non-impact resistant and impact resistant windows.

The mulled assembly consists of individual window units that are secured to the mullions described in this evaluation report. The mullions can be installed vertically (for side by side units), horizontally (for stacked units) or both vertically and horizontally for mulled units with transoms. The mullions are secured directly to the rough opening of the window and can be attached to wood, concrete, or masonry substrates.

The frames of the individual window units are secured to the extruded aluminum mullion tube using Tek self tapping screws. Extruded aluminum bracket clips and bull nose clips are used to secure the aluminum mullion tubes to the wall framing. An extruded aluminum bracket clip is used to secure a vertical mullion to a horizontal mullion.

This evaluation report contains mulled window assemblies using individual vinyl window products manufactured by Wincore Windows and Doors. that are currently listed in Texas Department of Insurance (TDI) product evaluation reports.

Mullion Components:

Mullion: Aluminum mullion. Manufactured from 6063-T6 aluminum. The outside dimensions are 1.00" x 3.00". The inside dimensions are 0.750" x 2.186".

Mullion Components (Continued):

Bracket Clip: Manufactured from 6063-T6 aluminum. The dimensions are 2.125" x 5.25" x 2.125" x 0.125". This bracket clip is used to secure the aluminum mullion to the wall framing. This bracket clip is also used to secure a vertical aluminum mullion to a horizontal aluminum mullion.

Bull Nose Clip: Manufactured from 6063-T6 aluminum. The dimensions are 0.688" x 4.5" x 2.375" x 0.125". This bull nose clip is used to secure the aluminum mullion to the wall framing.

LIMITATIONS

Design Drawings: The mulled window assembly shall be constructed and installed in accordance with the following design drawings:

- Drawing No. 08-01602, sheets 1 through 3 of 3, titled "1" x 3" Structural Tubing Mullion Vertical Impact Zone 3," dated July 29, 2010, signed and sealed by Luis R. Lomas, PE. The stated drawings will be referred to as "Approved Drawings" in this evaluation report. A copy of the approved drawings shall be available at the job site.
- Drawing No. 08-01603, Rev. A, sheets 1 through 7 of 7, titled "1" x 3" Structural Tubing Mullion Horizontal Impact Zone 3," dated July 29, 2010, revised February 17, 2011, signed and sealed by Luis R. Lomas, PE on April 5, 2011. The stated drawings will be referred to as "Approved Drawings" in this evaluation report. A copy of the approved drawings shall be available at the job site.

Design Pressure Rating: The design pressure rating for the mulled window assembly is dependent on the mullion load rating based on the mullion span, the mullion clip used, the dimensions of the individual windows in the mulled assembly, and the design pressure rating for the individual windows in the mulled assembly. Refer to the approved drawings to determine the mullion load rating for the mulled assembly based on the configuration of the mulled assembly.

Maximum Sizes: The height and width of each individual window in the mulled window assembly shall not exceed the maximum allowable height and width specified on the certification program labels for the individual windows. In addition, the maximum allowable dimensions for windows in the mulled window assembly shall be as specified on the approved drawings.

The following procedure should be used to determine the design pressure rating for the mulled window assembly:

1. Determine the tributary height or width and the mullion span (height or width) for the mulled window assembly. Refer to the mullion configuration sketches on the approved drawings for the mullion span (height or width) and the tributary height or width determination. **NOTE:** In no case shall the maximum allowable dimensions of the individual windows, as specified on the certification program labels and in the TDI product evaluation reports, exceed the window dimensions in the approved drawings.
2. Using the approved drawings, select the appropriate table. Locate the row or column with the mullion span (height or width). Locate the row or column with the tributary height or width. At the intersection of the row or column containing the mullion span and the row or column containing the tributary height or width, read the mullion load rating (in PSF).
3. Review the design pressure rating on the certification program label and in the TDI product evaluation report for each individual window of the mulled assembly.

4. If the design pressure rating for each individual window of the mullied assembly is greater than the mullion load rating determined from the table in the approved drawings, then the design pressure rating of the mullied assembly is the design pressure capacity determined from the table in the approved drawings.
5. If the design pressure rating for any of the individual windows is less than the mullion load rating determined from the table in the approved drawings, then the design pressure rating of the mullied assembly shall be the design pressure rating of the lowest rated individual window in the assembly.

Impact Resistance: The mullions can be used with either non-impact resistant or impact resistant windows. If the mullions are used with non-impact resistant windows, then the mullied window assemblies will need to be protected with an impact protective system when installed in areas where windborne debris protection is required. If the mullions are used with impact resistant windows, then the mullied window assemblies will not need to be protected with an impact protective system. Refer to the TDI evaluation reports for each of the windows in the mullied assembly to determine the locations where the mullied window assemblies can be used (ex. Inland I zone only or Inland I and Seaward zones).

Product Identification: A certification program label will be affixed to each individual window of the mullied assembly. Refer to the TDI evaluation report for each individual window in the mullied assembly for the information that must be specified on the certification program label. **NOTE:** The certification program label is for the performance characteristics of the individual windows in the mullied assembly and not for the mullied assembly. The design pressure rating for the mullied assembly is as specified in the Limitations Section of this evaluation report.

INSTALLATION INSTRUCTIONS

General: The mullied window assembly shall be installed in accordance with the manufacturer's installation instructions, the approved drawings, and this evaluation report. Detailed drawings and installation instructions are available from the manufacturer.

Attachment of Window Frames to Mullions: The window frames shall be anchored to the aluminum mullions with minimum No. 10 Tek self tapping screws. The fasteners shall be of sufficient length to penetrate a minimum of three threads beyond the aluminum mullion wall. The fasteners shall be spaced approximately 6 inches from each mullion end and approximately 8 inches on center. Refer to the details shown in the approved drawings for the attachment of the windows to the mullions.

Attachment of Vertical Mullions to Horizontal Mullions: Vertical mullions shall be secured to horizontal mullions using the bracket clip. The bracket clip shall be secured to each mullion as specified in the approved drawings.

Attachment of Mullied Assembly to Wall Framing: The requirements for the wall framing shall be as specified in the TDI evaluation reports for the individual windows and as specified in the approved drawings. The mullied window assembly shall be secured to the wall framing using the type, size, quantity, and spacing of fasteners as specified in the TDI evaluation reports for the individual windows. As a point of reference for locating fasteners at window corners, where a window unit joins with a mullion shall be considered a corner location for a window.

Attachment of Mullions to Wall Framing: The mullions shall be secured to the wall framing using the bracket clip and the bull nose clip. The bracket clip and the bull nose clip shall be secured to the mullion and to the wall framing as specified in the approved drawings.

Note: The manufacturer's installation instructions shall be available on the job site during installation. The approved drawings 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.