



Product Evaluation

MU26 | 1114

Engineering Services Program

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.

For more information, contact TDI Engineering Services Program at (800) 248-6032.

Evaluation ID: MU-26

Effective Date: November 1, 2014

Re-evaluation Date: November 2018

Product Name: Muller Window Assemblies for Vinyl Windows using Vinyl Mullions with Aluminum Mullion Reinforcements, Impact and Non-impact Resistant

Manufacturer: Window Mart
P.O. Box 570
5760 Albert Pike
Royal, AR 71968
(888) 283-6278

General Description:

- This evaluation report is for muller windows using vinyl mullions with aluminum mullion reinforcements manufactured by Window Mart.
- Mull the windows together using either two or four aluminum mullion reinforcements. Windows muller together with four aluminum mullion reinforcements will achieve a higher design pressure rating for the mullions.
- The muller window assemblies evaluated in this report are for impact resistant and non-impact resistant windows manufactured by Window Mart.

Mullion Configurations:

- This evaluation report includes the following mullion configurations:
 - Vertical Mullions. Vinyl mullions with either two or four 1/4" x 3/4" aluminum reinforcements. Used for mulling together windows horizontally (windows side-by-side).
 - T Mullions. Vinyl mullions with either two or four 1/4" x 3/4" aluminum reinforcements. This is a horizontal mullion anchored to a vertical mullion. Used for mulling a transom to a two windows muller horizontally.

- **VX Mullion.** Vinyl mullions with either two or four 1/4" x 3/4" aluminum reinforcements. This is a vertical mullion anchored with two horizontal mullions. Used for mulling two windows stacked to another assembly of two windows stacked

Mullion Components:

- **Mullion Reinforcement:** Manufactured from 6005-T5 aluminum; the dimensions are 1/4" x 3/4".
- **H Mull:** Vinyl (PVC); the dimensions are 1.00" x 3-3/8".

Limitations:

- **Fabrication and Assembly:** The mullied assembly may be mullied together at the factory and shipped as a complete assembly or they may be mullied together at the job site.

Design Drawings:

- Construct and install the mullied assembly in accordance with one or more of the design drawings in table 2 based on the configuration of the mullied assembly:
 - Drawing No. 08-02231 Rev. A, sheets 1 through 6 of 6, titled "Vertical Mullion-Impact (2), 1/4" x 3/4" Aluminum Reinforcements," dated September 23, 2013, revised October 2, 2014, signed and sealed by Luis R. Lomas, P.E. on October 13, 2014.
 - Drawing No. 08-02234 Rev. A, sheets 1 through 6 of 6, titled "Vertical Mullion-Impact (4), 1/4" x 3/4" Aluminum Reinforcements," dated October 2, 2013, revised October 2, 2014, signed and sealed by Luis R. Lomas, P.E. on October 13, 2014.
 - Drawing No. 08-02232 Rev. A, sheets 1 through 7 of 7, titled "T Mullion-Impact (2), 1/4" x 3/4" Aluminum Reinforcements," dated October 2, 2013, revised October 2, 2014, signed and sealed by Luis R. Lomas, P.E. on October 13, 2014
 - Drawing No. 08-02235 Rev. A, sheets 1 through 7 of 7, titled "T Mullion-Impact (4), 1/4" x 3/4" Aluminum Reinforcements, " dated October 21, 2013, revised October 2, 2014, signed and sealed by Luis R. Lomas, P.E. on October 13, 2014.
 - Drawing No. 08-02233 Rev. A, sheets 1 through 7 of 7, titled "VX Mullion-Impact (2), 1/4" x 3/4" Aluminum Reinforcements," dated October 2, 2013, revised October 2, 2014, signed and sealed by Luis R. Lomas, P.E. on October 13, 2014.
 - Drawing No. 08-02236 Rev. A, sheets 1 through 7 of 7, titled "VX Mullion-Impact (4), 1/4" x 3/4" Aluminum Reinforcements," dated October 2, 2013, revised October 2, 2014, signed and sealed by Luis R. Lomas, P.E. on October 13, 2014.
- This evaluation report will refer to the stated drawings to as "Approved Drawings."
- Maintain a copy of the approved drawings at the job site.

Maximum Window Sizes:

- The height and width of each individual window in the mullied assembly must not exceed the maximum allowable height and width specified on the certification program labels for the individual windows.
- The maximum allowable dimensions for windows in the mullied assembly must be as specified on the approved drawings.

Design Pressure Rating:

- The design pressure rating for the mullied assembly is dependent on the mullion load rating based on the mullion span and the dimensions of the individual windows in the mullied assembly, and the design pressure rating for the individual windows in the mullied assembly.
- Refer to the approved drawings to determine the mullion load rating for the mullied assembly based on the configuration of the mullied assembly.

Use the following procedure to determine the design pressure rating for the mullied window assembly:

1. Determine design pressure rating for the mullion using the Design Pressure Rating charts in the approved drawings. **NOTE:** In no case must the maximum allowable dimensions of the individual windows, as specified on the certification program labels and in the TDI product evaluation reports, exceed the dimensions in the approved drawings.
2. Review the design pressure rating on the certification program label and in the TDI product evaluation report for each individual window of the mullied assembly.
3. If the design pressure rating for each individual window of the mullied assembly is greater than the design pressure rating for the mullions determined from 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.
4. If the design pressure rating for any of the individual windows is less than the design pressure rating determined from the approved drawings, then the design pressure rating of the mullied assembly must be the design pressure rating of the lowest rated individual window in the assembly.

Impact Resistance:

- Use the mullions with either non-impact resistant or impact resistant windows.
- If using mullions with non-impact resistant windows, then protect the mullied window assemblies with an impact protective system when installing the product in areas that require windborne debris protection.
- If using mullions with impact resistant windows, then the mullied window assemblies will not require protection 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 (example 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 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:** Install the mullied assembly 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 Mullion Reinforcement to Window Frames:** Anchor the aluminum mullion reinforcement to the window frames as shown in the approved drawings.
- **Attachment of Window Frames to H Mull:** Anchor the window frames to the vinyl H Mull. Refer to the details shown in the approved drawings for the attachment of the window frames to the vinyl H Mull.
- **Attachment of Horizontal H Mulls to Vertical H Mulls:** Secure the window frames directly adjacent to the vinyl H Mulls together using fasteners. Refer to the approved drawings for the attachment of the window frames.
- **Attachment of Mullied Assembly to Wall Framing:** The TDI evaluation reports must specify the requirements for the wall framing in for the individual windows and as specified in the approved drawings. Secure the mullied assembly to the wall framing using the type, size, quantity, and spacing of fasteners as specified in the TDI evaluation reports for the individual windows. Where a window unit joins with a mullion use a point of reference for locating fasteners at window corners.
- **Attachment of Mullions to Wall Framing:** Secure the window frames directly adjacent to the vinyl H Mulls to the wall framing using fasteners. Refer to the approved drawings for the attachment of the windows to the wall framing at these locations.

Note: The manufacturer's installation instructions must be available on the job site during installation. The approved drawings must be available on the job site during installation. Use corrosion resistant fasteners as specified in the IRC, the IBC, and the Texas Revisions.