

Product Evaluation

MU52 | 01020

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-52

Effective Date: January 1, 2020

Re-evaluation Date: January 2024

Product Name: Muller Window Assemblies for Vinyl Windows using M-2300 and M-2301 Aluminum Mullions, Impact and Non-Impact Resistant

Manufacturer: MI Windows and Doors, LLC
650 West Market Street
Gratz, PA 17030-0370
(717) 365-3300

General Description:

This evaluation report is for muller windows using M-2300 and M-2301 aluminum mullions manufactured by MI Windows and Doors.

The muller window assemblies evaluated in this report are for impact resistant and non-impact resistant windows manufactured by MI Windows and Doors

The M-2300 vertical mullion is only used on window assemblies that also utilize the M-2301 mullion.

Mullion Configurations:

This evaluation report includes the following mullion configurations:

- **Horizontal Mullions.** M-2301 aluminum mullions. Used for mulling together single or muller windows with transoms.

- **Vertical Mullions.** M-2300 aluminum mullions. Used for mulling together windows (side by side). The M-2300 mullion is only used on window assemblies that also utilize the M-2301 mullion.

Mullion Components:

M-2300 Mullion: Manufactured from 6105-T5 aluminum; the dimensions are shown on the approved drawing.

M-2301 Mullion: Manufactured from 6105-T5 aluminum; the dimensions are shown on the approved drawing.

SECT5768 Clip: Manufactured from 6063-T5 aluminum; the dimensions are shown on the approved drawing.

MT00022 Clip: Manufactured from 16-gauge galvanized steel; the dimensions are shown on the approved drawing.

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 the following design drawing based on the configuration of the mullied assembly:

- Drawing No. 08-03264; sheets 1 through 7 of 7; titled "M2301 Horizontal Mullion W/ M2300 Vertical Mullion;" dated June 5, 2018; signed and sealed by Luis R. Lomas, P.E. on December 20, 2019.

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, 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.

Product Identification:

- A certification program label will be affixed to each individual window of the mulled assembly.
- Refer to the TDI evaluation report for each individual window in the mulled 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 mulled assembly and not for the mulled assembly. The design pressure rating for the mulled assembly is as specified in the Limitations Section of this evaluation report.

Installation Instructions:

General: Install the mulled 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 Clips to Mullions: The mullion clips are secured to the mullions with friction. The clips slip into the ends of the hollow mullion. No fasteners are required.

Attachment of Mullion Clips to Wall Framing: The mullion clips are anchored to the wall framing with fasteners. Anchor the mullion clips to the wall framing as specified on the approved drawings.

Attachment of Window Frames to Mullions: Anchor the window frames to the mullions with fasteners. Refer to detail on Sheet 7 of 7 of the approved drawings.

Attachment of Vertical Mullion to Horizontal Mullion: The vertical mullion (M-2300) is secured to the horizontal mullion (M-2301) with clips. Refer to the detail shown on Sheet 6 of 7 of the approved drawings. All clip fastener holes must be used.

Attachment of Mulled Assembly to Wall Framing: The TDI evaluation reports specify the requirements for the wall framing for the individual windows and as specified in the approved drawings. Secure the mulled 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 the mullion location as a point of reference for locating fasteners at window corners.

Note: Keep the manufacturer's installation instructions available on the job site during installation. Use corrosion resistant fasteners as specified in the IRC and the IBC.