

Product Evaluation

MU33 | 1023

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-33

Effective Date: October 1, 2023

Re-evaluation Date: October 2027

Product Name: Mullled Window Assemblies for Vinyl Windows using Extruded Aluminum Mullions, Reinforced and Non-reinforced, Impact Resistant and Non-impact Resistant

Manufacturer: Showcase Custom Vinyl Windows and Doors
12613 Citypark Dr., Suite 100
Missouri City, TX 77489
(713) 926-8500

General Description:

This evaluation report is for mullled windows using extruded aluminum mullions manufactured by Showcase Custom Vinyl Windows and Doors.

The aluminum mullions may be non-reinforced or re-forced with steel reinforcement.

Mull the windows together using either vertical or horizontal aluminum mullions.

The mullled window assemblies evaluated in this report are for impact resistant and non-impact resistant windows manufactured by Showcase Custom Vinyl Windows and Doors and are currently listed in TDI product evaluation reports.

Mullion Components:

Mullion: Part No. 10300085; Manufactured from 6005-T5 aluminum; the dimensions are 0.875" x 3.258" x 0.075".

Mullion Reinforcement: Manufactured from steel; 0.25" x 2".

Mullion Clip: Part No. 10300093; Manufactured from 6005-T5 aluminum, the dimensions are 4" x 4.84" x 0.125".

Steel Mullion Bracket: Part No. 10203000; Manufactured from 15-gauge galvanized steel; the dimensions are 5" x 3.5" x 15-gauge".

Fabrication and Assembly: The mullion assembly may be mullioned together at the factory and shipped as a complete unit, or they may be mullioned together at the job site.

Design Drawings:

Construct and install the mullion assembly in accordance with one of the following design drawings based on the configuration of the mullion assembly:

- Drawing No. SCV004, sheets 1 through 4 of 4, titled "X-Reinforced Mullion (Impact)," dated March 12, 2014, revision C, dated April 20, 2023, signed, and sealed by Hermes F. Norero, P.E. on June 11, 2023.
- Drawing No. SCV005, sheets 1 through 4 of 4, titled "X-Non-Reinforced Mullion (Impact)," dated March 12, 2014, revision C, dated April 20, 2023, signed, and sealed by Hermes F. Norero, P.E. on June 11, 2023.
- Drawing No. SCV006, sheets 1 through 4 of 4, titled "Horizontal & T-Reinforced Mullion (Impact)," dated March 12, 2014, revision C, dated April 20, 2023, signed, and sealed by Hermes F. Norero, P.E. on June 11, 2023.
- Drawing No. SCV007, sheets 1 through 4 of 4, titled "Horizontal & T-Non-Reinforced Mullion (Impact)," dated March 12, 2014, revision C, dated April 20, 2023, signed, and sealed by Hermes F. Norero, P.E. on June 11, 2023.
- Drawing No. SCV008, sheets 1 through 4 of 4, titled "Vertical Reinforced Mullion (Impact)," dated March 12, 2014, revision C, dated April 20, 2023, signed, and sealed by Hermes F. Norero, P.E. on June 11, 2023.
- Drawing No. SCV009, sheets 1 through 4 of 4, titled "Vertical Non-Reinforced Mullion (Impact)," dated March 12, 2014, revision C, dated April 20, 2023, signed, and sealed by Hermes F. Norero, P.E. on June 11, 2023.

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 mulled 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 mulled assembly must be as specified on the approved drawings.

Design Pressure Rating:

The design pressure rating for the mulled assembly is dependent on the mullion load rating based on the mullion span and 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.

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

1. Determine the tributary width or height and the mullion span for the mulled assembly. Refer to the mullion configuration drawing on Sheet 1 of the approved drawings for the mullion span and the tributary width or height. **NOTE:** The maximum allowable dimensions of the individual windows must not exceed the dimensions in the approved drawings as specified on the certification program labels and in the TDI product evaluation reports.
2. Using the approved drawings, locate the row with the mullion span. Locate the column with the tributary width or height. Read the mullion load rating (psf) at the intersection of these rows.
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 mulled assembly is greater than the design pressure rating for the mullions determined from the approved drawings, then the design pressure rating of the mulled 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 design pressure rating determined from the approved drawings, then the design pressure rating of the mulled 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 mulled 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 mulled window assemblies will not require protection with an impact protective system.

Refer to the TDI evaluation reports for each of the windows in the mulled assembly to determine the locations where the mulled window assemblies can be used.

Product Identification:

Each individual window of the mulled assembly will have an attached certification program label. Refer to each individual window's TDI evaluation report for the information that the certification program label should include.

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 Section of this evaluation report specifies the design pressure rating for the mulled assembly.

Installation:

- **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 Window Frames to Mullions:** Anchor the window frames to the aluminum mullion with fasteners and spacing as shown in the approved drawings. The fasteners must be long enough to penetrate a minimum of three threads through the mullion or reinforcement.
- **Attachment of Mulled Assembly to Wall Framing:** The TDI evaluation reports must 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 as a point of reference for locating fasteners at window corners.
- **Attachment of Mullions to Wall Framing:** Secure the mullions to the wall framing with the appropriate mullion clip or mullion bracket as shown on the approved drawings. Refer to the approved drawings for the attachment of the mullions to the wall framing.
- **Attachment of Mullions to Mullions:** In accordance with the approved drawings, it is not a requirement that the mullions be secured to each other.

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.