

Product Evaluation

MU20 | 0919

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-20

Effective Date: September 1, 2019

Re-evaluation Date: September 2023

Product Name: Thermally Broken Aluminum Horizontal Mullion for Aluminum Windows and Doors, Impact Resistant and Non-Impact Resistant

Manufacturer: WinDoor Incorporated
7500 Amsterdam Drive
Orlando, FL 32832
(407) 481-8400

General Description:

This evaluation report is for mulled window and door assemblies using a thermally broken horizontal aluminum mullion manufactured by WinDoor Incorporated. The mulled assemblies evaluated in this report are either impact resistant or non-impact resistant.

The mulled assembly consists of single, twin, or triple windows mulled to a transom or single or double doors with sidelites mulled to a transom. The horizontal mullion may be used as long as the dimensions indicated on the approved drawings of the windows and doors are not exceeded. The mullions are secured directly to the rough opening and can be attached to wood, concrete, masonry, steel or aluminum substrates.

The frames of the individual window and door units are secured to the extruded aluminum mullion tube using minimum No. 10 self-tapping screws. Extruded aluminum wall T-clips are used to secure the aluminum mullion tubes to the wall framing.

This evaluation report contains mullioned assemblies using individual aluminum window and door products manufactured by WinDoor Incorporated that are currently listed in Texas Department of Insurance (TDI) product evaluation reports.

Mullion Components:

Mullion: Manufactured from 6063-T6 aluminum. The outside dimensions are shown on the approved drawings.

Wall T-Clips: Manufactured from 6063-T6 (1/8" thick) aluminum. The dimensions are shown in the approved drawings. This clip is used to secure the aluminum mullion to the wall framing.

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

Design Drawings:

Construct and install the mullioned assembly in accordance with the following drawing:

Drawing No. 08-01683; sheets 1 through 8 of 8; titled "Thermally Broken Horizontal Mullion Impact Rated up to Wind Zone 3;" dated July 19, 2012, Revision A, dated February 12, 2013; signed and sealed by Luis R. Lomas, P.E. on February 12, 2013.

The stated drawings will be referred to as "Approved Drawings" in this evaluation report.

A copy of the approved drawings must be available at the job site.

Maximum Sizes:

The height and width of each individual window and door in the mullioned assembly must not exceed the maximum allowable height and width specified on the certification program labels for the individual windows and doors.

In addition, the maximum allowable dimensions for windows and doors in the mullioned assembly must be as specified on the approved drawings.

Design Pressure Rating:

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

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

1. Determine the transom height, window and door height, and the mullion span (width) for the mulled assembly. Refer to the mullion configuration sketches on the approved drawings for the mullion span (width) and the transom height and window and door height determination. **NOTE:** In no case must the maximum allowable dimensions of the individual windows and doors, as specified on the certification program labels and in the TDI product evaluation reports, exceed the window and door dimensions in the approved drawings.
2. Using the approved drawings, select the appropriate table. Locate the column with the mullion span (width). Locate the row with the transom height and window or door height. At the intersection of the column containing the mullion span and the row containing the transom height and window or door height, 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 and door of the mulled assembly.
4. If the design pressure rating for each individual window and door of the mulled assembly is greater than the mullion load rating determined from the table in 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 and doors is less than the mullion load rating determined from the table in the approved drawings, then the design pressure rating of the mulled assembly shall be the design pressure rating of the lowest rated individual window and door in the assembly.

Impact Resistance:

The mullions can be used with either non-impact resistant or impact resistant windows and doors.

If the mullions are used with non-impact resistant windows and doors, then the mulled 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 and doors, then the mulled assemblies will not need to be protected with an impact protective system. Refer to the TDI evaluation reports for each of the windows and doors in the mulled assembly to determine the locations where the mulled 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 and door of the mulled assembly. Refer to the TDI evaluation report for each individual window and door in the mulled 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 and doors 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.

Attachment of Window and Door Frames to Mullions: The window and door frames must be anchored to the aluminum mullions with minimum No. 10 self-tapping screws. The fasteners must be of sufficient length to penetrate a minimum of three threads beyond the aluminum mullion wall. The fasteners must be located and spaced in accordance with the approved TDI product evaluation report. Refer to the details shown in the approved drawings for the attachment of the windows to the mullions.

Attachment of Mulled Assembly to Wall Framing: The requirements for the wall framing must be as specified in the TDI evaluation reports for the individual windows and doors and as specified in the approved drawings. The mulled assembly must 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 and door corners, where a window or door unit joins with a mullion must be considered a corner location for a window or door.

Attachment of Mullions to Wall Framing: The mullions must be secured to the wall framing using the wall T-clip. The wall T-clip must be secured to the mullion and to the wall framing as specified in the approved drawings.

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