

TEXAS DEPARTMENT OF INSURANCE

Engineering Services Program / 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

Effective April 1, 2014

MU-22

*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 **March 2018**.*

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 using 10300085 Aluminum Mullions, Reinforced and Non-Reinforced, Impact Resistant and Non-impact Resistant, manufactured by:

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

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 windows using 10300085 aluminum mullions manufactured by Window Mart.

The mullions may be non-reinforced or they may be reinforced with steel. Reinforced mullions will achieve a higher design pressure rating for the mullions.

The mulled window assemblies evaluated in this report are for impact resistant and non-impact resistant windows manufactured by Window Mart.

General Description:

This evaluation report includes the following mullion configurations:

Mullion – Non-reinforced. For mulling together windows either horizontally (windows side-by-side) or vertically (windows stacked). The mullions are not reinforced.

T Mullion – Non-reinforced. Horizontal mullion that is anchored to a vertical mullion. Used for mulling a transom to a mulled window assembly. The mullions are not reinforced.

X Mullion – Non-reinforced. Vertical mullion with two horizontal mullions anchored to it. Used for mulling two windows stacked to another assembly of two windows stacked. The mullions are not reinforced.

General Description (continued):

Vertical Mullion – Reinforced. For mulling together windows either horizontally (windows side-by-side) or vertically (windows stacked). The mullions are reinforced.

T Mullion – Reinforced. Horizontal mullion that is anchored to a vertical mullion. Used for mulling a transom to a mullied window assembly. The mullions are reinforced.

X Mullion – Reinforced. Vertical mullion with two horizontal mullions anchored to it. Used for mulling two windows stacked to another assembly of two windows stacked. The mullions are reinforced.

Mullion Components:

Mullion: Manufactured from 6005-T5 aluminum. The outside dimensions are 3.258" x 0.875" x 0.075".

Mullion Reinforcement: Steel reinforcement. The dimensions are 2.00" x 0.25".

Mullion Clip: Manufactured from 6005-T5 aluminum. The dimensions are 4.84" x 4" x 2.344" x 0.125". This mull clip is used to secure the aluminum mullion to the wall framing.

Steel Mullion Bracket: Manufactured from 15 gauge galvanized steel. The dimensions are 5.00" x 3.50" x 2.344" x 0.067". This steel mullion bracket is used to secure the aluminum mullion to the wall framing.

Angle Clip: Manufactured from 6063-T5 aluminum. The dimensions are 3.00" x 3.00" x 0.688" x 0.125". This angle clip is used to secure the aluminum vertical mullion to the aluminum horizontal mullion.

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: The mullied assembly shall be constructed and installed in accordance with one or more of the following design drawings depending on the configuration of the mullied assembly:

- Drawing No. 08-01920, sheets 1 through 4 of 4, titled "10300085 Aluminum Mullion Non Reinforced LMI Wind Zone 3," dated February 12, 2013, signed and sealed by Luis R. Lomas, P.E. on February 13, 2013. 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. 08-01921, sheets 1 through 4 of 4, titled "10300085 Aluminum T Mullion Non Reinforced LMI Wind Zone 3," dated February 12, 2013, signed and sealed by Luis R. Lomas, P.E. on February 13, 2013. 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. 08-01922, sheets 1 through 4 of 4, titled "10300085 Aluminum X Mullion Non Reinforced LMI Wind Zone 3," dated February 12, 2013, signed and sealed by Luis R. Lomas, P.E. on February 13, 2013. 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. 08-01923, sheets 1 through 4 of 4, titled "10300085 Aluminum Mullion Reinforced LMI Wind Zone 3," dated February 13, 2013, signed and sealed by Luis R. Lomas, P.E. on February 14, 2013. 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 Drawings (Continued):

- Drawing No. 08-01924, sheets 1 through 4 of 4, titled “10300085 Aluminum T Mullion Reinforced LMI Wind Zone 3,” dated February 13, 2013, signed and sealed by Luis R. Lomas, P.E. on February 14, 2013. 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. 08-01925, sheets 1 through 4 of 4, titled “10300085 Aluminum X Mullion Reinforced LMI Wind Zone 3,” dated February 13, 2013, signed and sealed by Luis R. Lomas, P.E. on February 14, 2013. 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.

Maximum Window Sizes: The height and width of each individual window in the mulled 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 assembly shall 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.

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

1. Determine design pressure rating for the mullion using the Design Pressure Table Instructions on Sheet 1 of 4 of the approved drawings. **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 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 mulled assembly.
3. 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.
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 mulled 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 mulled 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 mulled 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 mulled assembly to determine the locations where the mulled 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 mulled assembly. Refer to the TDI evaluation report for each individual window 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 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: The mulled 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 self drilling screws. Refer to the details shown in the approved drawings for the attachment of the windows and doors to the mullions.

Attachment of Mulled 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 mulled 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 either the mullion clip or the steel mullion bracket. The mull clip and the steel mullion bracket shall be secured to the mullion and to the wall framing as specified in the approved drawings.

Attachment of Horizontal Mullions to Vertical Mullions: Vertical mullions shall be secured to horizontal mullions using the angle clip 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.