

Product Evaluation

DR1230 | 0522

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: DR-1230

Effective Date: May 1, 2022

Re-evaluation Date: May 2026

Product Name: Series MSD-375 (Medium Stile) and WSD-500 (Wide Stile) Aluminum Side Hinged Entrance Doors, Impact Resistant

Manufacturer: Oldcastle BuildingEnvelope
803 Airport Road
Terrell, TX 75160
(972) 551-6100

General Description:

The series MSD-375 (Medium Stile) and WSD-500 (Wide Stile) side hinged entrance doors are aluminum frame glazed outswing doors used for commercial curtain wall and storefront installations. This evaluation report includes the following door assemblies:

- Double Door Assembly (XX)
- Single Door Assembly (X)

Acceptance of Combined Assemblies: If the doors are used with curtain wall or storefront framing, then the curtain wall or storefront system must be listed in separate TDI evaluation reports.

Product Identification: An Oldcastle BuildingEnvelope label will be affixed to the door assembly. The label includes the manufacturer's name (Oldcastle BuildingEnvelope); the product name (MSD-375/ WSD-500 StormMax Aluminum Entrance Doors); that the design pressure and dimensions are per drawing TD22-01; and that the product complies with TAS 201-94, TAS 202-94, TAS 203-94, Large Missile Impact Rated.

Limitations:

Design Drawings:

Door assemblies must comply and be installed in accordance with the following design drawing:

Drawing No. TD22-01, "MSD-375 & WSD-500 StormMax Aluminum Entrance Doors (Large Missile Impact)," Sheets 1 thru 20 of 20, dated January 5, 2022; signed and sealed by Yiping Wang, P.E. on April 18, 2022. This evaluation report refers to the stated drawings as the approved drawings.

Fabrication and Assembly: Oldcastle BuildingEnvelope Series MSD-375 and WSD-500 Side Hinged Entrance Doors are fabricated in the factory. The doors are assembled and glazed at the jobsite. The approved drawings referenced in this evaluation report indicate the options for the glazing construction.

Design Pressure (DP):

The door assemblies have a maximum design pressure rating of +70 psf / -80 psf. Refer to approved drawing for specific design pressure requirements.

If the doors are used with curtain wall or storefront framing, then the design pressure rating of the complete assembly will be the lesser of the allowable design pressure rating for the curtain wall or storefront framing and the doors in this evaluation report.

Hardware: Hardware requirements are specified on the approved drawings. Design pressure varies as a function of the hardware option used.

Impact Resistance:

The door assemblies satisfy TDI's criteria for protection from windborne debris. These assemblies passed an impact criteria equivalent to Missile Level D as specified in ASTM E 1996. Install these assemblies at any height on the structure that does not exceed the assembly's design pressure rating. For essential facilities, the assembly may not be installed below a height of 30 feet in Wind Zone 3 and may be installed at all heights in Wind Zone 2 as defined in ASTM E 1996-14a.

Installation Instructions:

General: Prepare and install the assembly in accordance with Oldcastle BuildingEnvelope installation instructions and the approved drawings specified in this evaluation report. Detailed installation instructions are available from Oldcastle BuildingEnvelope.

Installation:

Wall Framing Construction: The door assemblies may be mounted to several types of wall framing construction. The types of wall framing construction allowed include:

- Concrete (minimum compressive strength: 3,000 psi)
- Grout-filled concrete block
- Aluminum (minimum 1/8" thick, 6063-T5)
- Wood (minimum specific gravity, S.G. = 0.55)
- Steel (minimum 16-gauge, $F_y=33$ ksi)

Fastener Requirements:

Refer to the approved drawings for the anchor layout and notes.

Refer to the approved drawings for the minimum embedment depths for the fasteners and the minimum edge distances (minimum distance fastener must be from the edge of the substrate material) for the fasteners.

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.