

## Product Evaluation

CWSF43 | 1122

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 1-800-248-6032.

**Evaluation ID:** CWSF-43

**Effective Date:** November 1, 2022

**Re-evaluation Date:** November 2025

**Product Name:** Resistor 3100 Aluminum Storefront System, Impact Resistant

**Manufacturer:** Trulite Glass and Aluminum Solutions  
403 Westpark Court  
Suite 201  
Peachtree City, GA 30269  
(800) 432-8132

**General Description:** The Resistor 3100 is an aluminum frame storefront system used for commercial installations. This evaluation report includes the following storefront assemblies:

Mulled Assemblies with Reinforcement (Aluminum or Steel)  
Mulled Assemblies without Reinforcement  
Double Door with Transom and Sidelites  
Single Door with Transom and Sidelites  
Door Frames without Transoms and with Sidelites

**Doors:** Doors referenced in this product evaluation report are not part of this product evaluation report. The doors used with these assemblies must be listed in a separate TDI product evaluation report.

**Product Identification:** A Trulite label will be affixed to the assembly. The label includes the manufacturer's name: (Trulite Glass & Aluminum Solutions); the product name: (Resistor 3100-Series Storefront); the test standards (TAS 201-94, TAS 202-94, TAS 203-94, ASTM E 330, ASTM E 1886, ASTM E 1996); the missile level (Large Missile Impact Rated, Missile Level D); and Installation and Design Pressure Per TDI Drawing TA18-06.

**Compliance:** The store front assemblies passed test criteria equivalent to ASTM E 330-14, ASTM E 1886-13a, and ASTM E 1996-14a as referenced in the 2018 IRC and the 2018 IBC.

**Limitations:**

**Design Drawings:**

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

Drawing No. TA18-06; titled "Resistor 3100 StoreFront Wall-LMI & SMI;" Sheets 1 thru 13 of 13; Rev. 3; dated August 31, 2022; signed and sealed by Yiping Wang, P.E on September 6, 2022. This evaluation report refers to the stated drawings as the approved drawings.

**Fabrication and Assembly:** Trulite Glass & Aluminum Solutions storefront systems are fabricated in the factory. The aluminum storefront systems are assembled and glazed at the jobsite. The approved drawing referenced in this evaluation report indicates the options for the glazing construction.

**Design pressure (DP):**

The aluminum storefront systems have a maximum design pressure rating of +100/-100 psf. Refer to approved drawing for specific design pressure requirements.

**Impact Resistance:**

The store front system has been tested for windborne debris resistance. These assemblies passed the equivalent of Missile Level D specified in ASTM E 1996-14a. 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.

**Acceptance of Other Assemblies:**

The approved drawings specify the limitations on overall width.

The approved drawings specify limitations on daylight opening size.

Doors used with the assemblies must be listed in separate TDI product evaluation reports.

If the storefront system is used with doors, then the design pressure rating of the complete assembly will be the lesser of the allowable design pressure rating for the doors and the storefront system in this evaluation report.

**Installation Instructions:**

**General:** Prepare and install the assembly in accordance with the manufacturers recommended installation instructions. Detailed installation instructions and drawings are available in the approved drawings.

**Wall Framing Construction:** The aluminum storefront system may be mounted to several types of wall framing construction. The types of wall framing construction allowed include:

- Concrete (minimum compressive strength;  $f'c = 3,000$  psi)
- Wood: Minimum specific gravity of 0.55
- Masonry: Hollow or Grout Filled Block Per ASTM C90 with  $f'm = 2,000$  psi minimum.
- Steel (minimum 1/8" thick;  $FY=36$  ksi)
- Aluminum (minimum 1/8" thick, 6063-T5)

**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.