

Product Evaluation

CWSF40 | 1121

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-40

Effective Date: November 1, 2021

Re-evaluation Date: November 2025

Product Name: Series CG500 Resistor Aluminum Storefront System, Impact Resistant

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

General Description: The Series CG500 Resistor is an aluminum frame storefront system used for commercial installations. This evaluation report includes the following storefront assemblies:

Light Mullion with Steel Reinforcement – Long Span
Light Mullion without Steel Reinforcement – Short Span
Heavy Mullion without Steel Reinforcement – Long Span
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: (CG500 Resistor 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 AD14-06.

Compliance: The store front assemblies passed test criteria equivalent to ASTM E 330-14, ASTM E 1886-13a, and ASTM E 1996-14a.

Limitations:

Design Drawings:

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

Drawing No. AD14-06; titled "CG500 Store Front System;" Sheets 1 thru 13 of 13; dated September 30, 2021; signed and sealed by Yiping Wang, P.E on October 12, 2021. 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 +70/-80 psf. Refer to approved drawing for specific design pressure requirements.

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.

Impact Resistance:

The store front system satisfies TDI's criteria for protection from windborne debris. 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. The assembly may not be installed below a height of 30 feet on essential facilities as defined in ASCE 7-16.

Acceptance of Other Assemblies:

The approved drawings specify the limitations on overall width.

The approved drawings specify limitations on vertical height.

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

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: 2,730 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 12-gauge, $FY=36$ 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.