

Product Evaluation

CWSF74 | 0322

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: CWSF-74

Effective Date: March 1, 2022

Re-evaluation Date: March 2026

Product Name: Trifab® VersaGlaze® 451/451T Aluminum Store Front Systems, Impact Resistant

Manufacturer: Kawneer Company, Inc.
Technology Park / Atlanta
555 Guthridge Court
Norcross, GA 30092
(770) 449-5555

General Description:

This evaluation report is for the Trifab® VersaGlaze® 451/451T aluminum store front system. The system is used for commercial installations. This evaluation report includes the following store front assemblies:

- Store Front System
- Double Door with Store Front and Transom
- Store Front with 90 Degree Bend
- Store Front with 135 Degree Bend

Doors: Kawneer doors used with these assemblies must be listed in separate TDI product evaluation reports.

Product Identification: A Kawneer label will be affixed to the store front assembly. The label includes the manufacturer's name (Kawneer); the product name (Trifab® VersaGlaze® 451/451T Framing System); that the design pressures and assembly size are per TDI drawing KAW016; the test standards (ASTM E 330, ASTM E 1886, ASTM E 1996; TAS 201, TAS 202, TAS 203); and the Missile Level (Large Missile Impact Rated, Level D).

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

Limitations:

Design Drawings: Store front assemblies must comply and be installed in accordance with the following design drawing:

Drawing No. KAW016; "Trifab 451/451T Storefront System (Impact);" Sheets 1 thru 12 of 12; dated February 11, 2021; signed and sealed by Hermes F. Norero, P.E on January 26, 2022. This evaluation report refers to the stated drawings as the approved drawings.

Fabrication and Assembly: The Kawneer Trifab® VersaGlaze® 451/451T aluminum store front systems are fabricated in the factory. The aluminum store front systems 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 store front assemblies have a maximum design pressure of +45/-45 psf. Refer to the design drawing for specific design pressure requirements.

If the store front 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 specified in a separate evaluation report 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 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 drawing specifies the limitations on maximum frame height, maximum width, maximum daylight opening width, and maximum daylight opening height.

Assemblies must not exceed the heights shown on the approved drawing.

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

Installation Instructions:

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

Installation:

Wall Framing Construction: The aluminum store front system 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)
- CMU (ASTM C-90; minimum compressive strength: 2,000 psi)
- aluminum (minimum 1/8" thickness, 6063-T5)
- steel (minimum 12-gauge wall thickness; 36 ksi minimum yield strength)
- wood (minimum specific gravity, SG=0.42)

Refer to the appropriate design drawing for specific wall construction requirements.

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.