

# TEXAS DEPARTMENT OF INSURANCE

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## PRODUCT EVALUATION CWSF-34

Effective February 1, 2014

*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 **February 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.*

**Trifab 451/451T Aluminum Storefront System, Impact Resistant**, manufactured by

**Kawneer Company, Inc.**  
**555 Guthridge Court**  
**Norcross, Georgia 30092-3503**  
**Telephone: (770) 840 - 6426**

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 the Trifab 451/451T aluminum storefront system. The aluminum storefront system is an aluminum frame system used for commercial storefront installations.

### **General Description:**

This evaluation report includes the following storefront assemblies:

Multiple Fixed Panel Storefront Assembly  
Storefront Assembly with Double Door and Transom  
Storefront Assembly with Single Door and Transom

**Doors:** Doors referenced in this product evaluation report are Kawneer 350 IR doors. The 350 IR doors are not part of this product evaluation report. Kawneer 350 IR doors used with these assemblies shall be listed in a separate Texas Department of Insurance product evaluation report.

**Product Identification:** A Kawneer label will be affixed to the storefront assembly. The label includes the manufacturer's name (Kawneer); the product name (Trifab 451/451T Storefront); that the design pressure and size are per drawing #1726T; and that the product complies with ASTM E 330, ASTM E 1886, ASTM E 1996, Large Missile Impact, Zone 4-Level D.

## LIMITATIONS

### Design Drawings:

Store front assemblies complying with the requirements for large missile impact shall comply and be installed in accordance with the following drawing:

Drawing No. 1726T, titled "Trifab 451/451T Large Missile Impact Storefront System," Sheets 1 thru 8 of 8, dated March 19, 2013, signed and sealed by Warren W. Schaeffer., P.E on March 20, 2013. The stated drawings will be referred to as the approved drawings in this evaluation report.

**Fabrication and Assembly:** Kawneer aluminum storefront systems are fabricated in the factory. The aluminum storefront 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):

- Multiple Fixed Store Front Assemblies: Maximum design pressure:  $\pm 45$  psf. Refer to the approved drawings for specific design pressure requirements.
- Storefront Assembly with Doors and Transom: Maximum design pressure:  $\pm 45$  psf. Refer to the approved drawings for specific design pressure requirements.

**Impact Resistance:** These assemblies satisfy the Texas Department of Insurance's criteria for protection from windborne debris in both the **Inland I** and **Seaward** zones. These assemblies have passed an impact criteria equivalent to Missile Level D specified in ASTM E 1996-04. These assemblies may be installed at any height on the structure as long as the design pressure rating for the assembly is not exceeded. These assemblies will not need to be protected with an impact protective system when installed in areas where windborne debris protection is required.

### Acceptance of Other Assemblies:

- Limitations on horizontal stacking, overall width, and the number of vertical panels used shall be as specified on the approved drawings.
- Either single doors or double doors may be used with the assemblies shown on the approved drawings.

## INSTALLATION INSTRUCTIONS

**General:** The assembly shall be prepared and installed in accordance with the manufacturers recommended installation instructions. Detailed installation instructions and drawings are available in the following document "Installation Instructions Trifab 451/451T-IR," by Kawneer, dated August, 2010.

### Installation:

**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: 3,000 psi)
- Wood dimension lumber (minimum Southern Yellow Pine)
- Masonry – (ASTM C-90, Grade N, Type 1 or greater)
- Steel studs (minimum 16 gauge, 33 ksi)
- Steel (1/8" thick, A36 (minimum Fy = 36 ksi))
- Aluminum (minimum 0.125" 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:** The manufacturer's installation instructions 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.