

Product Evaluation

CWSF69 | 0922

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-69

Effective Date: September 1, 2022

Re-evaluation Date: September 2026

Product Name: FG-5700/5750/5750T StormMax® Aluminum Storefront Systems, Impact Resistant

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

General Description:

The StormMax® storefront system is an aluminum frame system used for commercial installations. This evaluation report includes the following storefront assemblies:

- FG-5700 StormMax® Outside Wet and Dry Glazed using FG-5712 Subsill
- FG-5700 StormMax® Inside Dry Glazed using FG-5180 Subsill
- FG-5750 StormMax® Outside Wet and Dry Glazed using FG-5712 Subsill
- FG-5750 StormMax® Inside Dry Glazed using FG-5180 Subsill
- FG-5750T StormMax® Outside Wet and Dry Glazed using FGT-5712 Subsill
- FG-5750T StormMax® Inside Dry Glazed using FGT-5712 Subsill

Doors: Oldcastle BuildingEnvelope doors used with these assemblies must be listed in a separate TDI product evaluation report.

Product Identification: An Oldcastle BuildingEnvelope label will be affixed to the storefront assembly. The label includes the following information:

FG-5700 StormMax® Storefront System, Monolithic Impact, Wet and Dry Glazed: The label includes the manufacturer's name (Oldcastle BuildingEnvelope); the product name (FG-5700 StormMax® Storefront); the design pressures and dimensions are per drawing 21-38374; the test standards (TAS 201/202/203-94); and the Missile Level (Large Missile Impact Rated).

FG-5750 StormMax® Non-Thermal IGU Storefront System, Wet and Dry Glazed: The label includes the manufacturer's name (Oldcastle BuildingEnvelope); the product name (FG-5750 StormMax® Storefront); the design pressures and dimensions are per drawing 21-38377; the test standards (TAS 201/202/203-94); and the Missile Levels (Large and Small Missile Impact Rated).

FG-5750T StormMax® Thermal IGU Impact Storefront System, Wet and Dry Glazed: The label includes the manufacturer's name (Oldcastle BuildingEnvelope); the product name (FG-5750T StormMax® Storefront); the design pressures and dimensions are per drawing 21-38380; the test standards (TAS 201/202/203-94); and the Missile Levels (Large and Small Missile Impact Rated).

Limitations:

Design Drawings: Storefront assemblies must comply and be installed in accordance with one of the following design drawing:

- Drawing No. 21-38374; "FG-5700 StormMax® Storefront System, Wet and Dry Glazed;" Sheets 1 thru 37 of 37; dated July 12, 2022; signed and sealed by Frank Bennardo, P.E on July 12, 2022. This evaluation report refers to the stated drawings as the approved drawings.
- Drawing No. 21-38377; "FG-5750 StormMax® Non-Thermal Impact Storefront System, Wet and Dry Glazed;" Sheets 1 thru 43 of 43; dated July 12, 2022; signed and sealed by Frank Bennardo, P.E on July 12, 2022. This evaluation report refers to the stated drawings as the approved drawings.
- Drawing No. 21-38380; "FG-5750T StormMax® Thermal IGU Impact Storefront System, Wet and Dry Glazed;" Sheets 1 thru 41 of 41; dated July 12, 2022; signed and sealed by Frank Bennardo, P.E on July 12, 2022. This evaluation report refers to the stated drawings as the approved drawings.

Fabrication and Assembly: Oldcastle BuildingEnvelope StormMax® 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):

FG-5700 StormMax® Storefront System: The storefront system has a maximum design pressure rating of +90 psf / -90 psf. Refer to the approved drawing for specific design pressure requirements.

FG-5750 StormMax® Non-Thermal Storefront System: The storefront system has a maximum design pressure rating of +70 psf / -80 psf. Refer to the approved drawing for specific design pressure requirements.

FG-5750T StormMax® Thermal IGU Impact Storefront System: The storefront system has a maximum design pressure rating of +75 psf / -75 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:

FG-5700 StormMax® Storefront System: The storefront 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 30 feet on essential facilities as defined in ASCE 7-16.

FG-5750 StormMax® Non-Thermal Storefront System: The storefront system satisfies TDI's criteria for protection from windborne debris. These assemblies passed the equivalent of Missile Level D and Missile Level A specified in ASTM E 1996-14a. Assemblies passing Missile Level D may be installed at any height on the structure that does not exceed the assembly's design pressure rating. Assemblies passing Missile Level A may be installed at heights greater than 30 feet above ground level that does not exceed the assembly's design pressure rating. For essential facilities, as defined in ASCE 7-16, assemblies passing Missile Level D may not be installed below 30 feet and assemblies passing Missile Level A may not be installed.

FG-5750T StormMax® Thermal IGU Impact Storefront System: The storefront system satisfies TDI's criteria for protection from windborne debris. These assemblies passed the equivalent of Missile Level D and Missile Level A specified in ASTM E 1996-14a. Assemblies passing Missile Level D may be installed at any height on the structure that does not exceed the assembly's design pressure rating. Assemblies passing Missile Level A may be installed at heights greater than 30 feet above ground level that does not exceed the assembly's design pressure rating. For essential facilities, as defined in ASCE 7-16, assemblies passing Missile Level D may not be installed below 30 feet and assemblies passing Missile Level A may not be installed.

Acceptance of Other Assemblies:

- The approved drawings specify the limitations on overall width.
- Assemblies must not exceed the heights shown on the approved drawings.
- 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 the 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 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)
- metal stud (minimum 16-gauge; $F_y=33$ ksi)
- steel (minimum 1/8" thick, $F_y=36$ ksi)
- wood (minimum specific gravity, $SG=0.55$)
- aluminum (minimum 1/8" thick, 6063-T6)

Refer to the appropriate design drawing for the allowed wall framing construction.

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.