



Product Evaluation

CWSF23 | 0316

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-23

Effective Date: March 1, 2016

Re-evaluation Date: March 2020

Product Name: Reliance StormMax Curtain Wall Systems, Impact Resistant

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

General Description: The Reliance StormMax curtain wall system is an aluminum frame curtain wall used for commercial installations. This evaluation report includes the following curtain wall assemblies:

- Twin Spans
- Single Spans
- 90 Degree Corner

Doors: Doors referenced in this product evaluation report are Oldcastle BuildingEnvelope door products. The Oldcastle BuildingEnvelope doors used with these assemblies must be listed in separate TDI product evaluation reports.

Product Identification: An Oldcastle BuildingEnvelope label will be affixed to the storefront assembly.

Products Installed in Accordance with Drawing No. 14-078: The label includes the manufacturer's name (Oldcastle BuildingEnvelope); the product name (Reliance StormMax Captured Curtain Wall-Dry Glazed); that the design pressures and dimensions are per drawing 14-078; and that the product complies with TAS-201, TAS-202, TAS-203.

Products Installed in Accordance with Drawing No. 14-079: The label includes the manufacturer's name (Oldcastle BuildingEnvelope); the product name (Reliance StormMax SSG Curtain Wall System); that the design pressure and dimensions are per drawing 14-079; and that the product complies with TAS-201, TAS-202, TAS-203.

Products Installed in Accordance with Drawing No. 14-080: The label includes the manufacturer's name (Oldcastle BuildingEnvelope); the product name (Reliance StormMax High Performance Curtain Wall System); that the design pressures and dimensions are per drawing 14-080; and that the product complies with TAS-201, TAS-202, TAS-203.

Products Installed in Accordance with Drawing No. 14-081: The label includes the manufacturer's name (Oldcastle BuildingEnvelope); the product name (Reliance StormMax Captured Curtain Wall System); that the design pressures and dimensions are per drawing 14-081; and that the product complies with TAS-201, TAS-202, TAS-203.

Limitations:

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

- Drawing No. 14-078, "Reliance StormMax Captured Curtain Wall System Large Missile Impact Insulated Laminated Glass (Dry Glazed)," Sheets 1 thru 40 of 40, dated October 16, 2014 (sheet 8 of 40 revised January 4 2016), signed and sealed by Walter A. Tillit, Jr, P.E on January 5, 2016. This evaluation report refers to the stated drawings as the approved drawings.
- Drawing No. 14-079, "Reliance StormMax SSG Curtain Wall System Large Missile Impact Insulated Laminated Glass," Sheets 1 thru 40 of 40, dated October 16, 2014 (sheet 8 of 40 revised January 4 2016), signed and sealed by Walter A. Tillit, Jr, P.E on January 5, 2016. This evaluation report refers to the stated drawings as the approved drawings.
- Drawing No. 14-080, "Reliance StormMax High Aluminum Performance Curtain Wall," Sheets 1 thru 31 of 31, dated October 16, 2014, signed and sealed by Walter A. Tillit, Jr., P.E on October 15, 2015. This evaluation report refers to the stated drawings as the approved drawings.
- Drawing No. 14-081, "Reliance StormMax Captured Curtain Wall System Large & Small Missile Impact Insulated & Laminated Glass," Sheets 1 thru 40 of 40, dated October 16, 2014 (sheet 8 of 40 revised January 4 2016), signed and sealed by Walter A. Tillit, Jr, P.E on January 5, 2016. This evaluation report refers to the stated drawings as the approved drawings.

Fabrication and Assembly: Oldcastle BuildingEnvelope Reliance StormMax curtain wall systems are fabricated in the factory. The aluminum curtain wall 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):

- **For Assemblies in Accordance with Drawing 14-078**, the curtain wall system has a maximum design pressure rating of +70 psf / -70 psf. Refer to the approved drawing for specific design pressure requirements.
- **For Assemblies in Accordance with Drawing 14-079**, the curtain wall system has a maximum design pressure rating of +90 psf / -90 psf. Refer to the approved drawing for specific design pressure requirements.
- **For Assemblies in Accordance with Drawing No. 14-080**, the curtain wall system has a maximum design pressure rating of +92 psf / -92 psf. Refer to approved drawing for specific design pressure requirements.
- **For Assemblies in Accordance with Drawing 14-081**, the curtain wall system has a maximum design pressure rating of +100 psf / -100 psf. Refer to the approved drawing for specific design pressure requirements.
- If the curtain wall 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 curtain wall systems satisfy TDI's criteria for protection from windborne debris in both the **Inland I** and **Seaward** zones. These assemblies passed an impact criteria equivalent to Missile Level D specified in ASTM E 1996. Note: Certain assemblies specified in Drawing 14-080 have also passed an impact criteria equivalent to Missile Level E specified in ASTM E 1996. Install these assemblies at any height on the structure that does not exceed the assembly's design pressure rating. These assemblies do not require protection with an impact protective system when installed in areas that require windborne debris protection.

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 "Reliance StormMax Curtain Wall Installation and Glazing Manual," and the approved drawings specified in this evaluation report. Detailed installation instructions are available from Oldcastle BuildingEnvelope.

Installation:

Wall Framing Construction: The aluminum curtain wall 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)
- steel (minimum 1/4" thick, Fy=36 ksi)
- wood (minimum specific gravity, SG=0.55)

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 and the approved drawings available at the job site during installation. Use corrosion resistant fasteners as specified in the IRC, the IBC, and the Texas Revisions.