

Product Evaluation

SHU237 | 0821

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: SHU-237

Effective date: August 1, 2021

Re-evaluation date: August 2025

Product name: ClearTek Polycarbonate Storm Panel Shutter System

Manufacturer: Ultratek Worldwide
3801 N. Washington Blvd.
Sarasota, FL 34234
(941) 351-6700

General Description:

This evaluation report is for clear polycarbonate storm panels. The evaluation report includes corrugated polycarbonate panels and flat polycarbonate panels. The corrugated polycarbonate panels are available in 21", 27", 33", and 39" panel widths. Panel thickness is specified on the approved drawings. Alternate corrugated panels are available in 12", 14", and 24" panel widths. The flat polycarbonate panels are a maximum of 60" in width. The panels thickness varies between 0.118" to 0.250".

Design Drawings:

"ClearTek Storm Panel System;" manufactured by Ultratek Worldwide; Drawing No. 21-13; Sheets 1-10 of 10; dated March 4, 2021; drawing signed, sealed, and dated July 13, 2021, by John H. Kampmann Jr, P.E. The stated drawings will be referred to as approved drawings in this report.

Limitations:**Configurations:**

- Single Units

Mounting Conditions:

- Trapped Mount
- Direct Mount
- Built-out Direct Mount
- Built-out Trapped Mount

Wall Construction: The storm panels may be mounted to the following types of wall framing:

- Pre-cast concrete, cast-in-place concrete (minimum compressive strength required specified in drawings)
- Grout-filled concrete masonry units (CMU)
- Hollow concrete masonry units (CMU)
- Wood (refer to specific gravity on drawings).

Allowable Design Pressure: The allowable design pressure is a function of the shutter span, mounting condition, and the anchorage method used. The maximum allowable design pressure is +/-75.0 psf for the corrugated panels. The maximum allowable design pressure is +/-60.0 psf for the flat polycarbonate panels. Refer to the approved drawings for the allowable design pressure for a specific installation condition.

Maximum Shutter Length: The maximum allowable shutter length is unlimited.

Maximum Shutter Span:

- Flat polycarbonate panels: The maximum allowable shutter span is 105".
- Corrugated polycarbonate panels: The maximum allowable span is a function of the mounting condition and the design pressure rating. The maximum allowable span is 135". Refer to the approved drawings for specific span limitations.

Minimum Separation from Glass: The minimum glass separation as a function of span and design pressure rating is specified on the approved drawings. The shutter assembly is considered a non-porous impact protective system. No minimum separation from glass is required unless installed on essential facilities. The shutters may not be installed below 30 feet on essential facilities as defined in ASTM E 1996-14a.

Product Identification: The roll-up shutter assemblies must have a manufacturer-produced permanent label that indicates the manufacturer (UltraTek Worldwide); the name of the product (Cleartek Invisishield); the test standards and missile level (ASTM E 330, ASTM E 1886, and ASTM E 1996, Missile Level D; TAS 201, TAS 202, TAS 203, Large & Small Missile).

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

Impact Resistance: This shutter assembly satisfies the Texas Department of Insurance's criteria for protection from windborne debris. The assembly passed a missile level equivalent to Missile Level D specified in ASTM E 1996-14a. The assembly may be installed at any height on the structure as long as the design pressure rating for the assembly is not exceeded. The shutters may not be installed on essential facilities as defined in the IBC.

Installation:

General Installation Requirements: The storm panels must be installed in accordance with the manufacturer's installation instructions, the approved drawings, and this product evaluation report. Copies of the approved drawings must be available on the jobsite during inspection of the shutter assembly.

Anchorage: The storm panels must be anchored to the structure in accordance with the approved drawings.

Note: Keep the manufacturer's installation instructions and the approved drawings available on the job site during the installation. Use corrosion resistant fasteners as specified in the IRC and the IBC.