

Product Evaluation

SHU233 | 0221

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-233

Effective Date: February 1, 2021

Re-evaluation Date: February 2025

Product Name: 24-Gauge Corrugated Steel Storm Shutters with Polycarbonate Panels

Manufacturer: Town & Country Industries
400 West McNab Road
Fort Lauderdale, FL 33309
(561) 512-9702

General Description:

The 24-gauge steel storm panels are 0.0232" thick and are composed of ASTM A653 Grade 40 steel with a G60 galvanized coating. The steel panels are rolled into either two ribbed 2" x 14.375" sections with nominal coverage of 12" per panel or one ribbed 2" x 8.332" sections with nominal coverage of 6" per panel. The polycarbonate panels are extruded to 0.100" thickness and are manufactured from 100 percent synthetic thermoplastic polymer resin. The polycarbonate panels are manufactured by Transparent Protection Systems, Inc. The polycarbonate panels are two ribbed 2" x 15.25" sections with nominal coverage of 12" per panel. The storm panels in this report are not a permanently mounted shutter system.

Limitations:

Mounting Conditions: The shutters may be wall mounted, direct mounted, or build-out mounted. Refer to the approved drawings for the acceptable mounting conditions.

Wall Construction: The accordion shutters may be mounted to the following types of wall framing:

- Cast-in-place concrete (minimum 3,000 psi)
- Hollow or grout-filled concrete masonry units (CMU), C-90
- Wood (Spruce-Pine-Fir, $G \geq 0.42$ or Southern Yellow Pine, $G \geq 0.55$)

Design Drawings: The roll-up shutters are installed in accordance with Town & Country Industries, Drawing No. 20-24244.10, Sheets 1-10 of 10, dated June 17, 2020, with each sheet signed, sealed, and dated by Frank Bennardo., P.E. on November 23, 2020. The stated drawings will be referred to as approved drawings in this report. A copy of the approved drawings shall be available at the job site.

Product Identification: The panels have an impression every 24" that indicates the manufacturer (Town & Country Ind); the name of the product (24 Gauge); the missile level (Missile Level D); the test standards: ASTM E 330; ASTM E 1886, ASTM E 1996; and the TDI product evaluation report number (SHU-233).

Compliance: The shutters comply with ASTM E 330-14, ASTM E 1886-13a, and ASTM E 1996-14a.

Allowable Design Pressure: The allowable design pressure can vary as a function of corrugated panel span, attachment anchor type, and structure substrate. The maximum allowable design pressure is ± 100 psf.

Minimum Separation from Glass: The shutter assembly is considered a non-porous impact protective system. When installed in non-essential facilities as defined in International Building Code, there is no minimum separation from glass required.

Maximum Allowable Panel Span: The maximum allowable panel span is 120". Refer to Table 1 in the approved drawings for allowable panel spans as a function of allowable design pressure.

Maximum Allowable Width: There is no limit to the panel width (defined as the orientation perpendicular to the panel span).

Impact Resistance: These products satisfy TDI's criteria for protection from windborne debris (Missile Level D). The shutter assemblies may be installed at any height on the structure that does not exceed the design pressure rating for the assemblies.

Installation:

General Installation Instructions: Install the shutters in accordance with the approved drawings and this product evaluation.

Anchorage: The shutters are anchored to the structure in accordance with the approved drawings. Anchorage of the shutters must follow the mounting details on the drawings and the fasteners specified in the mounting details and fastener schedules.

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