

TEXAS DEPARTMENT OF INSURANCE

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PRODUCT EVALUATION SHU-168

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 **June 2017**.*

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.

Clear Bertha Polycarbonate Storm Panel manufactured by

Eastern Metal Supply, Inc.
9400 Telge Road
Houston, Texas 77095
(800) 996-6061

will be accepted for use in designated catastrophe areas along the Texas Gulf Coast when installed in accordance with this product evaluation and the design drawings that are referenced in this report.

PRODUCT DESCRIPTION

The clear carbonate panels are 2.25 inch deep corrugations with a wall thickness of 0.100 inches. The panels are manufactured from polymeric resin with a thermoplastic polymer tensile strength of $F_y=8.7$ ksi, flexural strength $F_{by} = 12.5$ ksi and flexural modulus of 340 ksi. The panels are available in a half clear panel (9.120" wide), a single wide panel (15.120") and a double wide clear panel (27.120" wide). The panels are overlapped, a minimum of one corrugation, to provide an unlimited width of opening perpendicular to the panel span.

LIMITATIONS

Design Drawings: The storm panels shall be installed in accordance with Eastern Metal Supply, Inc. drawing "Clear Bertha Storm Panel", Drawing No. 13-048, sheets 1-6 of 6, dated June 19, 2013, revision 1, all signed and sealed by Walter A. Tillit Jr., P.E. on June 21, 2013. The stated drawings will be referred to as approved drawings in this report.

Product Identification: A label will be affixed to each storm panel. The label identifies the manufacturer, the name of the shutter, and compliance with ASTM E 330, ASTM E 1886, and ASTM E 1996.

Impact Resistance: This shutter assembly satisfies the Texas Department of Insurance's criteria for protection from windborne debris in both the Inland I zone and the Seaward zone. The shutter assemblies passed an impact-resisting standard equivalent to Missile Level D specified in ASTM E 1996-05. The shutter assemblies may be installed at any height on the structure as long as the design pressure rating for the assemblies is not exceeded.

Design Wind Pressure:

Maximum Width (inches)	Maximum Height (inches)	Allowable Design Pressure Rating (psf) ¹
Unlimited	96	±60

Note: ¹ Refer to sheet 5 of 6 for other heights and pressures based on mounting conditions.

Separation from Glass: The minimum separation from glass is 1”.

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

- Pre-cast concrete, cast-in-place concrete (minimum compressive strength 3,000 psi);
- Concrete masonry units (C-90); or
- Wood (minimum Spruce-Pine-Fir).

INSTALLATION INSTRUCTIONS

General Installation Requirements: All shutters shall be installed in accordance with the approved drawings. All assemblies must adhere to the limitations section of this evaluation. All bolts, washers and wing nuts shall be galvanized or stainless steel.

Anchorage: The panels can be direct mounted to concrete, hollow masonry, or wood framing in accordance with the mounting details in the manufacturer’s installation instructions.

Note: The manufacturer’s installation instructions and the approved drawings 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.