

TEXAS DEPARTMENT OF INSURANCE

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PRODUCT EVALUATION SHU-142

Effective August 1, 2006

*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 3 years after the effective date.*

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.

16mm Polycarbonate Direct Mount Hurricane Storm Panels manufactured by:

Polygal Inc.
9405A D. Ducks Lane
Charlotte, NC 28273
(800) 537-0095

will be accepted for use in designated catastrophe areas along the Texas Gulf Coast when installed in accordance with this product evaluation along with Polygal, Inc. Hurricane Panel Installation Instructions – Polygal 16mmSG Sheet.

PRODUCT DESCRIPTION

The 16mm hurricane storm panels consists of one (1) sheet of 16mm thick triple wall polycarbonate sheets with an extruded aluminum channel on the perimeter. The overall dimensions of the panel are 72" wide by 96" high. The extruded aluminum channels measures 2" x $\frac{1}{2}$ " x 0.063". The aluminum channel is constructed of 6063-T5 aluminum alloy.

LIMITATIONS

System	Maximum Width (inches)	Maximum Height (inches)	Allowable Design Pressure Rating (psf)
16mm	72	96	±45

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 1996-02. 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.

INSTALLATION INSTRUCTIONS

General Installation Requirements:

All units shall be installed in accordance with this product evaluation report and the manufacturer's installation instructions. All bolts, washers and wing nuts shall be galvanized or stainless steel.

Anchorage:

The units shall be direct mounted to wood wall framing or concrete in accordance with the mounting details in the manufacturer's installation instructions. The panels are secured to the structure along the head, jambs and sill with either a 3" Sammy for $\frac{3}{8}$ " rod GST 30 (wood framing) or 1 $\frac{1}{2}$ " Sammy for $\frac{3}{8}$ " rod CST 20 (concrete). The Sammy fasteners are countersunk flush with concrete or wood wall framing. The panels shall overlap 3" on all sides of the opening. The fasteners shall be spaced as follows:

Head and Sill: (located from right to left) 1 $\frac{1}{2}$ ", 3", 15", 27", 39", 51", 63", 69", and 70 $\frac{1}{2}$ ".

Jambs: (located from each jamb from top to bottom) 1 $\frac{1}{2}$ ", 10 $\frac{1}{2}$ ", 22 $\frac{1}{2}$ ", 34 $\frac{1}{2}$ ", 46 $\frac{1}{2}$ ", 58 $\frac{1}{2}$ ", 70 $\frac{1}{2}$ ", 82 $\frac{1}{2}$ " and 93 $\frac{1}{2}$ ".

The panels are held in place with either $\frac{3}{8}$ " – 16 x 1 $\frac{1}{4}$ " long bolts or $\frac{3}{8}$ " – 16 x 2" long threaded rod, 1" diameter washer and $\frac{3}{8}$ " – 16 wing nut.

Attachment to Wood Frame Structures:

The wall framing shall be minimum Southern Yellow Pine lumber (G \geq 0.55). The fasteners shall penetrate into the wall framing a minimum of 3".

Attachment to Concrete Structures:

Concrete shall have a minimum compressive strength of 3000 psi. The fasteners shall penetrate into the concrete a minimum of 1 $\frac{1}{2}$ ".

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) and the International Building Code (IBC).