

# TEXAS DEPARTMENT OF INSURANCE

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## PRODUCT EVALUATION SHU-178

Effective Date: January 1, 2013

*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 **January 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.*

**Series APEX-A55 Foam-filled Rolled Aluminum Slat Roll-Up Shutters** manufactured by:

**Rollac Shutter of Texas, Inc.**  
**5331 Orange Street**  
**Pearland, Texas 77581**  
**(800) 880-0922**

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 referenced in this evaluation report.

## PRODUCT DESCRIPTION

**General:** All of the slat roll-up shutter systems specified in this product evaluation report are permanently mounted impact protective systems. The slats are mounted with the following components: mullions, rails, and reel box assembly. Consecutive single spans and multiple spans are connected with mullions. All aluminum extrusions shall be 6063-T6 aluminum alloy unless otherwise noted on the drawings. The shutters may be face mounted, built-out, inside mounted or any combination thereof.

### **Slat Types:**

**Foam filled rolled aluminum slat:** This slat is produced from aluminum alloy 3005-H48 sheet metal and is injected with a foam plastic core. This foam plastic core is produced from two components mixed in 100/100 parts by weight Elastopor P12041 R (1.06 specific gravity) Resin and Elastopor P1001 U (1.22 specific gravity) Isocyanate. This aluminum slat has a total width of 2.598", a maximum depth of 0.531" and a typical wall thickness of 0.024".

## LIMITATIONS

**Design Drawings:** The roll-up shutters shall be installed in accordance with Rollac Shutter of Texas, Inc, titled "Apex A-55 Slat Engaged Roll-Up Shutter," Drawing No. 12-173, sheets 1-17 of 17, dated November 29, 2012, with each sheet signed and sealed by Walter A. Tillit Jr., P.E. on December 4, 2012. 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.

**Maximum Allowable Design Load (Wood, Concrete, or CMU): ±30 psf to ±53 psf**

These ratings are for installations into poured concrete, grout filled concrete masonry units (CMU), or wood wall framing. The allowable design pressure for the assembly shall be determined using the "Slat Performance Charts" on sheet 10 of 17 of the approved drawings for concrete and CMU installations and on sheets 16 and 17 of 17 for wood installations. Wood wall framing may be minimum No. 2 Southern Yellow Pine, Douglas Fir-Larch, or Spruce-Pine-Fir dimension lumber. The slat span in inches shall be used to determine the allowable design pressure.

**Maximum Slat Span:** The maximum slat span for a given design pressure shall be determined using the drawings listed in the paragraph above, and shall not exceed 10 feet.

**Maximum Mullion Span:** The maximum span of the shutter system with consecutive spans and/or multiple spans is also dependent on the mullion span which is determined using the information in the applicable tables on sheet 15 of 17 of the approved drawings. The mullion span is determined from the design pressure, the mullion spacing and the type of mullion.

**Impact Resistance:** This 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 assembly passed Missile Level D specified in ASTM E 1996-05. The assembly may be installed at any height on the structure as long as the design pressure rating for the assembly is not exceeded.

## INSTALLATION INSTRUCTIONS

**General Installation Requirements:**

All shutters shall be installed in accordance with the approved drawings. All assemblies shall adhere to the limitations section of this evaluation.

**Identification:** The shutter assembly shall bear a label that identifies the manufacturer, the name of the shutter, and compliance with ASTM E 330, ASTM E 1886, and ASTM E 1996.

**Anchorage:** The shutters shall be anchored to the structure in accordance with the approved drawings on sheet 11 of 17 for concrete or CMU installations and on sheet 17 of 17 for wood installations. Anchorage of shutters to concrete, CMU, or wood framing shall follow the mounting details on the drawings and the fasteners specified in the mounting details. For attachment to wood framing, the lag screws shall have a minimum penetration of 1 ½ inches into the wood framing members.

**Separation from Glass:** The shutter shall be separated from the glass by the separation schedule in the approved drawings on sheet 10 of 13 for concrete or CMU. The minimum separation to glass shall be determined using the tables on sheet 16 of 17 of the approved drawings for wood installations.

**Note:** The manufacturer's installation instructions 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.