

TEXAS DEPARTMENT OF INSURANCE

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PRODUCT EVALUATION

Effective Date: June 1, 2013

SHU-169

*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 **April 2014**.*

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.

Extruded Aluminum 60mm and 40mm Slat Roll-up Shutters manufactured by:

Atlantic Metal Extrusions
1243 Etruscan Way
Indian Harbour Beach, Florida 32937
(859) 227-1320

will be accepted for use in designated catastrophe areas along the Texas Gulf Coast when installed in accordance with this product evaluation along with drawing No. 08-265 sheets 1 through 19 of 19, dated December 11, 2008, signed and sealed by Walter A. Tillit, Jr., P.E. on December 12, 2008. The stated drawings will be referred to as the approved drawings in this report.

PRODUCT DESCRIPTION

The 40mm and 60mm extruded aluminum roll-up shutters are composed of a 6063-T6 aluminum alloy. The shutters can be either a removable or a permanently mounted impact protective system. The Type 1 (60mm) extruded aluminum slats have a total width of 2.847" and a depth of 0.591" and a typical wall thickness of 0.047". The Type 2 (40mm) extruded aluminum slats have a total width of 1.890" and a depth of 0.369" and a typical wall thickness of 0.047". The slats are mounted with the following components: the header, the mullions, track, the reel box assembly and storm bars. The overall horizontal span of the system can be increased by the use of storm bars that create multiple spans. Consecutive single spans and multiple spans are connected by mullions. All aluminum extrusions shall be 6063-T6 aluminum alloy, unless otherwise noted. The shutters may be wall mounted, inside mounted, face mounted, build-out or any combination thereof.

Identification: The shutter assemblies shall have a label that identifies the manufacturer, the name of the product, compliance with ASTM E-330, and compliance with ASTM E 1886, and ASTM E 1996, or equivalent.

LIMITATIONS

Maximum Allowable Design Load (Wood): 90 psf when attached to wood construction.

Maximum Allowable Design Load (Concrete or CMU): The maximum allowable design pressures vary based on the mounting substrate, fastener spacing, and mounting technique (wall mount, inside mount, build-out mount). The maximum positive (+) and negative (-) design pressure ratings for poured concrete and concrete block is listed for various panel lengths on Sheet 15 of 19 of Drawing No. 087-265. The pressure rating varies based on span distance, shutter height, substrate, mullion spacing, and anchor spacing. For maximum allowable pressure based on mullion spacing refer to Sheet 19 of 19 of the approved drawings.

Minimum separation from glass: In all installations, there will be a minimum separation from the glass of one (1) inch.

Maximum Slat Span: The slat spans a maximum of 8' - 4" but may be reinforced with vertical storm bars or vertical mullions to form larger width openings. The slats interlock to form openings of unlimited height for single units, but are limited to 11' - 6" when using storm bars and 15 - 8" when using vertical mullions.

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 the equivalent of Missile Level D specified in ASTM E 1996-04. 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 shutters shall be installed in accordance with the approved drawings, signed and sealed by Walter A. Tillit, Jr., P.E. on December 12, 2008. During a high wind event, the shutters shall be locked and in the closed position.

Anchorage: The side rails shall be anchored to the wall using the anchor schedule on page 6 of 19 of the approved drawings for concrete and masonry installations. For attachment to concrete or masonry, anchors shall have a minimum edge distance of 3 inches, unless adjusted using the factor on Page 6 of 19 of the approved drawings. The minimum penetration into concrete block shall be 1 $\frac{1}{4}$ inches and the minimum penetration into poured concrete shall be 1 $\frac{3}{4}$ inches. For attachment to wood framing, the wood framing members shall be minimum Southern Yellow Pine (G=0.55) or greater and attached according to the specifications on page 14 of 19 of the approved drawings. The minimum penetration into wood wall framing shall be 1 $\frac{1}{2}$ inches. Refer to the anchor schedule and notes to verify proper embedment for each type of fastener.

Note: The manufacturer's installation instructions and the approved drawings, sheets 1 through 19 of 19, signed and sealed by Walter A. Tillit, Jr., P.E. on December 12, 2008, 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.