

TEXAS DEPARTMENT OF INSURANCE

Engineering Services Program / MC 103-3A 333 Guadalupe Street P.O. Box 149104 Austin, Texas 78714-9104
Phone No. (512) 322-2212 Fax No. (512) 463-6693

PRODUCT EVALUATION SHU-213

Effective Date: June 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 **May 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.

Barracuda III End-Retention and Non-End Retention Rollup Shutter manufactured by:

Alutech United, Inc.
117 Dixon
Selbyville, DE 19975
Telephone: (302) 436-6005

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

PRODUCT DESCRIPTION

General: The Barracuda III extruded aluminum roll-up shutter is a 6063-T5 aluminum alloy permanently mounted impact protective system. Aluminum extruded roll up shutters are assembled from interlocking extruded slats. The slats are mounted with the following components: the end-retention rail and the hood assembly. Aluminum extrusions shall be 6003-T5 aluminum alloy, unless otherwise noted on the drawings. The shutters may be wall mounted to concrete, concrete-filled concrete masonry block, hollow concrete masonry block, wood framing, aluminum or steel. The roll-up shutters may be installed as either single units or multiple units utilizing mullions.

Slat Description: The single wall aluminum slats are 6063-T5 aluminum alloy with a thickness of 0.039" and a cross section of 1.931" wide. The double wall slats are 6063-T5 aluminum alloy with a thickness of 0.050" and a cross section of 2.30" wide.

Product Identification: All shutters shall be labeled with the manufacturer's name, product name and compliance standards ASTM E 330, ASTM E 1886 and E 1996. The label for the end retention shutter system with double wall slats will also indicate Missile Level D, Wind zone 4. The label for the non-end retention shutter system and end retention shutter system with single wall slats will also indicate Missile Level C, Wind zone 2.

LIMITATIONS

Design Drawings: The Barracuda III roll up shutters shall be installed in accordance with Drawing No. 12-AUI-03, sheets 1 through 12 of 12, dated January 2, 2013, signed and sealed by Frank L. Bennardo, P.E. on January 4, 2013. 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.

Design Pressure Rating: The maximum design pressure rating for non-end retention shutter shall be +80, -80 psf. The maximum design pressure rating for end retention shutter with double wall slats shall be +113.3, -113.3, and the maximum design pressure rating for end retention shutter with single wall slats shall be +50, -50 psf.

Span Configurations: The shutters are installed as a single span configuration.

Separation Distance from Glazed Openings: The roll-up shutters shall be separated from the glazed openings as specified in the Glass Separation Schedule and glazing separation notes on sheet 1 of 12 of the approved drawings.

Wall Construction: The roll-up shutters may be mounted to the following types of wall framing:

- Pre-cast concrete, cast-in-place concrete (minimum compressive strength 2,846 psi)
- Grout-filled concrete masonry units (CMU), C-90, Grade N, Type 1 (or greater)
- Wood (minimum Spruce-Pine-Fire dimension lumber)
- Aluminum, minimum 6063-T5, or A36 steel, $\frac{1}{8}$ " thick

Impact Resistance: The end retention system with double wall slats 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 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.

The non-end retention shutter system and the end retention shutter system with single wall slats satisfies the Texas Department of Insurance's criteria for protection from windborne debris in the **Inland I** zone. The shutter assemblies passed an impact standard equivalent to Missile Level C 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.

INSTALLATION INSTRUCTIONS

General Installation Requirements: All shutters shall be installed in accordance with the approved drawings and this product evaluation report.

Anchorage: All devices are mounted and anchored in accordance with the approved drawings. The end-retention rail and non-end retention rail shall be mounted to approved structural substrates with the anchor schedule and fasteners specified on the drawings. The fasteners shall be spaced a maximum of 4" o.c.

Note: All fasteners shall be corrosion resistant as specified in the International Residential Code (IRC), the International Building Code (IBC), and the Texas Revisions.