

Product Evaluation

SHU213 | 1120

Engineering Services Program

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 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.

For more information, contact TDI Engineering Services Program at (800) 248-6032.

Evaluation ID: SHU-213

Effective Date: November 1, 2020

Re-evaluation Date: November 2024

Product Name: Barracuda III End Retention and Non-End Retention Roll-Up Shutters

Manufacturer: Alutech United, Inc.
1537 Northgate Blvd
Sarasota, FL 34234
(941) 355-0970

General Description:

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 must 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:

End Retention Shutters with Double Wall Slats: The roll-up shutter assemblies have a permanently mounted label that indicates the manufacturer (Alutech United, Inc.); the name of the product (Barracuda Roll-Up Shutter); the missile level (Missile Level D); and the test standards: ASTM E 330-02, ASTM E 1886-05, and ASTM E 1996-05.

Non-End Retention Shutters and End Retention Shutters with Single Wall Slats: The roll-up shutter assemblies have a permanently mounted label that indicates the manufacturer (Alutech United, Inc.); the name of the product (Barracuda Roll-Up Shutter); the missile level (Missile Level C); and the test standards: ASTM E 330-02, ASTM E 1886-05, and ASTM E 1996-05.

Limitations:**Design Drawings:**

"Barracuda Roll-Up Shutter;" manufactured by Alutech United, Inc.; Drawing No. 20-25717; Sheets 1–12 of 12, dated May 13, 2020; signed, sealed, and dated May 18, 2020 by Frank L. Bennardo, P.E. The stated drawings will be referred to as approved drawings in this report.

Roll-Up Configurations: The shutters are installed as a single span units or multiple span units using mullions.

Mounting Conditions: The roll-up shutters may be wall mounted, build-out mounted, or interior mounted. Refer to the approved drawings for specific mounting conditions.

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 required specified in drawings)
- Grout-filled block concrete masonry units (CMU); C-90, Grade N, Type 1 (or greater)
- Wood (minimum Spruce-Pine-Fir dimension lumber, S.G. = 0.42)
- Aluminum (minimum 6063-T6, 1/8" thickness)
- Steel; A36; 1/8" thickness

Allowable Design Pressure: The maximum allowable design pressure for non-end retention shutters is +/-80 psf. The maximum allowable design pressure for end retention shutters with double wall slats is +/-113.3 psf. The maximum allowable design pressure for end retention shutters with single wall slats is +/-50 psf.

Maximum Slat Span: The maximum allowable slat span is specified on the approved drawings.

Maximum Width: Shutter width is unlimited as long the allowable slat span is not exceeded. Refer to the approved drawings for multi-span construction requirements.

Minimum Separation from Glass: The minimum separation from glass is specified in a table in the in the approved drawing.

Impact Resistance:

End Retention Shutters with Double Wall Slats: The end-retention roll-up shutter with double wall slats satisfies the Texas Department of Insurance's criteria for protection from windborne. The assembly may be installed at any height on the structure as long as the design pressure rating for the assembly is not exceeded.

Non-End Retention Shutters and End Retention Shutters with Single Wall Slats: 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. The products may be used for basic protection in areas where the basic ultimate wind speed is less than 150 mph. 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: The roll-up shutters must be installed in accordance with the manufacturer's installation instructions, the approved drawings, and this product evaluation report. Copies of the approved drawings must be available on the jobsite during inspection of the shutter assembly.

Anchorage: The roll-up shutters must be anchored to the structure in accordance with the approved drawings.

Note: Keep the manufacturer's installation instructions available on the job site during the installation. Use corrosion resistant fasteners as specified in the IRC and the IBC.