

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-186

Effective November 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 **August 2016**.*

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.

ES-44 SUP Slat Roll-Up Shutters manufactured by

Croci North America
11600 Adelmo Lane
Fort Myers, Florida 33966
(239) 278-3066

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 specified in this report.

PRODUCT DESCRIPTION

General: Aluminum extruded roll up shutters are assembled from interlocking extruded slats. The slats are mounted with the following components: the guide rails and the hood assembly. Consecutive single spans and multiple spans are connected with mullions. Aluminum extrusions shall be 6003-T6 aluminum alloy, unless otherwise noted on the drawings. The shutters may be wall mounted, inset mounted, header mounted, built-out or any combination thereof.

Slat Description: The ES-44 SUP slats are 6063-T5 aluminum alloy with a thickness of 0.04" and a cross section of 2.02" wide by 0.37" deep.

Product Identification: All shutters shall be labeled with the manufacturer's name, series number and design pressure rating.

LIMITATIONS

Design Drawings: The ES 44 SUP roll up shutters shall be installed in accordance with Drawing No. 13-069, sheets 1 through 12 of 12, dated March 18, 2013, signed and sealed by Pedro De Figueiredo, P.E. on October 2, 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 design pressure rating for the roll up shutters is dependant on several factors, including the span, the mounting condition, and the mullion span. Refer to the approved drawings to determine the allowable design pressure rating for the shutter assembly based on the configuration of the roll-up shutter assembly used. In no case shall the design pressure rating exceed ± 110 psf.

Span Configurations: The shutters can be installed as a single span configuration or a multiple span configuration. Multiple span configurations require a mullion.

LIMITATIONS (Continued)

Wall Framing Construction: The shutters may be mounted to the following types of wall framing:

- Cast-in-place or pre-cast concrete (minimum compressive strength specified on approved design drawings);
- Grout-filled concrete masonry units (CMU), C-90, Grade N, Type 1 (or greater);
- Hollow concrete masonry units (CMU), C-90;
- Aluminum (minimum $\frac{1}{4}$ " thick, 6063-T6);
- Steel (minimum A36, $\frac{1}{8}$ " thick); or
- Wood (minimum Southern Pine dimension lumber).

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 standard equivalent to 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 and this product evaluation report.

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