

EVALUATION REPORT

Code: Florida Building Code, 2023 – 8th Edition
Product Category: Shutters
Product Sub-Category: Fabric Storm Panels
Product Name: Super Max
Manufacturer: Custom Hurricane Products, Inc.
2024 58th Avenue Circle East
Bradenton, FL 34203
Fire Classification: N/A
Maximum Allowable Design Pressures: 75.0 psf and -75.0 psf
Florida Product Approval: FL#16380.1

1. Executive Summary

The following is a Product Control Evaluation Report issued by David G. Karins, P.E. to Custom Hurricane Products, Inc. for the proposed Roll Down Mesh Impact Screen, product name “Super Max”. The intent of this report is to provide the necessary Code certification from a Florida Registered Professional Engineer for private residential and commercial use of the hurricane screen shutters.

It is the professional opinion of David G. Karins that this hurricane shutter system is in compliance with the Florida Building Code 2023 – 8th Edition (the Code) and that the products are, for the purpose intended, at least equivalent to that required by the Code by evidence of comparative and rational analysis.

Re-evaluation of this Product Evaluation Report is necessary following any code changes to maintain its validity.

Applicable Florida Building Code Sections

Sections: 1609.1.2
1609.1.2.4
1709.9

Evaluation Report Prepared By:
No 0052677
STATE OF
SEP 21 2023
David G. Karins, P.E.
President
FL Registration No. 52677
August 22, 2023

2. Product Description & Information

High Velocity Hurricane Zone: Not Approved

Outside High Velocity Hurricane Zone: Approved

Maximum Allowable Design Pressures: 75.0 psf and -75.0 psf

Allowable wind loads shall be in accordance with current edition of Chapter 16 of the Florida Building Code and ASCE 7, and for a basic wind speed as required by the jurisdiction where the screen will be installed and multiplied by 0.6 per 1609.1.2.4 and 1609.1.3.

Product Description:

Fabric Type: 27 Mil – Mesh 50% Aramid and Polyester in a weave basket construction.

Screen Construction: Double layer polyester webbing 1" by 5/16" was webbed at each side of the screen to facilitate securement to the inside of the aluminum side rails.

Side Rail Construction: The side rails are constructed of 6063-T6 aluminum. Option 1: Side rails are fastened to a 3"x3"x1/8" aluminum tube, which is fastened to concrete beam or grout filled masonry using a single row of 5/16" diameter x 2-1/2" long hex head Tapcon concrete fasteners located 6" on center. The side rail is fastened to the aluminum tube with a single row of 1/4" diameter Elco EZG160 or 1/4" diameter – 20 Elco Biflex at 6" on center. Option 2: The side rail can be fastened directly to a concrete column or grout filled masonry using a single row of 2-1/2" long Red Head Sammy Screws with 1/4-20 by 1/2" stainless steel side walk bolts or 1/4" diameter Tapcon with spacer and washer located 6" on center.

Cover Box Construction: The cover box is fastened to the header box using the same cover box assembly screws and a single row of No. 10 by 3/4" hex head self-drilling screws located 13" on center.

Limitations:

The product evaluation document and installation instructions are generic and do not provide information for site-specific projects (Anything deviating from these documents and installation instructions). All site-specific projects shall require a Florida Registered Professional Engineer Seal who shall take all responsibilities of the product.

Glass separation is required for Wind Zone 4 and all wind zones for essential facilities.

The height of the screen shall be limited to 3 times the test height (Total of 24'-0" tall).

(Refer to Attached Drawings for additional information)

3. Evaluation Analysis

Custom Hurricane Products, Inc. supplied Karins with drawings and certification letters of independent testing performed on the proposed shutter system. Karins researched and analyzed the specifications of the code tested system for the evaluation, as well as calculated deflections by means of interpolation. All testing required by the Code and ASTM standards for these products were performed by independent testing laboratories certified by FBC and not affiliated with Custom Hurricane Products, Inc. and/or provide equivalency letters for updated testing editions.

ASTM E1886-13a	Standard Test method for Performance of Storm Shutters Impacted by Missile(s) and Exposed to Cyclic Pressure Differentials
ASTM E1996-14a or 17	Standard Specification for Performance of Storm Shutters Impacted by Wind Borne Debris in Hurricanes
ASTM E330-14 or 14a	Test Method for Structural Performance of Storm Shutters by Uniform Static Air Pressure Difference

This product shall have porosity of less than 10% outside of the High Velocity Hurricane Zone (HVHZ)

Based on the test configurations, the height is the non-span direction and maybe increased without affecting the performance (impact or pressure) of the screen.

4. Substantiating Data

4.1 Test Reports

- a. The following tests were conducted and documented by FBC Approved Testing Laboratories:
 - See Fenestration Testing Laboratory, Inc. (FTL) Performance Test Report, Project No. 13-4442, Revision 0: Dated 04-30-2013
 - Standard Tests Conducted
 - ASTM E1886 – 2012/2013a
 - ASTM E1996 – 2017/2012a/2014a
 - ASTM E330 – 2002

4. Certification of Independence

This Florida Professional Engineer does not have, nor does intend to acquire or will it acquire, a financial interest in any company manufacturing or distributing products evaluated.

This Florida Professional Engineer is not owned, operated or controlled by any company manufacturing or distributing products it evaluates.

This Florida Professional Engineer performing an evaluation does not have nor will acquire, a financial interest in any company manufacturing or distributing products for which the reports are being issued.

This Florida Professional Engineer performing an evaluation does not have, nor will acquire, a financial interest in any other entity involved in the approval process of the product.



SEP 21 2023

David G. Karins, P.E.
President
FL Registration No. 52677
August 22, 2023

Appendix A

References

- Florida Building Code 2020 – 7th Edition
- Chapter 61G20-3.005 Department of Community Affairs – Florida Building Commission
B.C.I.S. Product Approval Application 61G20-3.005 Method 1-D – Product Evaluation and
Quality Assurance for Optional Statewide Approval
- Drawing of SuperMax Installation Instructions, Sheet 1 through 3
- Letter of Equivalency for ASTM E188 and ASTM E1996