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PRODUCT EVALUATION REPORT

Date:	September 23, 2020
Product Name:	40, 55 & 60 mm End Retainers
Product Category:	Hurricane Shutter
Product Sub-Category:	Roll-Up
Report No.:	5539 (40mm)
From Fenestration Testing	5565 (55mm)
Laboratory, Inc.	5248 (60mm)
Submitted by:	Rollingshield, Inc. 9875 N.W. 79 th Avenue Hialeah, FL. 33016

1. PURPOSE OF EVALUATION

This is a Product Evaluation Report performed by V.M. engineering, Inc. Certification of Authorization No. 27633 to the Manufacturer "Rollingshield, Inc.", base on rule chapter Nos. 9B-72.070, method 1d and 9B-72.090 method 1b of the State of Florida Approval, Department of Community Affairs-Florida Building Commission. This product is being issued an Evaluation Report as described herein, and has been verified for compliance in accordance with the Florida Building Code edition 2020, and to verify that the product is for the purpose intended at least equivalent to that required by the code.

2. DOCUMENTS SUBMITTED

a) Product Documents:

Drawings No. 169-2020, titled "40mm, 55mm & 60mm End Retainer (Roll-Down Shutter)", sheets 1 thru 8, prepared by V.M. engineering, Inc. and signed and sealed by me, Morgan Villanueva, P.E.

b) Engineering Calculations:

Calculations showing the maximum mullion span with wind load span, maximum anchor spacing with wind load for installation in concrete and concrete block with fill cells, the calculation and analysis was performed according section 16 of the Florida Building Code. Calculations prepared by V.M. engineering, Inc. and signed and sealed by me, Morgan Villanueva, P.E.

c) Test Reports:

Test report prepared by Fenestration Testing Laboratory, Inc. Lab. No. 5248 for 60mm, dated August 06, 2007. Lab. No. 5565 for 55mm, dated March 29, 2008.

Lab. No. 5539 for 40mm, dated March 14, 2008. All reports signed and sealed by Carlos Rionda, P.E., large missile impact, cyclic loading under ASTM E-1886 and ASTM E-1996 as well as uniform static loads in accordance with ASTM E-330 and tensile test as per Florida Building Code 2010, TAS 201, TAS 202 and TAS 203.

3. WIND LOAD RESISTANCE:

The end retainer shutter system has been tested to sustain wind pressures according by ASCE 7-16 and Florida Building Code 2020. The maximum slat span is indicated in sheet 7 of 8 of the product approvals documents, and maximum anchor spacing for concrete and concrete block is indicated in sheet 6 of 8.

4. INSTALLATION:

The installation of this shutter SHALL BE in accordance with the details showing in sheets 6 of 8 and 8 of 8 of the Florida Approval Documents.

5. MATERIAL SPECIFICATIONS:

As indicated in sheet 1 of 8 (General Notes) of this Florida Approval Documents.

6. 40mm, 55mm and 60mm End Retainer Shutter System:

The use of this product shall be strictly in compliance with this Florida Approval Documents prepared by V.M. engineering, Inc. and shall be signed and sealed by Morgan Villanueva, P.E. this product shall install only into concrete and concrete block in fill cell with grout.

This product will be installed in Non-High Velocity Hurricane Zones only, as defined in the Florida Building Code 2020, section 1620.

This product evaluation report was prepared by Morgan Villanueva, P.E. with Florida License No. 60292, president of V.M. engineering, Inc. certificate of authorization No. 27633



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