



398 E DANIA BEACH BLVD. SUITE 338, DANIA BEACH, FL 33004

Product Evaluation Report

of

**ESS Manufacturing, Inc.
UltraShield Hurricane Screen
(HVHZ) (Impact)**

for

Florida Product Approval

FL# FL42141

Report No. 8610

Current Florida Building Code

Method: 1 – D (Engineering Evaluation)
Category: Impact Protective Systems
Sub – Category: Operable

Product: UltraShield Hurricane Screen
Materials: Aluminum 6063-T6 & Twitchell Fabric
Product Dimensions: See Installation Instructions, ESS001

Prepared for:

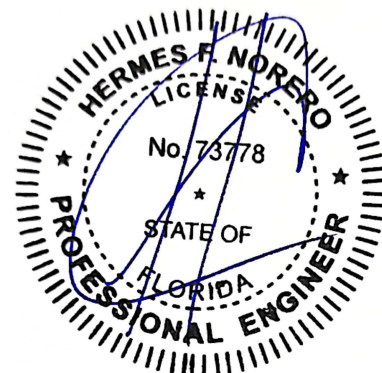
**ESS Manufacturing, Inc.
668 SW Whitmore Dr.
Port Saint Lucie, FL 34984**

Prepared by:

Hermes F. Norero, P.E.
Florida Professional Engineer # 73778
Date: 8/9/2023

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Hermes F. Norero, P.E.
Florida P.E. No. 73778

Manufacturer: ESS Manufacturing, Inc.

Product Category: Impact Protective Systems

Product Sub-Category: Operable

Compliance Method: State Product Approval Method (1)(d)

Product Name: UltraShield Hurricane Screen
(HVHZ) (Impact)

Scope: This is a Product Evaluation Report issued by Hermes F. Norero, P.E. (FL # 73778) for **ESS Manufacturing, Inc.** based on Method 1d of the State of Florida Product Approval, Department of Business and Professional Regulation - Florida Building Commission.

Hermes F. Norero, P.E. does not have nor will acquire financial interest in the company manufacturing or distributing the product or in any other entity involved in the approval process of the product named herein.

This product has been evaluated for use in locations adhering to the current Florida Building Code.

See Installation Instructions **ESS001**, signed and sealed by Hermes F. Norero, P.E. (FL # 73778) for specific use parameters.

Limits of Use:

1. This product has been evaluated and is in compliance with the current Florida Building Code, **including** the "High Velocity Hurricane Zone" (HVHZ).
2. Product anchors shall be as listed and spaced as shown on details. Anchor embedment into substrate material shall be beyond wall dressing or stucco.
3. When used in areas requiring wind borne debris protection this product complies with Chapter 16 of the current Florida Building Code and **does not require** an impact resistant covering.
4. Site conditions that deviate from the details of installation instructions **ESS001** require further engineering analysis by a licensed engineer or registered architect.
5. See Installation Instructions **ESS001** for size and design pressure limitations.

Quality Assurance: The manufacturer has demonstrated compliance of manufacture of products in accordance with the Florida Building Code for manufacturing under a quality assurance program audited by an approved quality assurance entity through **National Accreditation & Management Institute** (FBC Organization # QUA1789).

Performance Standards: The product described herein has been evaluated per:

- TAS 201-94
- TAS 202-94
- TAS 203-94
- ASTM E330-14
- ASTM E1886-13a
- ASTM E1996-17

Referenced Data:

1. Product Testing performed by **Blackwater Technical Services, Inc.**
(FBC Organization # TST10394)
Report: BT-ESS-22-001
BT-ESS-22-001B
TAS report signed and sealed by Michael Caldwell, FL P.E. No. 49979
Dated: 06/16/2023
08/04/2023
2. Product Testing performed by **Testing Evaluation Laboratories**
(FBC Organization # TST4317)
Report: TEL 01980388A
TEL 01980388B
TEL 01980388C
Dated: 08/31/2011
08/31/2011
08/31/2011
3. Quality Assurance
National Accreditation & Management Institute
(FBC Organization #: QUA1789)

Installation:

Refer to Installation Instructions (**ESS001**) for anchor spacing and more details of the installation requirements.

Design Pressure:

Refer to Installation Instructions (**ESS001**) for design pressures based on size, configuration, and glass types.

Equivalence of Test Standards:

Various test standards have been evaluated for differences in test methodology, if any, between tested editions of the test standards listed below and those editions referenced in the current Florida Building Code. The manufacturer has tested their products to the following test standard edition(s):

- 1) ASTM E1886-19
- 2) ASTM E1996-20

Chapter 35 of the current Florida Building Code references the following editions of the above-mentioned test standards:

- 1) ASTM E1886-13a
- 2) ASTM E1996-17

After review of the above-mentioned referenced standards and editions, it has been found that the results and tests carried out meet the requirements for compliance with the referenced standard. All referenced standards have been found to be equivalent.