



ENGINEERING EXPRESS® PRODUCT EVALUATION REPORT

December 3, 2020

Application Number: FL-16788.1-R3
EX Project Number: 20-33881

Product Manufacturer: Solara Industries, Inc.
Manufacturer Address: 4343 Frontage Rd. North
Lakeland, FL 33810

Product Name & Description: Armor Panel
PVC-Coated Fabric Storm Panel with Kevlar Grommet Reinforcement

Scope of Evaluation:

This Product Evaluation Report is being issued in accordance with the requirements of the Florida Department of Business and Professional Regulation (Florida Building Commission) Rule Chapter 61G20-3.005, F.A.C., for statewide acceptance per Method 1(d). The product noted above has been tested and/or evaluated as summarized herein to show compliance with the Florida Building Code Seventh Edition (2020) and is, for the purpose intended, at least equivalent to that required by the Code. Re-evaluation of this product shall be required following pertinent Florida Building Code modifications or revisions.

Substantiating Data:

- **PRODUCT EVALUATION DOCUMENTS**

EX drawing #20-33881 titled "Armor Panel PVC-Coated Fabric Storm Panel with Kevlar Grommet Reinforcement", sheets 1-2, prepared by Engineering Express, signed & sealed by Frank Bennardo, PE is an integral part of this Evaluation Report.

- **TEST REPORTS**

Uniform static structural performance has been tested in accordance with ASTM E330-02 test standards per test report(s) #HETI-06-4027, #HETI-06-4028, & #HETI-06-4031 by Hurricane Engineering & Testing, Inc. (HETI), signed by Rafael E. Droz-Seda, P.E.

Large missile impact resistance and cyclic loading performance have been tested in accordance with ASTM E1886-02 & E1996-02 test standards per test report(s) #HETI-06-4029A, #HETI-06-4029B, & #HETI-06-4030 by Hurricane Engineering & Testing, Inc. (HETI), signed by Rafael E. Droz-Seda, P.E.

Fabric tensile capacity has been determined in accordance with ASTM D638-03 test standard per test report #HETI-06-T565 by Hurricane Engineering & Testing, Inc. (HETI), signed by Rafael E. Droz-Seda, P.E.

Fabric overlap weld bond capacity has been determined per test report #HETI-06-T593 by Hurricane Engineering & Testing, Inc. (HETI).

Solara Industries, Inc - Armor Panel

- **STRUCTURAL ENGINEERING CALCULATIONS**

Structural engineering calculations have been prepared which evaluate the product based on comparative and/or rational analysis to qualify the following design criteria:

1. Maximum Allowable Spans
2. Minimum Allowable Spans
3. Anchor Spacing

No 33% increase in allowable stress has been used in the design of each product.

Impact Resistance:

Large Missile Impact Resistance has been demonstrated as evidenced in previously listed test reports, and is accounted for in the engineering design of this product.

Wind Load Resistance

Each product has been designed to resist wind loads as indicated in the span schedule(s) on its respective Product Evaluation Document (i.e. engineering drawing).

Installation

Each product listed above shall be installed in accordance with separate engineering documents. This Product Evaluation Document (i.e. engineering drawing) provides no instructions for installation, only that the product has been designed to perform under load as shown with all components noted therein.

Each product component shall be of the material specified in that product's respective Product Evaluation Document (i.e. engineering drawing).

Limitations & Conditions of Use:

Use of each product shall be in strict accordance with its respective Product Evaluation Document (i.e. engineering drawing) as noted herein.

All supporting host structures shall be designed to resist all superimposed loads and shall be of a material listed in each product's respective anchor schedule. Host structure conditions which are not accounted for in each product's respective anchor schedule shall be designed for on a site-specific basis by a registered professional engineer.

All components which are permanently installed shall be protected against corrosion, contamination, and other such damage at all times.

Each product has been designed for use outside of the High Velocity Hurricane Zone (HVHZ), outside of Wind Zone 4 and all Essential Facilities only.

Respectfully,



Frank Bennardo, PE
ENGINEERING EXPRESS®
#PE0046549 | Cert. Auth. 9885