

## **ENGINEERING EXPRESS® (EX) PRODUCT EVALUATION REPORT**

May 2, 2023

Application Number: FL#41965.1  
EX Project Number: 22-51747  
  
Product Manufacturer: AV Composites  
Manufacturer Address: 2950 NE 118<sup>th</sup> Street  
Miami, FL 33180

Product Name & Description: Foam Core Roof Panel – Panel Span Performance Evaluation

### ***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 2 (b). The product noted above has been tested and/or evaluated as summarized herein to show compliance with standard ASCE 7-16 (ASD) and Florida Building Code Seventh Edition (2020) and is, for the purpose intended, at least equivalent to that required by the Standard and Code. Re-evaluation of this product shall be required following pertinent Florida Building Code or ASCE Standard modifications or revisions.

### ***Substantiating Data:***

- **PRODUCT EVALUATION DOCUMENTS**

EX Performance Evaluation document # 22-51747 titled "FOAM CORE ROOF PANEL", prepared by Engineering Express, Inc., signed & sealed by Richard Neet, P.E. is an integral part of this Evaluation Report.

- **TEST REPORTS (IF APPLICABLE)**

- Standard test methods of conducting strength tests of panels for building construction, section 11 in accordance with ASTM E72-05.
- Standard test method for concentrated load tests on panels used in floor and roof construction, section 13 in accordance with ASTM E2322-03.
- Standard test method for performance of wood and wood-based floor and roof sheathing under concentrated static and impact loads, section 6 in accordance with ASTM E661-03.
- Standard test method for density of sandwich core materials in accordance with ASTM C271/C271-16 (2022).

**AV Composites – Foam Core Roof Panels**

The product has been tested per the following:

<b>Test Lab</b>	<b>Test Report #</b>	<b>Test Standard</b>	<b>Test Description</b>	<b>Signed &amp; Sealed By:</b>
American Test Lab of South Florida	1024.01-22	ASTM E72-05	Strength Test	Stephen Warter, P.E.
American Test Lab of South Florida	1024.01-22	ASTM E2322-03	Concentrated Load Test	Stephen Warter, P.E.
American Test Lab of South Florida	1024.01-22	ASTM E661-03	Concentrated Static/Impact Loads - Wood	Stephen Warter, P.E.
American Test Lab of South Florida	1024.01-22	ASTM C271/C271-16 (2022)	Density of Sandwich Core	Stephen Warter, P.E.

- **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 Size/Pressure Combinations

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

***Impact Resistance:***

Large and small missile impact resistance has NOT been demonstrated as evidenced in previously listed test reports and is accounted for in the engineering design of this product.

***Wind Load Resistance:***

This 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:***

The product listed above shall be installed in strict compliance with the Product Evaluation document (i.e., engineering drawing), along with all components noted therein.

The product components shall be of the material specified in the Product Evaluation document (i.e., engineering drawing).

## AV Composites – Foam Core Roof Panels

***Limitations & Conditions of Use:***

Use of this product shall be in strict accordance with its respective Product Evaluation document (i.e. engineering drawing) as noted herein for outdoor patio construction only.

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. Any alteration to the respective Product Evaluation document will invalidate it. This product has been designed for use outside of the High Velocity Hurricane Zone (NON-HVHZ). This product has NOT been designed for use within the high velocity hurricane zone (HVHZ).

Respectfully,

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Richard Neet, P.E.

**ENGINEERING EXPRESS®**

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