

ENGINEERING EXPRESS® (EX) PRODUCT EVALUATION REPORT

August 3, 2023

Application Number: FL 15491.1
EX Project Number: 23-60049

Product Manufacturer: Structall Building Systems, Inc.
Manufacturer Address: 350 Burbank Road
Oldsmar, FL 34677

Product Name & Description: EPS Foam Core Composite Panel 3", 4" & 6"
With Aluminum Or Steel Skins

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 7-22 (ASD) and the Florida Building Code Eighth Edition (2023) 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 # 23-60049 titled "EPS Foam Core Composite Panel 3", 4" & 6" With Aluminum Or Steel Skins", prepared by Engineering Express, Inc., signed & sealed by Frank Bennardo, P.E. is an integral part of this Evaluation Report, pages 1 through 3.

- **TEST REPORTS (PAGE 1 OF 2)**

Uniform static structural performance has been tested in accordance with ASTM E72-98 & E72-05 test standard per test report(s) #506027-B, 506027-C, 506027-D, 509014-A, 509014-B (signed by Rick Cavanagh) by Terrapin Testing, Inc., in addition to test report(s) #ESP012351P-1, #ESP012351P-2, #ESP012351P-3, #ESP012351P-3A, #ESP012351P-4, #ESP012351P-5, #ESP012351P-6, #ESP012351P-6A, #ESP012351P-7, #ESP012351P-8, #ESP012351P-9, #ESP012351P-9A (signed by Remesh Patel, PE) by Element Materials Technology.

Thermoplastic structural performance for self-ignition temperature has been tested in accordance with ASTM D 1929 per test report VTEC# 100-1137-1 (signed by Neil Schultz) by VTEC Laboratories Inc., with an approved self-ignition temperature greater than 650°F as required per FBC Section 2606.4.

Structall Building Systems, Inc. - EPS Foam Core Composite Panel 3", 4" & 6" With Aluminum Or Steel Skins

- **TEST REPORTS (PAGE 2 OF 2)**

Thermoplastic structural performance for surface burning characteristics have been tested in accordance with ASTM E-84 per test reports 15328-97939 (aluminum skin EPS panels) and 15328-97938 (steel skin) 1 (signed by William E. Fitch, PE) by Omega Point Laboratories. The roof assembly was tested as a 3" thick panel (for aluminum skin) and as a 4" thick panel (for steel skin EPS panels) with an approved smoke developed index not greater than 450 and a flame spread index of 75 or less as required per FBC Section 2603.3.

- **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. Maximum Allowable Deflections

Impact Resistance:

Impact Resistance has not been demonstrated.

Wind Load Resistance:

This product has been designed to resist wind loads as indicated on its respective Performance Evaluation document (i.e. engineering document).

Installation:

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

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

Limitations & Conditions of Use:

Use of each product shall be in strict accordance with its respective Performance Evaluation document (i.e. engineering document) 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. Any alteration to the respective Performance Evaluation document will invalidate it. This product has been designed for use inside and outside of the High Velocity Hurricane Zone (HVHZ & NON-HVHZ).

Respectfully,

Frank Bennardo, P.E.

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