Force Engineering & Testing
19530 Ramblewood Drive
Humble, Texas 77338
Phone: (281) 540-6603, Fax: (281) 540-9966
Website: forceengineeringtesting.com

Product Evaluation Report

ENDURO COMPOSITES, INC.

DuroSpan 12.0 x 1.25R Roof Panel

Florida Product Approval # 32006.2 R2

Florida Building Code 2023
Per Rule 61G20-3
Method: 2 –B

Category: Structural Components
Subcategory: Roof Deck
Compliance Method: 61G20-3.005(2)(b)
NON HVHZ

Product Manufacturer:
Enduro Composites, Inc.
16602 Central Green Blvd.
Houston, Texas 77032

Engineer Evaluator:
Johnathan Green, P.E. # 88223
Florida Evaluation ANE ID: 12901

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OCT 18 2023

JOHNATHAN GREEN
LICENSE
No. 88223
STATE OF
FLORIDA
PROFESSIONAL ENGINEER

THIS DOCUMENT HAS BEEN DIGITALLY SIGNED AND SEALED BY JOHNATHAN GREEN ON THE DATE ADJACENT TO THE SEAL.

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Compliance Statement: The product as described in this report has demonstrated compliance with the Florida Building Code 2023, Sections 1504.7, 1709.2, 2606, 2609.

Product Description: DuroSpan, 12.0x1.25R Bidirectional glass fiber reinforced Iso-Polyester DLC2 Formulation roof panels, 12x1.25R-LC2 150 series, 1 ¼" tall ribs at 12" O.C., 36" Wide, through fastened structural roof panel. Structural Application.

Panel Material/Standards: Material: Nominal 0.055" thick glass fiber reinforced plastic.
Nominal Weight: 8 oz/sf.

Panel Dimension(s):
Width: 36" maximum coverage
Rib Height: 1-1/4" major rib at 12" O.C.

Panel Fastener: #12-14 x 1-1/2" HWH SX5 with 1 1/8" oversize bonded washer or approved equal at 7"-5"-7"-5"-7" fastener pattern. Panel side laps fastened together w/ 3/8" x 1 ¼" Grommet at 18" O.C.
Corrosion Resistance: Per Florida Building Code 2023, Section 1507.4.4.

Substrate Description: Min. 16 Ga. Steel Framing. Framing must be designed in accordance w/ Florida Building Code 2023.

Allowable Design Pressures:

Table "A"

Maximum Design Pressure:	-33.8 psf	+31.2 psf
Fastener Pattern:	7"-5"-7"-5"-7"	7"-5"-7"-5"-7"
Fastener Spacing:	5'-0" O.C.	5'-0" O.C.

*Design Pressure includes a Safety Factor = 2.0.

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Code Compliance:

The product described herein has demonstrated compliance with
The Florida Building Code 2023, Section 1504.7, 1709.2, 2606, 2609.

Evaluation Report Scope:

The product evaluation is limited to compliance with the structural wind load requirements of the Florida Building Code 2023, as relates to Rule 61G20-3.

Performance Standards:

The product described herein has demonstrated compliance with:

- ASTM E 1592-05 (2017)
- FM 4471-92
- ASTM D 635-14
- ASTM D 1929-16
- ASTM E 84-18b

Reference Data:

1. ASTM E 1592-05 (2012)
   Force Engineering & Testing, Inc. (FBC Organization # TST-5328)
   Report No. 314-0217T-17
2. FM 4471-10, Section 4.4 Foot Traffic Resistance Test
   Force Engineering & Testing, Inc. (FBC Organization # TST-5328)
   Report No. 314-0217T-17
3. ASTM D 635-14
   Intertek
   Report No. P20171415
   Test Results: Class CC2
4. ASTM D 1929-12
   Intertek
   Report No. 103330300MID-001
   Test Results: Flash Ignition 772° F, Self-Ignition 800° F
5. ASTM E 84-16
   Intertek
   Report No. 102775700SAT-001A Rev. 1
   Test Results: Smoke Developed Index 300 & Flame Spread Index 60.
6. Certificate of Independence
   By Johnathan Green, P.E. #88223

Test Standard Equivalency:

1. The FM 4471-10, Foot Traffic Resistance test standard is equivalent to the FM 4471-92, Foot Traffic Resistance test standard.
2. The ASTM E 1592-05(2012) test standard is equivalent to the ASTM E 1592-05 (2017) test standard.
3. Letter of Equivalency for ASTM D1929 from Intertek, dated 04/14/2021.
4. Letter of Equivalency for ASTM E84 from Intertek, dated 10/13/2023.

Quality Assurance Entity:

The manufacturer has established compliance of roof panel products in accordance with the Florida Building Code and Rule 61G20-3.005 (3) for manufacturing under a quality assurance program audited by an approved quality assurance entity.

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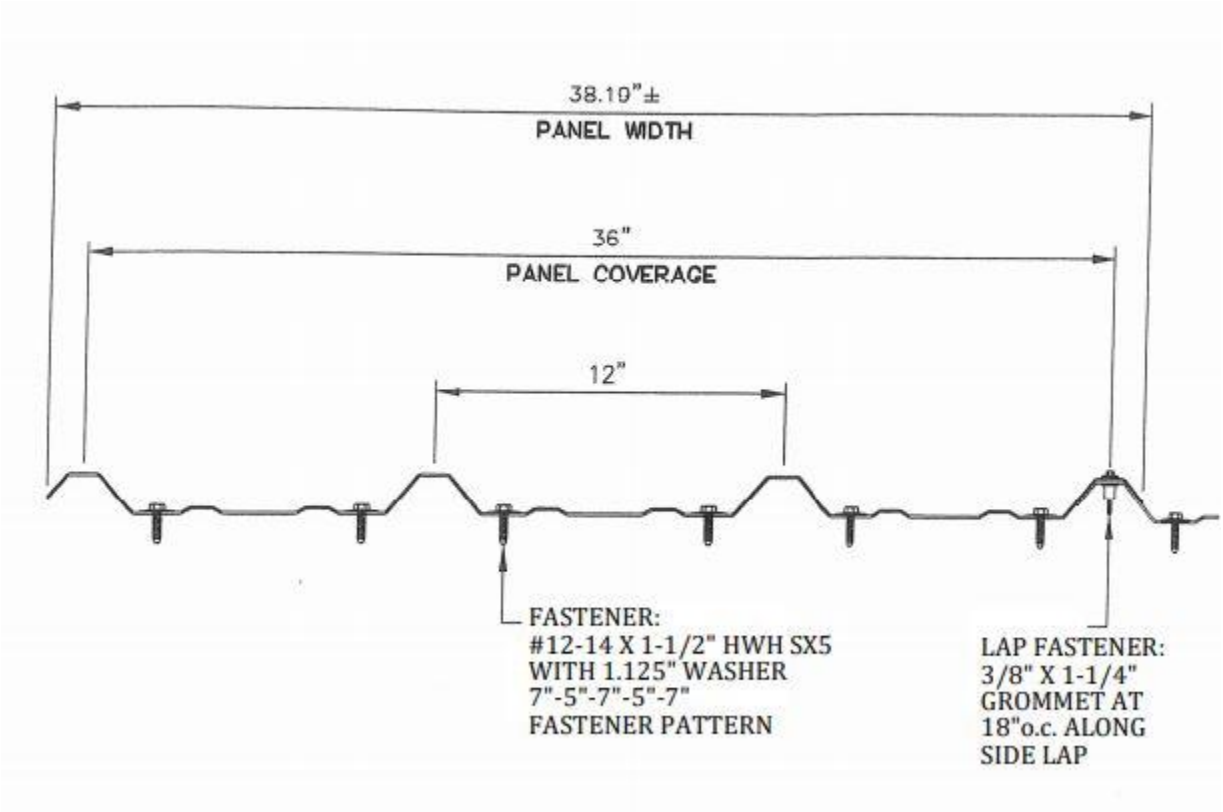
Minimum Slope Range:	Minimum Slope shall comply with Florida Building Code 2023, including Section 1507.4.2 and in accordance with Manufacturers recommendations. For slopes less than 3:12, lap sealant must be used in the panel side laps.
Installation:	Install per manufacturer's recommended details.
Panel Separation:	Panels shall be separated from each other by not less than 4 ft. measured in a horizontal plan unless the building meets one of the exceptions in FBC 2023 Section 2609.2.
Area Limitations:	Class CC2: See Table 2609.4 (FBC 2023)
Panels Shall NOT be Installed in:	Groups H, I-2, I-3 (FBC 2023, Section 2609.1)
Shear Diaphragm:	Shear diaphragm values are outside the scope of this report.
Design Procedure:	Based on the dimensions of the structure, appropriate wind loads are determined using Chapter 16 of the Florida Building Code 2023 for roof cladding wind loads. These component wind loads for roof cladding are compared to the allowable pressure listed above. The design professional shall select the appropriate erection details to reference in his drawings for proper fastener attachment to his structure and analyze the panel fasteners for pullout and pullover. Support framing must be in compliance with Florida Building Code 2023 Chapter 22 for steel, and Chapter 16 for structural loading.

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