

Evaluation Report Metal Roof Panel Plus Assembly Advantage Roof Panel

Manufacturer:
Advanced Aluminum

2941 Parkway Street
Lakeland, FL 33811
(863) 648-5787

for

Florida Product Approval

FL 33569.2 R2

Florida Building Code 8th Edition (2023)

Method: 1 - D

Category: Roofing

Sub - Category: Metal Roofing

Product:	Advantage Roof Panel
Material:	Steel
Panel Thickness:	29 gauge, Minimum
Panel Width:	36"
Support:	OSB Deck

This item has been digitally signed and sealed by James L. Buckner, P.E., on this date below. Printed copies of this document are not considered signed and sealed, and the signature must be verified on any electronic copies.

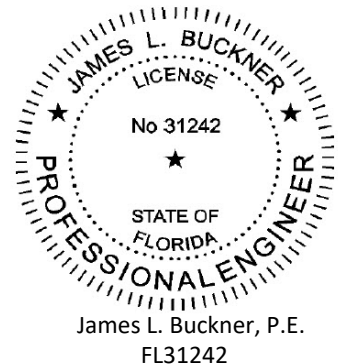
Prepared by:

James L. Buckner, P.E., S.E.C.B.
Florida Professional Engineer # 31242
Florida Evaluation ANE ID: 1916
Report No. 23-565.2-Adv-Plus-ER
(Revises 20-273.2-Adv-Plus-ER, FL33569.2 R1)
Date: 10/11/2023

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Evaluation Report

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James L. Buckner, P.E.
FL31242

Date: 2023.10.11
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Manufacturer:	Advanced Aluminum 2941 Parkway Street Lakeland, FL 33811 (863) 648-5787 www.advaluminum.com
Product Name:	Advantage Roof Panel Plus Assembly
Product Category:	Roofing
Product Sub-Category	Metal Roofing
Compliance Method:	State Product Approval Rule 61G20-3.005 (1) (d)
Product/System Description:	Steel Roof Panel Plus Assembly steel panel, 36" wide, 3/4" major rib height roof panel mechanically attached to OSB deck with screws. This report list ASD uplift resistance values with a margin of safety of 2.5 to 1. This is a Code Plus value. The Margin of Safety in Section 1504.9 of the Florida Building Code 6th (2017) is 2 : 1.
Product Assembly as Evaluated:	Refer to Page 4 of this report for product assembly components/materials & standards: 1. Roof Panel 2. Panel Fasteners 3. Underlayment
Support:	Type: OSB Roof Deck (Design of support and its attachment to roof framing is outside the scope of this evaluation.) Description: • 7/16 (min.) or greater OSB (Oriented Strand Board)
Slope:	Minimum slope shall be in compliance with FBC Chapter 15 Section 1507.4.2, applicable code sections and in accordance with manufacturer's recommendations.
Performance:	Wind Uplift Resistance: • Design Uplift Pressure: • ASD with Factor of Safety 2.5 : 1 (Refer to "Table A" attachment details herein) Refer to Table A

- Performance Standards:** The product described herein has demonstrated compliance with:
- UL580-06 – *Test for Uplift Resistance of Roof Assemblies*
 - UL 1897-15 – *Uplift test for roof covering systems*
- Standards Equivalency:** The UL 1897-12 standard version used to test the evaluated product assembly is equivalent with the prescribed standards in UL 1897-15 adopted by the Florida Building Code 8th Edition (2023).
- Code Compliance:** The product(s) described herein have demonstrated compliance with the performance standards listed above as referenced in the:
Florida Building Code 8th (2023)
International Building Code 2021
- Evaluation Report Scope:** This product evaluation is limited to compliance with the structural requirements of the Florida Building Code, as related to the scope section to Florida Product Approval Rule 61G20-3.001.
- Limitations and Conditions of Use:**
- Scope of “Limitations and Conditions of Use” for this evaluation:
This evaluation report for “Optional Statewide Approval” contains technical documentation, specifications and installation method(s) which include “Limitations and Conditions of Use” throughout the report in accordance with Rule 61G20-3.005. Per Rule 61G20-3.004, the Florida Building Commission is the authority to approve products under “Optional Statewide Approval”.
 - Option for application outside “Limitations and Conditions of Use”
Rule 61G20-3.005(1)(e) allows engineering analysis for “project specific approval by the local authorities having jurisdiction in accordance with the alternate methods and materials authorized in the Code”. Any modification of the product as evaluated in this report and approved by the Florida Building Commission is outside the scope of this evaluation and will be the responsibility of others.
 - This report is a building code product evaluation per FLPE rule (FAC) 61G15-36 to comply with Florida product approval rule (FAC) 61G20-3. This evaluation report is part of the Florida Building Commission approval for the listed code related criteria. This report by James Buckner, P.E. and CBUCK Engineering is not a design certification of code compliance construction submittal documentation, per FBC section 107, for any individual structure, site specific or permit design.
 - All metal components and fasteners shall be corrosion resistant in accordance with applicable sections of FBC.
 - Design of support system is outside the scope of this report. Support shall be designed by others and shall comply with Chapter 16 for structural loading.
 - Fire Classification is outside the scope of Rule 61G20-3 and is therefore not included in this evaluation.
 - This evaluation report does not evaluate the use of this product for use in the High Velocity Hurricane Zone (HVHZ) code section. (Dade & Broward Counties)

Quality Assurance: The manufacturer has demonstrated compliance of 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 through **Architectural Testing, Inc., an Intertek Company** (FBC Organization ID# QUA 1844).

**Components/Materials
(by Manufacturer):**

Roof Panel:

Product Identification:	Advantage Roof Panel
Material:	Steel
Thickness:	29 gauge (min.)
Panel Width:	36" (max.) Coverage
Major Rib Height:	3/4"
Yield Strength:	40 ksi min.
Corrosion Resistance:	In compliance with FBC Section 1507.4.3: • ASTM A792 coated, or • ASTM A653 G90 galvanized steel

Panel Fasteners:

Type:	Hex-Head Wood Screws with WSW
Size:	#10 min.
Penetration thru support:	3/16" min. thru deck support
Corrosion Resistance:	Per FBC Section 1506.6 and 1507.4.4
Standard:	Per ANSI/ASME B18.6.4
Fastener Location:	Refer to Drawing at the end of this report

**Components/Materials
(by Others):**

Underlayment:

Material and application shall be in compliance with FBC Section 1507.1.1 and in accordance with applicable code sections and manufacturer's recommendations.

Installation:

Installation Method:

(Refer to drawings at the end of this report.)

- Fastener spacing: **Refer to Table "A" Below**
(along the length of the panel)
- Row Spacing: **Refer to Table "A" Below**
(along the row, across the panel profile)
- Rib Interlock: Lapped
- Minimum fastener penetration thru bottom of support, 3/16".
- Refer to manufacturer's instructions for additional details and any site specific design.

TABLE "A" ALLOWABLE LOADS			
	Fastener Spacing	Row Spacing	* Design Pressure (PSF)
METHOD 1	See drawing on page 6 of this report	10"	- 89
METHOD 2	See drawing on page 6 of this report	15"	- 62
METHOD 3	See drawing on page 6 of this report	18"	- 47
* Allowable design pressure for allowable stress design (ASD) with a code Plus margin of safety of 2.5 to 1.			

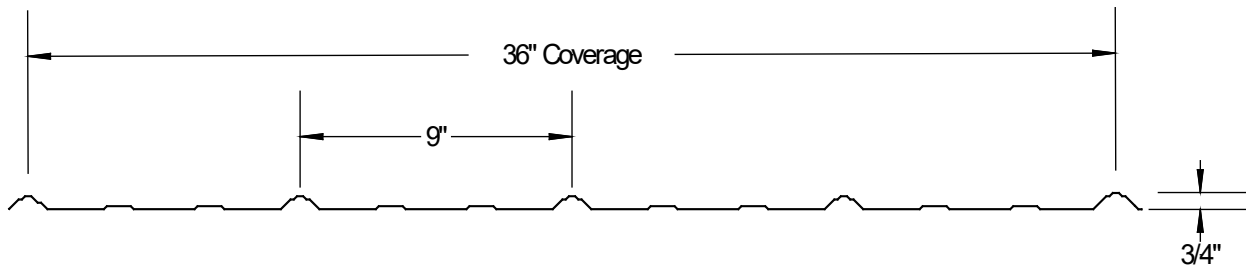
Install the "Advantage Roof Panel" system panel assembly in compliance with the installation method listed in this report and applicable code sections of FBC 8th Edition (2023). The installation method described herein is in accordance with the scope of this evaluation report. Refer to manufacturer's installation instructions as a supplemental guide for attachment.

Referenced Data:

1. UL580-06 & UL 1897-12 Uplift Test
FBC Organization Farabaugh Testing & Engineering
(FBC Organization ID# TST 1654)
Report #: T316-20, Report Date: 9/18/2023
2. Quality Assurance
Architectural Testing, Inc., an Intertek Company
(FBC Organization ID# QUA 1844).
3. Certification of Independence
By James L. Buckner, P.E. @ CBUCK Engineering
(FBC Organization # ANE 1916)

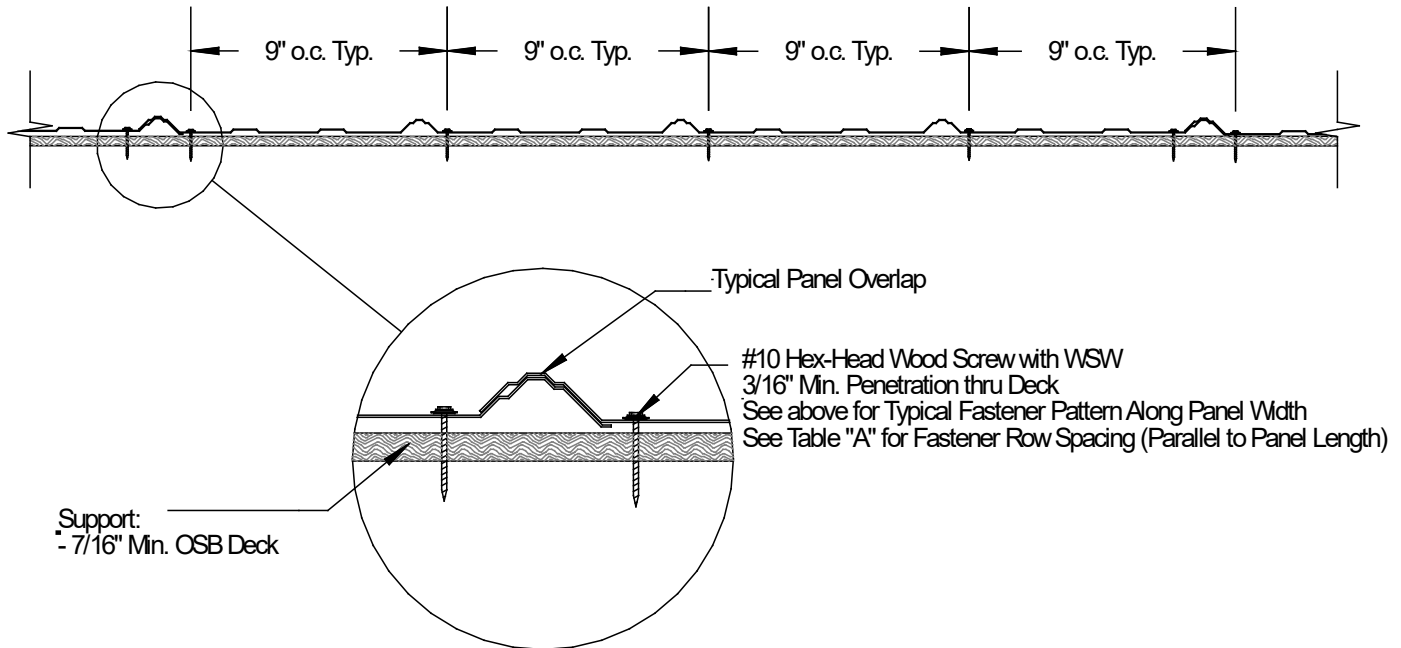
**Installation Method
Advanced Aluminum
“Advantage” Metal Roof Panel Attached to OSB Roof Deck**

Profile Drawings



**“Advantage” Roof Panel
Typical Panel Profile View (N.T.S.)**

Installation Method Advanced Aluminum "Advantage" Metal Roof Panel Attached to OSB Roof Deck



Typical Field of Panel Assembly Section View (N.T.S.)

TABLE "A" ALLOWABLE LOADS			
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