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ENGINEER

EVALUATE

TEST

CONSULT

EVALUATION REPORT BY FLORIDA P.E.

AvenEx Coating Technologies

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Vancouver, BC V6E 2J3, Canada
(604) 612-5289

Evaluation Report 3m-ACT-23-FBCER.02.23

FL30311-R3 (HVHZ)

Date of Issuance: 02/10/2023

SCOPE:

This Evaluation Report is issued under **F.A.C. Rule 61G20-3** and the applicable rules and regulations governing the use of construction materials in the State of Florida. The documentation submitted has been reviewed by Robert Nieminen, P.E. for use of the product under the Florida Building Code. The product described herein has been evaluated for compliance with the **7th Edition (2020) Florida Building Code, High Velocity Hurricane Zone (HVHZ)** [sections noted herein](#).

DESCRIPTION: AvenEx Mechanically Attached, Synthetic Roof Underlayments for use in FBC HVHZ jurisdictions

LABELING: Labeling shall be in accordance with the requirements of the Accredited Quality Assurance Agency noted herein and FBC 1507.1.1.

CONTINUED COMPLIANCE: This Evaluation Report is valid until such time as the named product(s) changes, the referenced Quality Assurance or production facility location(s) changes, or Code provisions that relate to the product(s) change. Acceptance of our Evaluation Reports by the named client constitutes agreement to notify NEMO ETC, LLC of any changes to the product(s), the Quality Assurance or the production facility location(s). NEMO ETC, LLC requires a complete review of its Evaluation Report relative to updated Code requirements with each Code Cycle.

ADVERTISEMENT: The Florida Product Approval Number (FL#) preceded by the words "NEMO P.E. Evaluated" may be displayed in advertising literature. If any portion of the Evaluation Report is displayed, then it shall be done in its entirety.

INSPECTION: Upon request, a copy of this entire Evaluation Report shall be provided to the user by the manufacturer or its distributors and shall be available for inspection at the job site at the request of the Building Official.

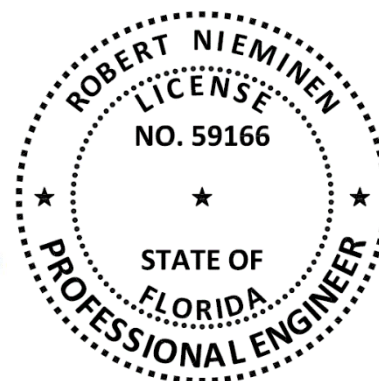
This Evaluation Report consists of pages 1 through 4.

Prepared by:

**Digitally signed
by Robert
Nieminen**

**Date: 2023.02.10
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This item has been digitally signed and sealed by
Robert Nieminen, P.E.
Printed copies of this document are not
considered signed and sealed, and the signature
must be verified on any electronic copies.
Robert Nieminen, Florida P.E. 59166, FBC ANE1983
NEMO ETC, LLC, Florida CA #32455



CERTIFICATION OF INDEPENDENCE:

1. NEMO ETC, LLC does not have, nor does it intend to acquire or will it acquire, a financial interest in any company manufacturing or distributing products it evaluates.
2. NEMO ETC, LLC is not owned, operated or controlled by any company manufacturing or distributing products it evaluates.
3. Robert Nieminen, P.E. does not have nor will acquire, a financial interest in any company manufacturing or distributing products for which the evaluation reports are being issued.
4. Robert Nieminen, P.E. does not have, nor will acquire, a financial interest in any other entity involved in the approval process of the product.
5. This is a building code evaluation. Neither NEMO ETC, LLC nor Robert Nieminen, P.E. are, in any way, the Designer of Record for any project on which this Evaluation Report, or previous versions thereof, is/was used for permitting or design guidance unless retained specifically for that purpose.

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ROOFING COMPONENT EVALUATION:
1. SCOPE:

Product Category: Roofing
Sub-Category: Underlayment
Product Approval Method: Method 1, Option D – Codified Material, Evaluation by Engineer
Compliance Statement: AvenEx Mechanically Attached, Synthetic Roof Underlayments, as produced by AvenEx Coating Technologies, have demonstrated compliance with the following sections of the 7th Edition (2020) Florida Building Code, High Velocity Hurricane Zone (HVHZ) through testing in accordance with applicable sections of the following Standards. Compliance is subject to the [Installation Requirements](#) and [Limitations of Use](#) set forth herein.

2. STANDARDS:

SECTION	PROPERTIES	STANDARD	YEAR
RAS 115, TAS 110	Material standard	ASTM D226	2009

3. REFERENCES:

ENTITY	EXAMINATION	REFERENCE	DATE
ERD (TST6049)	ASTM D226	ACT-SC14110.06.17-1	06/29/2017
ERD (TST6049)	ASTM D226	ACT-SC14110.06.17-2	06/29/2017
ERD (TST6049)	ASTM D226	ACT-SC14110.06.17-3	06/29/2017
QAI (QUA7628)	Traceability/Inspections	Service Confirmation	08/12/2019
QAI (QUA7628)	Quality Assurance	Florida BCIS	Current

4. PRODUCT DESCRIPTION:

TABLE 1: EVALUATED UNDERLAYMENTS			
PRODUCT	MATERIAL STANDARD	PLANT(S)	DESCRIPTION
Alpha	ASTM D226, Table 1	Dadra, India	Synthetic polymer-based scrim-reinforced underlayment, consisting of woven polyolefin base with a layer of nonwoven polyolefin sheet and a polymer coating on the back side, with a nominal unit weight of 2.25 lbs/square.
Beta	ASTM D226, Table 1	Dadra, India	Synthetic polymer-based scrim-reinforced underlayment, consisting of woven polyolefin base with a layer of nonwoven polyolefin sheet and a polymer coating on the back side, with a nominal unit weight of 3.80 lbs/square.
Charlie	ASTM D226, Table 1	Dadra, India	Synthetic polymer-based scrim-reinforced underlayment, consisting of woven polyolefin base with a layer of nonwoven polyolefin sheet and a polymer coating on the back side, with a nominal unit weight of 3.80 lbs/square.

5. LIMITATIONS:

- 5.1 This is a building code evaluation. Neither NEMO ETC, LLC nor Robert Nieminen, P.E. are, in any way, the Designer of Record for any project on which this Evaluation Report, or previous versions thereof, is/was used for permitting or design guidance unless retained specifically for that purpose.
- 5.2 This Evaluation Report is exclusively for use in FBC High Velocity Hurricane Zone jurisdictions, as defined in FBC Chapter 2.
- 5.3 This Evaluation Report pertains to above-deck roof components. Roof decks and structural members shall be in accordance with FBC HVHZ requirements to the satisfaction of the Authority Having Jurisdiction.
- 5.4 This Evaluation Report does not include evaluation of fire classification. Refer to **FBC HVHZ 1516** for requirements and limitations regarding roof assembly fire classification. Refer to **FBC 2603** for requirements and limitations concerning the use of foam plastic insulation.

5.5 **AvenEx Mechanically Attached, Synthetic Roof Underlayments** may be used with any prepared roof cover where the product is specifically referenced within FBC approval documents. If not listed, a request may be made to the Authority Having Jurisdiction for approval based on this evaluation combined with supporting data for the prepared roof covering.

5.6 Allowable Roof Covers:

TABLE 2: ROOF COVER OPTIONS					
FBC HVHZ:	TAS 110(S10) , RAS 115	TAS 110(S11) , RAS 118, 119 & 120	RAS 133	TAS 110(S11)	RAS 130
UNDERLAYMENT	ASPHALT SHINGLES	CLAY AND CONCRETE TILE	METAL	SLATE OR SLATE-TYPE SHINGLES	WOOD
Alpha	Yes	No	Yes (residential)	Yes	Yes
Beta	Yes	No	Yes	Yes	Yes
Charlie	Yes	No	Yes	Yes	Yes

5.7 RESERVED

5.8 Attachment Limitations:

Refer to [Section 6](#)

5.9 Exposure Limitations:

TABLE 3: EXPOSURE LIMITATIONS	
UNDERLAYMENT	MAXIMUM EXPOSURE (DAYS)
Alpha, Beta, Charlie	30

6. INSTALLATION:

6.1 **AvenEx Mechanically Attached, Synthetic Roof Underlayments** shall be installed in accordance with the manufacturer's published installation instructions subject to the [Limitations of Use](#) herein and the specifics noted below.

6.2 Re-fasten any loose decking panels, and check for protruding nail heads. Sweep the substrate thoroughly to remove any dust and debris prior to application.

6.3 **Approved Assemblies:**

6.3.1	DECK TYPE 1:	Wood, Non-Insulated
	DECK DESCRIPTION:	Min. 19/32" plywood or wood plank
	SYSTEM TYPE E:	Underlayment mechanically fastened to deck
	UNDERLAYMENT:	One or more plies of Alpha, Beta or Charlie with a minimum 4-inch side lap and 8-inch end lap, mechanically fastened to deck.
	FASTENING:	FBC HVHZ Approved nails and tin caps (FBC HVHZ 1517.5), 6-inch o.c. at the lap-edges and 12-inch o.c. at three (3), equally spaced, staggered rows between the side laps.
	SURFACING:	Refer to Table 2 herein.

7. BUILDING PERMIT REQUIREMENTS:

As required by the Building Official or Authority Having Jurisdiction to properly evaluate the installation of this product.

8. MANUFACTURING PLANTS:

Contact the named QA entity for manufacturing facilities covered by **F.A.C. Rule 61G20-3** QA requirements. Refer to [Section 4](#) herein for products and production locations having met codified material standards.

8. QUALITY ASSURANCE ENTITY:

[QAI Laboratories](#) – QUA7628; (604) 527-8378, mlansdowne@qai.org

- END OF EVALUATION REPORT -