



NEMO|etc.

Certificate of Authorization #32455
353 Christian Street, Unit #13
Oxford, CT 06478
(203) 262-9245

ENGINEER

EVALUATE

TEST

CONSULT

EVALUATION REPORT

APOC, sub of Gardner Asphalt Corp.

4161 E. 7th Avenue
Tampa, FL 33605
(813) 248-2101

Evaluation Report 1m-GG-19-FBCER.06.19-R2

FL26482-R6 (HVHZ)

Date of Issuance: 06/19/2019

Revision 2: 12/17/2020

SCOPE:

This Evaluation Report is issued under **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 products described herein have been evaluated for compliance with the **7th Edition (2020) Florida Building Code, High Velocity Hurricane Zone** sections noted herein.

DESCRIPTION: Gardner® 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.

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|etc. Evaluated" may be displayed in advertising literature. If any portion of the Evaluation Report is displayed, then it shall be done in its entirety.

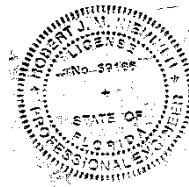
INSPECTION: Upon request, a copy of this entire Evaluation Report shall be provided to the user by the manufacturer or its distributors and shall be available for inspection at the job site at the request of the Building Official.

This Evaluation Report consists of pages 1 through 4.

Prepared by:

Robert J.M. Nieminen, P.E.

Florida Registration No. 59166, Florida DCA ANE1983



The facsimile seal appearing was authorized by Robert Nieminen, P.E. on 12/17/2020. This does not serve as an electronically signed document.

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.

ROOFING COMPONENT EVALUATION:
1. SCOPE:

Product Category: Roofing
Sub-Category: Underlayment
Compliance Statement: Gardner® Roof Underlayments, as produced by Gardner Asphalt Corp., have demonstrated compliance with the following sections of the 7th Edition (2020) Florida Building Code, High Velocity Hurricane Zone through testing in accordance with the following Standards. Compliance is subject to the Installation Requirements and Limitations / Conditions of Use set forth herein.

2. STANDARDS:

<u>Section</u>	<u>Property</u>	<u>Standard</u>	<u>Year</u>
TAS 110	Material standard	TAS 103	2020

3. REFERENCES:

<u>Entity</u>	<u>Examination</u>	<u>Reference</u>	<u>Date</u>
Miami-Dade (CER1592)	HVHZ Certification	20-0714.01	10/01/2020
NEMO	Traceability	FBC Cross-Listing	12/10/2020
PRI (TST5878)	TAS 103	GGI-196-02-01	07/26/2017
PRI (TST5878)	ASTM D1623, TAS 103	GGI-201-02-01	01/26/2018
PRI (TST5878)	ASTM D903, D1970	GGI-211-02-01	06/06/2018
PRI (TST5878)	ASTM D1623, TAS 103	GGI-202-02-01	08/09/2018
UL, LLC. (QUA9625)	Quality Assurance	Service Confirmation	02/12/2020
UL, LLC. (QUA9625)	Quality Assurance	Florida BCIS	Current

4. PRODUCT DESCRIPTION:

	<u>Product</u>	<u>Material Standard</u>	<u>Plant(s)</u>	<u>Description</u>
4.1	Weather-Armor® FT ³ Tile Underlayment	TAS 103	Springville, AL	nominal 60-mil thick, self-adhering membrane of elastic polymers, bitumen and polyester and glass reinforcement
4.2	Eagle-Armor by Apoc	TAS 103	Springville, AL	nominal 60-mil thick, self-adhering membrane of elastic polymers, bitumen and polyester and glass reinforcement
4.3	TriBuilt Fleece Tile Underlayment	FRSA/TRI 09-18	Springville, AL	nominal 60-mil thick, self-adhering membrane of elastic polymers, bitumen and polyester and glass reinforcement

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 for use in FBC High Velocity Hurricane Zone jurisdictions only (i.e., Broward and Miami-Dade Counties).
- 5.3 This Evaluation Report pertains to above-deck roof components. Roof decks and structural members shall be in accordance with FBC 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 **Gardner® 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 1: ROOF COVER OPTIONS						
<i>FBC HVHZ Section:</i>	<i>TAS 110(S10), RAS 115</i>	<i>TAS 110(S11), RAS 118, 119 & 120</i>		<i>RAS 133</i>	<i>TAS 110(S11)</i>	<i>RAS 130</i>
Underlayment	Asphalt Shingles	Clay and Concrete Tile		Metal Panels or Shingles	Slate or Slate-Type Shingles	Wood Shingle or Shakes
		Mechanical Attach	Adhesive-Set			
Weather-Armor® FT ³ Tile Underlayment	YES	YES	Yes (See 5.6.1)	YES	YES	YES
Eagle-Armor by Apoc	YES	YES	Yes (See 5.6.1)	YES	YES	YES
TriBuilt Fleece Tile Underlayment	YES	YES	Yes (See 5.6.1)	YES	YES	YES

5.6.1 Adhesive-set tile is limited to use of the following underlayment / tile-adhesive combinations.

TABLE 1A: ALLOWABLE UNDERLAYMENT / TILE-ADHESIVE COMBINATIONS¹		
Underlayment	Adhesive	HVHZ Product Approval
Weather-Armor® FT3 Tile Underlayment, Eagle-Armor by Apoc or TriBuilt Fleece Tile Underlayment	DAP “Touch ‘n Seal StormBond Roof Tile Adhesive”	NOA 20-0309.05
	Dupont “Tile Bond™ Roof Tile Adhesive”	FL22525
	ICP Adhesives “Polyset® AH-160”	NOA 17-0322.03

5.7 Allowable Substrates:

TABLE 2: SUBSTRATE OPTIONS	
Underlayment	Substrates
Weather-Armor® FT3 Tile Underlayment, Eagle-Armor by Apoc or TriBuilt Fleece Tile Underlayment	ASTM D226 felt
	Structural concrete*

*Note: minimum 73°F ambient application temperature for structural concrete

5.8 Attachment Limitations:

See Section 6

5.9 Exposure Limitations:

TABLE 3: EXPOSURE LIMITATIONS		
Underlayment	Prepared Roof Cover Installation Type	Maximum Exposure (days)
Weather-Armor® FT3 Tile Underlayment, Eagle-Armor by Apoc or TriBuilt Fleece Tile Underlayment	Adhesive-set tile (Polyset® AH-160)	30
	Adhesive-set tile (Tile Bond™ Roof Tile Adhesive or Touch ‘n Seal StormBond Roof Tile Adhesive)	90
	Mechanically attached	180

5.10 **Tile Slippage Limitations:** When loading roof tiles on the underlayment in direct-deck tile assemblies, the maximum roof slope shall be as follows. These slope limitations can only be exceeded by using battens during loading of the roof tiles.

TABLE 4: TILE SLIPPAGE LIMITATIONS FOR DIRECT-DECK TILE INSTALLATIONS			
Underlayment	Tile Profile	Staging Method	Maximum Slope
Weather-Armor® FT3 Tile Underlayment, Eagle-Armor by Apoc or TriBuilt Fleece Tile Underlayment	Flat or Lugged	Max. 10-tile stack	6:12

¹ Refer to Tile Manufacturer’s Florida HVHZ Product Approval or NOA for Attachment Resistance Expressed as a Moment Performance.

6. INSTALLATION:

- 6.1 **Gardner® Roof Underlayments** shall be installed in accordance with **APOC, sub of Gardner Asphalt Corp.** published installation requirements subject to the Limitations set forth in Section 5 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, and prime the substrate (if applicable).

6.3 Approved Assemblies:

- 6.3.1 Deck Type 1: Wood, non-insulated
 - Deck Description: Min. 19/32-inch plywood or wood plank
 - System Type E: Base sheet mechanically fastened to deck; underlayment adhered
 - Base Sheet: One or more plies of ASTM D226, Type II with min. 4-inch side laps and min. 6-inch end laps.
 - Fastening: FBC HVHZ Approved nails and tin caps (FBC HVHZ 1517.5), 6" o.c. at the laps and 12" o.c. at two (2) equally spaced, staggered center rows.
 - Cap Ply: **Weather-Armor® FT³ Tile Underlayment, Eagle-Armor by Apoc or TriBuilt Fleece Tile Underlayment**, self-adhered in accordance with published instructions and back-nailed (if applicable) in accordance with applicable Roofing Application Standard.
 - Surfacing: FBC HVHZ Approved prepared roof assembly, per Table 1.
- 6.3.2 Deck Type 3: Structural concrete, non-insulated
 - Deck Description: Min. 2,500 psi structural concrete
 - System Type F: Underlayment adhered
 - Underlayment: **Weather-Armor® FT³ Tile Underlayment, Eagle-Armor by Apoc or TriBuilt Fleece Tile Underlayment**, self-adhered in accordance with published instructions.
 - Note: Minimum 73°F ambient application temperature for structural concrete
 - Surfacing: **FBC HVHZ approved adhesive-set roof tile**, subject to published limits of use.

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.

9. QUALITY ASSURANCE ENTITY:

UL, LLC. (QUA9625); (414) 248-6409; karen.buchmann@ul.com

- END OF EVALUATION REPORT -