NEMO EVALUATION REPORT FT Synthetics, Inc. FBC FL23090-R10 Report No.: NER-FTS-002.R1 Revision 1: 2023-06-27

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Nemo Evaluation Report



FT Synthetics, Inc. 26977 56th Avenue Langley, BC V4W 3Y2, Canada (604) 594-3439 www.ftsyn.com

SUBJECT: FT Synthetics Roof Underlayments

Scope: This Evaluation Report is issued under F.A.C. Rule 61G20-3 and the applicable rules and regulations

governing Product Approval of construction materials in the State of Florida. NEMO Evaluations has

evaluated the product described herein for compliance with the <u>Code sections noted herein</u>.

CODE: 2020 Florida Building Code, 7th Edition

2020 Florida Building Code, Residential, 7th Edition

JURISDICTION: Non-HVHZ
NEMO CATEGORY: Steep Slope
FBC CATEGORY: Roofing

FBC Sub-Category: Underlayment

CSI DIVISION: 07 00 00 Thermal and Moisture Protection

07 30 05 Roofing Felt and Underlayment

METHOD: Method 1, Option C – Codified Material, Evaluation by Evaluation Entity

COMPLIANCE FT Synthetics Roof Underlayments, as produced by **FT Synthetics, Inc.**, have demonstrated compliance with the Code sections noted herein through testing in accordance with the referenced Standards, rational

analysis and an ongoing quality assurance program. Compliance is subject to the Installation Requirements

and Limitations of Use set forth herein.

QUALITY ASSURANCE: Evidence of current quality assurance shall be listing and labeling in accordance with the requirements of

NEMO cert., and the minimum provisions of FBC 1709.10.

CONTINUED This Evaluation Report is valid until such time the named product(s) change, the referenced Quality

 $Assurance\ changes,\ or\ the\ evaluated\ Code\ provisions\ change.\ \ Nemo\ Evaluations\ requires,\ at\ minimum,\ a$

complete review of this Evaluation Report with each 3-year Code Cycle.

BUILDING PERMIT As required by the Building Official or Authority Having Jurisdiction to evaluate the installation of this

REQUIREMENTS: product.

ADVERTISEMENT: The Florida Product Approval Number (FL#) preceded by the words "NEMO Evaluated" may be displayed in

advertising literature. If any portion of the Evaluation Report is displayed, it shall be displayed in its

entirety.

CERTIFICATION OF INDEPENDENCE:

COMPLIANCE:

✓ 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.

- ✓ NEMO ETC, LLC is not owned, operated or controlled by any company manufacturing or distributing products it evaluates.
- ✓ This is a building code evaluation. NEMO ETC, LLC is not, 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.

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Codes, Properties and Standards:						
<u>Code</u>	<u>Section</u>	Property	<u>Standard</u>	Year		
2020 Florida Building Code, 7 th Edition,	1504.3.1	Wind resistance	UL 1897	2015		
2020 Florida Building Code, Residential, 7^{th} Edition	1507.1.1, 1507.2.4, 1507.2.9.2, R905.1.1, R905.2.8.2	Material standard	ASTM D1970	2015		
	1507.3.3, R905.3.3	Material standard	FRSA/TRI, Sixth Edition	2018		
	TAS 110	Accelerated Weathering	ASTM D4798	2011		

2. PRODUCTS:

TABLE 1: EVALUATED UNDERLAYMENTS					
PRODUCT	Material Standard	PLANT(S)	DESCRIPTION		
EavePro 44	ASTM D1970	Langley, BC Canada	Self-adhering, black butyl rubber, fiberglass reinforced, embossed polyester fabric surfaced roof underlayment available in 44-inch-wide x 61.3-ft long rolls		
FT Butyl MP	ASTM D1970 and FRSA/TRI 09-18	Langley, BC Canada	Self-adhering, butyl-rubber, fiberglass reinforced, embossed polyester reinforced fabric surfaced roof underlayment available in 36-inch wide x 67-ft long rolls		
KOMODO BSA	ASTM D1970 and FRSA/TRI 09-18	Langley, BC Canada	Self-adhering, butyl-rubber, embossed fibrous surfaced roof underlayment available in 36-inch wide x 67-ft long rolls		
PLATINUM HT-B	ASTM D1970 and FRSA/TRI 09-18	Langley, BC Canada	Self-adhering, butyl-rubber, embossed fibrous surfaced roof underlayment available in 36-inch wide x 67-ft long rolls		

3. Installation:

- 3.1 **FT Synthetics Roof Underlayments** shall be installed in accordance with **FT Synthetics, Inc.** published installation instructions, subject to the <u>Limitations of Use</u> noted herein. In case of conflict between published installation instructions and this evaluation report, this report governs.
- 3.2 Roof decks shall be in accordance with codified requirements to the satisfaction of the Authority Having Jurisdiction. Refasten 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).

3.3 **EavePro 44**

3.3.1 Non-Tile Applications:

Shall be installed in compliance with requirements for an approved self-adhering underlayment (ASTM D1970) in **FBC 1507.1.1.1** or **1507.1.1.3** or **FBC Residential R905.1.1.1** or **R905.1.1.3** for the type of prepared roof covering to be installed, and the manufacturer's installation instructions.

3.4 KOMODO BSA and PLATINUM HT-B:

3.4.1 Non-Tile Applications:

Shall be installed in compliance with requirements for an approved self-adhering underlayment (ASTM D1970) in **FBC 1507.1.1.1** or **1507.1.1.3** or **FBC Residential R905.1.1.1** or **R905.1.1.3** for the type of prepared roof covering to be installed, and the manufacturer's installation instructions.

3.4.2 <u>Mechanically Attached Tile Applications</u>:

Shall be installed in compliance with the requirements for Self-Adhered Membrane set forth in <u>FRSA/TRI</u> Florida High Wind Concrete and Clay Roof Tile Installation Manual, Sixth Edition and the manufacturer's installation instructions.

Refer to Table 4 herein for attachment limitations.

Refer to Table 6 herein for tile staging limitations.

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3.5 FT Butyl MP:

3.5.1 Non-Tile Applications:

Shall be installed in compliance with requirements for an approved self-adhering underlayment (ASTM D1970) in **FBC 1507.1.1.1** or **1507.1.1.3** or **FBC Residential R905.1.1.1** or **R905.1.1.3** for the type of prepared roof covering to be installed, and the manufacturer's installation instructions.

3.5.2 Mechanically Attached or Adhesive-Set Tile Applications:

Shall be installed in compliance with the requirements for Self-Adhered Membrane set forth in <u>FRSA/TRI</u> Florida High Wind Concrete and Clay Roof Tile Installation Manual, Sixth Edition and the manufacturer's installation instructions.

Refer to Table 2A herein for allowable tile-adhesives.

Refer to Table 4 herein for attachment limitations.

Refer to <u>Table 6</u> herein for tile staging limitations.

4. LIMITATIONS OF USE:

- 4.1 This is a building code evaluation. NEMO ETC, LLC is not, 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. Nemo Evaluation Reports are not to be construed as representing any attributes not specifically listed, nor are Nemo Evaluation Reports to be construed as an endorsement of the subject of the report or a recommendation for its use. There is no warranty by NEMO ETC, LLC, express or implied, as to any finding or other matter in this report, or as to any product covered by the report.
- 4.2 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.
- 4.3 This Evaluation Report does not include evaluation of fire classification. Refer to **FBC 1505** for requirements and limitations regarding roof assembly fire classification. Refer to **FBC 2603** for requirements and limitations concerning the use of foam plastic insulation.
- 4.4 **FT Synthetics 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.

4.5 <u>Allowable Roof Covers</u>:

TABLE 2: ROOF COVER OPTIONS							
FBC SECTION ⇒	1507.2	1507.3		1507.4 AND 1507.5	1507.7	1507.8 AND 1507.9	
	ASPHALT	CLAY AND CONCRETE TILE		Metal Daniel Cano	SLATE OR SLATE-TYPE	WOOD SHINGLES AND	
UNDERLAYMENT	SHINGLES	MECHANICAL ATTACH	Adhesive-Set	METAL PANELS AND SHINGLES	Shingles	SHAKES	
EavePro 44	Yes	No	No	Yes	No	Yes (joint strips, 1507.1.1.3 / R905.1.1.3)	
FT Butyl MP	Yes	Yes	Yes (Table 2A)	Yes	Yes	Yes (joint strips, 1507.1.1.3 / R905.1.1.3)	
KOMODO BSA	Yes	Yes	No	Yes	Yes	Yes (joint strips, 1507.1.1.3 / R905.1.1.3)	
PLATINUM HT-B	Yes	Yes	No	Yes	Yes	Yes (joint strips, 1507.1.1.3 / R905.1.1.3)	

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

TABLE 2A: ALLOWABLE TILE ADHESIVE / UNDERLAYMENT COMBINATIONS ¹				
Underlayment Adhesive FBC File				
ET D. H. I MD	Dupont "TILE BOND™ Roof Tile Adhesive"	FL22525		
FT Butyl MP	ICP Construction "Polyset® AH-160"	FL6332		

4.6 Allowable Substrates:

Table 3: Substrate Options for Adhered Underlayments						
Substrates (designed to meet wind loads for						
UNDERLAYMENT	APPLICATION	Түре	PRIMER	MATERIAL(S)		
EavePro 44	self-adhering	Deck / sheathing	None	Plywood		
FT Butyl MP	self-adhering	Deck / sheathing	None	Plywood		
KOMODO BSA	self-adhering	Deck / sheathing	None	Plywood		
PLATINUM HT-B	self-adhering	Deck / sheathing	None	Plywood		

4.7 Attachment Limitations:

- 4.7.1 For use under mechanically attached NON-TILE prepared roof coverings, attachment shall be in accordance with the manufacturer's installation instructions, but for mechanically attached underlayments or base sheets not less than **FBC 1507.1.1** or **R905.1.1**.
- 4.7.2 For use under tile roof systems, attachment shall be in accordance with the manufacturer's installation instructions, but not less than Section 4.7.3 herein.
- 4.7.3 Wind Resistance for Underlayment Systems in Tile Roof Applications:

The following wind uplift limitations apply to underlayment systems that are not prescriptive in the FRSA/TRI Florida High Wind Concrete and Clay Roof Tile Installation Manual, Sixth Edition. The Maximum Design Pressure is the result of testing for wind load resistance based on allowable wind loads, and reflects the ultimate passing pressure divided by 2 (the 2 to 1 margin of safety per FBC 1504.9 has already been applied).

4.7.3.1 Direct-to-Deck:

The maximum design pressure for the selected assembly shall meet or exceed that required under FRSA/TRI Florida High Wind Concrete and Clay Roof Tile Installation Manual, Sixth Edition, Appendix A, Table 1A or the critical (highest) design pressure determined in accordance with FBC 1609 or FBC Residential Chapter 3.

	TABLE 4: ALLOWABLE DESIGN PRESSURES, UNDERLAYMENT IN TILE ROOF APPLICATIONS				
System No.	D ECK	PRIMER	Underlayment	DESIGN PRESSURE (PSF)	
1	Plywood, APA rated sheathing, 32/16, Exposure 1, PS1, 15/32 category	None	KOMODO BSA or PLATINUM HT-B, self-adhered and back-nailed within the selvedge-edge side laps using corrosion resistant 12 ga. x 1¼" ring shank nails through 32 ga., 1-5/8" diameter tin caps or corrosion resistant 1-inch diameter metal cap nails spaced max. 12-inch o.c.	-45.0	
2	Plywood, APA rated sheathing, 32/16, Exposure 1, PS1, 15/32 category	None	FT Butyl MP, self-adhered and back-nailed within the selvedge-edge side laps using corrosion resistant 12 ga. x 1½" ring shank nails through 32 ga., 1-5/8" diameter tin caps or corrosion resistant 1-inch diameter metal cap nails spaced max. 12-inch o.c. 6-inch wide, self-adhering end laps are blind-nailed with 1-inch diameter metal cap nails spaced 6-inch o.c.	-75.0	

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¹ Refer to Tile Manufacturer's or Adhesive Manufacturer's Florida Product Approval for Overturning Moment Resistance Performance.

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4.8 Exposure Limitations:

TABLE 5: EXPOSURE LIMITATIONS				
Underlayment	MAXIMUM EXPOSURE (DAYS)			
EavePro 44	Mechanically attached	90		
FT Butyl MP	Mechanically attached or adhesive-set tile roof system	180		
KOMODO BSA	Mechanically attached	180		
PLATINUM HT-B	Mechanically attached	180		

4.9 <u>Tile Slippage Limitations:</u>

When loading roof tiles on the underlayment in direct-deck tile assemblies, the maximum roof slope shall be as follows. Slopes in excess of these limitations require the use of battens or loading boards during loading of the roof tiles, in which case the maximum staging method is a 10-tile stack.

TABLE 6: TILE SLIPPAGE LIMITATIONS FOR DIRECT-DECK TILE INSTALLATIONS						
Underlayment	INDERLAYMENT TILE PROFILE STAGING METHOD MAXIMUM SLOPE					
KOMODO BSA or	Flat or Lugged	10-tile stack	4:12			
PLATINUM HT-B	Flat or Lugged	6-tile stack (4 over 2)	7:12			
FT Butyl MP	Flat	10-tile stack	4:12			
	Lugged	10-tilestack	7:12			

4.10 All components in the roof assembly shall have quality assurance audit in accordance with **F.A.C.** Rule 61G20-3. Refer to the Product Approval of the component manufacturer for components mentioned herein that are produced by a Product Manufacturer other than this report holder.

- END OF EVALUATION -