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ENGINEER

EVALUATE

TEST

CONSULT

EVALUATION REPORT BY FLORIDA P.E.

TAMKO Building Products, LLC

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Evaluation Report 3m-TAM-20-FBCER.A-R1

FL12328-R10

Date of Issuance: 09/29/2020

Revision 1: 08/02/2022

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** sections noted herein.

DESCRIPTION: TAMKO Roof Underlayments for use in FBC non-HVHZ jurisdictions

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

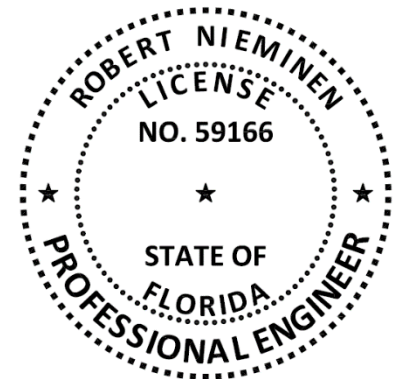
CONTINUED COMPLIANCE: This Evaluation Report is valid until such time as the named product(s) changes, the referenced Quality Assurance or production facility location(s) changes, or Code provisions that relate to the product(s) change. Acceptance of our Evaluation Reports by the named client constitutes 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 6.

Prepared by:



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: TAMKO Roof Underlayments, as produced by TAMKO Building Products LLC, have demonstrated compliance with the following sections of the 7th Edition (2020) Florida Building Code 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:

SECTION	PROPERTY	STANDARD	YEAR
1507.1.1 / R905.1.1	Material standard	ASTM D226	2009
1507.1.1, 1507.2.4, 1507.2.9.2 / R905.1.1, R905.2.8.2	Material standard	ASTM D1970	2015
1507.2.9.2, 1507.6.5 / R905.2.8.2, R905.5.4	Material standard	ASTM D6380	2013

3. REFERENCES:

ENTITY	EXAMINATION	REFERENCE	DATE
MTI (TST2508)	ASTM D1970	DX24H7B	10/03/2017
PRI (TST5878)	ASTM D1970	TAP-388-02-01	10/04/2017
PRI (TST5878)	ASTM D226, Type II	TAP-420-02-01	04/19/2018
PRI (TST5878)	ASTM D1970	TAP-447-02-01	10/19/2018
PRI (TST5878)	ASTM D6380	847T0009	12/21/2019
PRI (TST5878)	ASTM D6380	847T00010	12/21/2019
PRI (TST5878)	ASTM D226, Type II	TAP-351-02-01	04/25/2016
PRI (TST5878)	ASTM D226, Type II	TAP-351-02-02	05/04/2016
UL LLC (TST9628)	ASTM D226, Type II	13CA12269	03/14/2014
UL LLC (QUA9625)	Quality Assurance	Service Confirmation	10/20/2020
UL LLC (QUA9625)	Quality Assurance	Florida BCIS	Current

4. PRODUCT DESCRIPTION:

	PRODUCT	MATERIAL STANDARD	PLANT(S)	DESCRIPTION
4.1	No. 30 UL	ASTM D226, Type II	Joplin, MO Green Cove Springs, FL	Asphalt-saturated organic felt
4.2	No. 30 ASTM	ASTM D226, Type II	Phillipsburg, KS	Asphalt-saturated organic felt
4.3	TAM-FELT®	ASTM D226, Type II	Green Cove Springs, FL	Asphalt-saturated organic felt
4.4	Moisture Guard®	ASTM D1970	Joplin, MO	Self-adhering, fiberglass reinforced SBS modified bitumen roof underlayment with a mineral top surface.
4.5	TW Underlayment	ASTM D1970 ¹	Columbus, KS	Self-adhering, SBS modified bitumen roof underlayment with a polymer-film top surface.
4.6	TW Metal and Tile Underlayment	ASTM D1970 ¹	Joplin, MO	Self-adhering, fiberglass reinforced SBS modified bitumen roof underlayment with a polymer-film top surface.

¹ Agreement between purchaser and seller, as set forth in Section 4.3, Note 1 of ASTM D1970-15, should be established as to slip resistance of TW Underlayment and TW Metal and Tile Underlayment.

	PRODUCT	MATERIAL STANDARD	PLANT(S)	DESCRIPTION
4.7	TW Seam Tape	ASTM D1970	Columbus, KS	Self-adhering, SBS modified bitumen deck seam-tape with a polymer-film top surface.
4.8	ASTM Slate Surfaced Roll Roofing	ASTM D6380, Class M, Type II	Green Cove Springs, FL	Asphalt-saturated organic mat, coated on both sides with asphalt and surfaced with granules.
4.9	ASTM Tile Underlayment	ASTM D6380, Class M, Type II	Green Cove Springs, FL	Asphalt-saturated organic felt, coated on both sides with asphalt and surfaced with granules.

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 not for use in FBC High Velocity Hurricane Zone jurisdictions (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 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.
- 5.5 **TAMKO 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								
FBC SECTION:	1507.2	1507.3		1507.4 AND 1507.5		1507.7	1507.8 AND 1507.9	
UNDERLAYMENT	ASPHALT SHINGLES	CLAY AND CONCRETE TILE		METAL		SLATE OR SLATE-TYPE SHINGLES	WOOD	
		MECHANICAL ATTACH	ADHESIVE-SET	PANELS	SHINGLES		SHINGLES	SHAKES
No. 30 UL	Yes	Yes See 5.6.1	Yes See 5.6.1	Yes	Yes	Yes	Yes	Yes
No. 30 ASTM	Yes	Yes See 5.6.1	Yes See 5.6.1	Yes	Yes	Yes	Yes	Yes
TAM-FELT®	Yes	No	No	Yes	Yes	Yes	Yes	Yes
Moisture Guard®	Yes	No	No	No	No	Yes	Yes (joint strips, 1507.1.1.3 / R905.1.1.3)	Yes (joint strips, 1507.1.1.3 / R905.1.1.3)
TW Underlayment	Yes	No	No	Yes	Yes	Yes	Yes (joint strips, 1507.1.1.3 / R905.1.1.3)	Yes (joint strips, 1507.1.1.3 / R905.1.1.3)
TW Metal and Tile Underlayment	Yes	No	No	Yes	Yes	Yes	Yes (joint strips, 1507.1.1.3 / R905.1.1.3)	Yes (joint strips, 1507.1.1.3 / R905.1.1.3)
TW Seam Tape	Yes (joint strips, 1507.1.1.1 / R905.1.1.1)	No	No	Yes (joint strips, 1507.1.1.1 / R905.1.1.1)	Yes (joint strips, 1507.1.1.1 / R905.1.1.1)	Yes (joint strips, 1507.1.1.1 / R905.1.1.1)	Yes (joint strips, 1507.1.1.3 / R905.1.1.3)	Yes (joint strips, 1507.1.1.3 / R905.1.1.3)
ASTM Slate Surfaced Roll Roofing	Yes (Valley Liner)	Yes (Cap Sheet in 2-ply system)	No	No	No	No	No	No

TABLE 1: ROOF COVER OPTIONS								
FBC SECTION:	1507.2	1507.3		1507.4 AND 1507.5		1507.7	1507.8 AND 1507.9	
UNDERLAYMENT	ASPHALT SHINGLES	CLAY AND CONCRETE TILE		METAL		SLATE OR SLATE-TYPE SHINGLES	WOOD	
		MECHANICAL ATTACH	ADHESIVE-SET	PANELS	SHINGLES		SHINGLES	SHAKES
ASTM Tile Underlayment	Yes (Valley Liner)	Yes (Cap Sheet in 2-ply system)	No	No	No	No	No	No

5.6.1 No. 30 UL or No. 30 ASTM may be used as a mechanically attached anchor sheet followed by an asphalt-applied ASTM Slate Surfaced Roll Roofing or ASTM Tile Underlayment.

5.7 **Allowable Substrates:**

TABLE 2: SUBSTRATE OPTIONS FOR ADHERED UNDERLAYMENTS			
UNDERLAYMENT	APPLICATION	PRIMER	SUBSTRATES
Moisture Guard®, TW Underlayment or TW Metal and Tile Underlayment	self-adhering	(Optional) ASTM D41	plywood
		None	No. 30 UL, No. 30 ASTM or TAM-FELT®
TW Seam Tape	self-adhering	(Optional) ASTM D41	plywood
ASTM Slate Surfaced Roll Roofing or ASTM Tile Underlayment	hot asphalt	None	No. 30 UL, No. 30 ASTM or TAM-FELT®

5.8 **Attachment Limitations:**

5.8.1 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**.

5.8.2 For use under tile roof systems, attachment shall be in accordance with the manufacturer's installation instructions, but – for mechanically attached base sheets - not less than:

- **FRSA/TRI Florida High Wind Concrete and Clay Roof Tile Installation Manual**, Sixth Edition, Appendix A, Table 1 (for Two-Ply Asphalt Applied Hot Mop Underlayment)

5.9 **Exposure Limitations:**

TABLE 3: EXPOSURE LIMITATIONS		
UNDERLAYMENT	PREPARED ROOF COVER INSTALLATION TYPE	MAXIMUM EXPOSURE (DAYS)*
No. 30 UL, No. 30 ASTM, TAM-FELT®	Any	30
Moisture Guard®, TW Underlayment, TW Metal and Tile Underlayment, TW Seam Tape		
ASTM Slate Surfaced Roll Roofing, ASTM Tile Underlayment		

*Maximum exposure shall not exceed the manufacturer's recommendations, which may be less than 30 days.

5.10 **Tile Slippage Limitations:** When loading roof tiles on the underlayment in direct-deck tile roof assemblies, the tile shall be staged atop battens during loading of the roof tiles.

6. INSTALLATION:

- 6.1 **TAMKO Roof Underlayments** shall be installed in accordance with **TAMKO Building Products LLC** installation instructions subject to the Limitations set forth in Section 5 herein and the specifics noted below.
- 6.1.1 Consult TAMKO requirements for back-nailing of adhered underlayments at slopes 2:12 or greater.
- 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 No. 30 UL, No. 30 ASTM:

6.3.1 Non-Tile Applications:

Shall be installed in compliance with requirements for an approved mechanically attached underlayment (ASTM D226, Type II) in **FBC Table 1507.1.1.1** or **FBC Residential Table R905.1.1.1** for the type of prepared roof covering to be installed, and the manufacturer's installation instructions. FBC requirements take precedence over the manufacturer's installation instructions.

6.3.2 Tile Applications:

No. 30 UL or No. 30 ASTM are limited to use as a mechanically attached base sheet in the "TWO-PLY SYSTEM" from **FRSA/TRI Florida High Wind Concrete and Clay Roof Tile Installation Manual**, Sixth Edition, followed by ASTM Slate Surfaced Roll Roofing, ASTM Tile Underlayment applied in hot asphalt, or other FBC Approved hot-asphalt applied cap sheet. Refer to **FRSA/TRI**, Sixth Edition, Appendix A, Table 1 for attachment requirements.

6.4 TAM-FELT®:

- 6.4.1 Shall be installed in compliance with requirements for an approved mechanically attached underlayment (ASTM D226, Type II) in **FBC Table 1507.1.1.1** or **FBC Residential Table R905.1.1.1** for the type of prepared roof covering to be installed, and the manufacturer's installation instructions. FBC requirements take precedence over the manufacturer's installation instructions.

6.5 Moisture Guard®, TW Underlayment, TW Metal and Tile Underlayment:

- 6.5.1 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.

When installed over a mechanically attached, FBC Approved ASTM D226 Type II felt, the felt shall be fastened in accordance with **FBC 1507.1.1** or **R905.1.1**.

6.6 ASTM Slate Surfaced Roll Roofing, ASTM Tile Underlayment:

6.6.1 Tile Applications:

ASTM Slate Surfaced Roll Roofing and ASTM Tile Underlayment are limited to use as the Hot Asphalt applied "Cap Sheet" in the "TWO-PLY SYSTEM" from **FRSA/TRI Florida High Wind Concrete and Clay Roof Tile Installation Manual**, Sixth Edition.

Refer to Section 5.8.2 for attachment limitations.

Refer to Section 5.10 for tile staging limitations.

6.6.2 Valley Liner:

ASTM Slate Surfaced Roll Roofing and ASTM Tile Underlayment are acceptable for use as a valley liner in accordance with **FBC 1507.2.9.2** or **FBC Residential R905.2.8.2**. Installation shall be in accordance with the manufacturer's instructions before applying shingles.

7. BUILDING PERMIT REQUIREMENTS:

As required by the Building Official or Authority Having Jurisdiction in order 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; (360) 817-5512; bsai.inspections@ul.com

- END OF EVALUATION REPORT -