



**NEMO|etc.**

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ENGINEER

EVALUATE

TEST

CONSULT

**P.E. EVALUATION REPORT (PEER)**

**Sentry Building Innovations**

1209 Orange Street, Wilmington,  
New Castle, DE 19801  
**(843) 735-1773**

PEER-ACTSBI-001.A.R7

FL21895-R7 (NON-HVHZ)

Date of Issuance: 02/16/2017

Revision 7: 10/02/2023

**SCOPE:**

This P.E. Evaluation Report (henceforth 'PEER') 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 products described herein have been evaluated for compliance with the **8<sup>th</sup> Edition (2023) Florida Building Code sections noted herein.**

**DESCRIPTION: Roofnado Roof Underlayments (NON-HVHZ)**

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

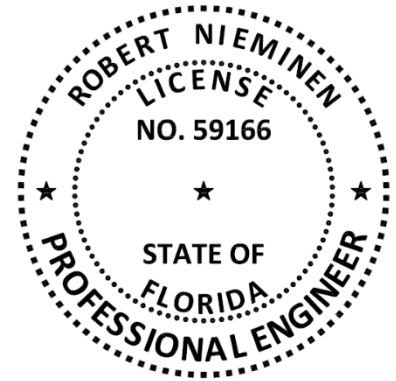
**CONTINUED COMPLIANCE:** This PEER is valid until such time as the named product(s) changes, the referenced Quality Assurance or production facility location(s) changes, or Code provisions that relate to the product(s) change. Acceptance of our PEERs by the named client constitutes agreement to notify 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 PEER 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 PEER is displayed, then it shall be done in its entirety.

**INSPECTION:** Upon request, a copy of this entire PEER 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 PEER consists of pages 1 through 7.

**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 PEERs 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 PEER, 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  
**Product Approval Method:** Method 1, Option D – Codified Material, Evaluation by Engineer  
**Compliance Statement:** **Roofnado Roof Underlayments**, as produced by **Sentry Building Innovations**, have demonstrated compliance with the following sections of the **8<sup>th</sup> Edition (2023) Florida Building Code** through testing in accordance with the following Standards. Compliance is subject to the [Installation Requirements](#) and [Limitations of Use](#) set forth herein.

**2. STANDARDS:**

SECTION	PROPERTY	STANDARD	YEAR
1504.3.1	Wind resistance	UL 1897	2015
1507.1.1 / R905.1.1	Material standard	ASTM D8257	2020
1507.1.1, 1507.2.9.2 / R905.1.1, R905.2.8.2	Material standard	ASTM D1970	2017
1507.3.3 / R905.3.3	Material standard	FRSA/TRI, Seventh Edition	2023
TAS 110	Accelerated Weathering	ASTM D4798	2011
TAS 110	Material standard	TAS 103	2020 (from 2023 Code)

**3. REFERENCES:**

ENTITY	EXAMINATION	REFERENCE	DATE
NEMO	PEER	PEER-ACT-001.A.R4	10/02/2023
NEMO	Traceability	SPE	09/28/2023
ICC NTA (QUA3504)	Quality Assurance	Inspection Report (ML1)	05/25/2023
ICC NTA (QUA3504)	Quality Assurance	Inspection Report (ML3)	06/12/2023
ICC NTA (QUA3504)	Quality Assurance	Inspection Report (ML2)	07/20/2023

**4. PRODUCT DESCRIPTION:**

TABLE 1: EVALUATED UNDERLAYMENTS			
PRODUCT	MATERIAL STANDARD	PLANT(s) <sup>i</sup>	DESCRIPTION
Roofnado™ AnchorDeck™	ASTM D8257 <sup>ii</sup>	ML1	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.
Roofnado™ StormTread™	ASTM D8257 <sup>ii</sup>	ML1	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.
Roofnado™ ShingleLock™	ASTM D8257 <sup>ii</sup>	ML1	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.
Roofnado™ StormTread™ XW	ASTM D8257 <sup>ii</sup>	ML1	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 3.40 lbs/square.
Roofnado™ LapLock™ PSU	ASTM D1970 <sup>iii</sup> FRSA/TRI and TAS 103 (partial)	ML2	Nominal 50-mil, self-adhering, multi-layered roof underlayment composed of a synthetic top facer bonded to a polymer modified bituminous layer and release film

TABLE 1: EVALUATED UNDERLAYMENTS			
PRODUCT	MATERIAL STANDARD	PLANT(S) <sup>i</sup>	DESCRIPTION
Roofnado™ AnchorDeck™ PSU	ASTM D1970 <sup>iii</sup>	ML3	Nominal 40-mil, self-adhering, multi-layered roof underlayment composed of a synthetic top facer bonded to a polymer modified bituminous layer and release film

## 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 PEER, or previous versions thereof, is/was used for permitting or design guidance. PEERs are not to be construed as representing any attributes not specifically listed, nor are PEERs to be construed as an endorsement of the subject, or a recommendation for its use. There is no warranty by NEMO ETC, LLC or Robert Nieminen, P.E., express or implied, as to any finding or other matter in this PEER, or as to any product covered by the PEER.
- 5.2 This PEER is not for use in FBC High Velocity Hurricane Zone jurisdictions, as defined in FBC Chapter 2 (Broward and Miami-Dade Counties).
- 5.3 This PEER 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 PEER 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 **Roofnado 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 PEER combined with supporting data for the prepared roof covering.
- 5.6 **Allowable Roof Covers:**

TABLE 2: ROOF COVER OPTIONS						
<i>FBC NON-HVHZ:</i>	1507.2	1507.3		1507.4 & 1507.5	1507.7	1507.8 & 1507.9
UNDERLAYMENT	ASPHALT SHINGLES	CLAY AND CONCRETE TILE		METAL PANELS OR SHINGLES	SLATE OR SLATE-TYPE SHINGLES	WOOD SHINGLES OR SHAKES
		MECH. ATTACH	ADHESIVE-SET			
Roofnado AnchorDeck	Yes	No	No	Yes (residential)	Yes	No
Roofnado StormTread	Yes	No	No	Yes	Yes	No
Roofnado ShingleLock	Yes	No	No	Yes	Yes	No
Roofnado StormTread XW	Yes	No	No	Yes	Yes	No
Roofnado LapLock PSU	Yes	Yes	Yes <a href="#">(Table 2A)</a>	Yes	Yes	Yes <sup>iv</sup>
Roofnado AnchorDeck PSU	Yes	No	No	Yes	Yes	Yes <sup>iv</sup>

- 5.6.1 In addition to the codified roof cover options noted above, allowable roof covers include synthetic or composite shingles, slate or shakes holding current [Florida Product Approval](#) (statewide or local).

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

TABLE 2A: ALLOWABLE UNDERLAYMENT / TILE-ADHESIVE COMBINATIONS <sup>v</sup>					
UNDERLAYMENT	TILE-ADHESIVE OPTIONS AND <a href="#">FLORIDA PRODUCT APPROVAL</a>				
	DAP GLOBAL		DUPONT	ICP CONSTRUCTION	
	STORMBOND	STORMBOND 2	TILE BOND	POLYSET AH-160	POLYSET RTA-1
	FL14506	FL14506	FL22525	FL6332	FL6276
Roofnado LapLock PSU	No	No	Yes	Yes	No

5.7 **Allowable Substrates:**

TABLE 3: ALLOWABLE SUBSTRATE OPTIONS FOR ADHERED UNDERLAYMENTS				
UNDERLAYMENT	APPLICATION	SUBSTRATES (DESIGNED TO MEET CODE)		
		TYPE	PRIMER	MATERIAL(S)
Roofnado LapLock PSU	self-adhering	Deck / sheathing	(Optional) ASTM D41	Plywood or OSB
		Base Sheet	None	ASTM D226, Type II felt
		Base Ply	None	Roofnado AnchorDeck PSU
Roofnado AnchorDeck PSU	self-adhering	Deck / sheathing	(Optional) ASTM D41	Plywood or OSB
		Base Sheet	None	ASTM D226, Type II 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 Wind Resistance for Underlayment Systems in Tile Roof Applications:

The following wind uplift limitations apply to tile underlayment systems. The Maximum Design Pressure (‘MDP’) 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).

5.8.2.1 Direct-to-Deck:

The maximum design pressure for the selected assembly shall meet or exceed that required under FRSA/TRI Florida Manual, 7th Edition, Appendix A or the critical (highest) design pressure determined in accordance with **FBC 1609** or **FBC Residential Chapter 3**.

TABLE 4A: ALLOWABLE DESIGN PRESSURES, DIRECT-TO-DECK UNDERLAYMENT IN TILE ROOF APPLICATIONS						
SYSTEM No.	DECK	PRIMER	JOINT TREATMENT	BASE PLY	CAP PLY	<a href="#">MDP (PSF)</a>
UDL-1.	<b>Plywood</b> , APA rated sheathing, 40/20, Exposure 1, PS1, 19/32 category	(Optional) ASTM D41	None	None	Roofnado LapLock PSU, self-adhered and back-nailed in accordance with Sentry Building Innovations installation instructions, max. 12-inch o.c.	-97.5

5.8.2.2 Mechanically-Attached Base Sheet:

The maximum design pressure for the selected assembly shall meet or exceed that required under **FRSA/TRI Manual, 7th Edition**, Appendix A or the critical (highest) design pressure determined in accordance with **FBC 1609** or **FBC Residential Chapter 3**.

Alternatively, the maximum design pressure for the selected assembly shall meet or exceed at least the Zone 1 design pressure determined in accordance with **FBC 1609** or **FBC Residential Chapter 3**. Elevated pressure zones shall employ an attachment density by a qualified design professional to resist the elevated pressure criteria. Commonly used methods are [ANSI/SPRI](#) WD1, [FM Loss Prevention Data Sheet](#) 1-29 or [Roofing Application Standard](#) RAS 117 or RAS 137. Assemblies marked with an asterisk\* carry the limitations set forth in Section 2.2.10.1 of [FM Loss Prevention Data Sheet](#) 1-29 for enhancements.

TABLE 4B: ALLOWABLE DESIGN PRESSURES, 2-PLY UNDERLAYMENT SYSTEMS IN TILE ROOF APPLICATIONS						
SYSTEM No.	DECK	BASE SHEET		BASE PLY	CAP PLY	MDP (PSF)
		TYPE	ATTACH			
UDL-2.	Plywood, APA rated sheathing, 32/16, Exposure 1, PS1, 15/32 category	FBC Approved ASTM D226, Type II felt	12 ga. x 1.25-inch long x 3/8-inch head diameter annular ring shank roofing nails and 1-5/8-inch diameter tin caps; 6-inch o.c. at the 4-inch wide side laps and 12-inch o.c. at two (2) equally spaced center rows.	(Optional) Roofnado AnchorDeck PSU, self-adhered and back-nailed using 12 ga. x 1.25-inch long x 3/8-inch head diameter annular ring shank roofing nails and 1-5/8-inch diameter tin caps, max. 12-inch o.c.	Roofnado LapLock PSU, self-adhered and back-nailed using 12 ga. x 1.25-inch long x 3/8-inch head diameter annular ring shank roofing nails and 1-5/8-inch diameter tin caps, max. 12-inch o.c.	-45.0

5.9 Exposure Limitations:

TABLE 5: EXPOSURE LIMITATIONS		
UNDERLAYMENT	PREPARED ROOF COVER INSTALLATION TYPE	MAXIMUM EXPOSURE (DAYS)
Roofnado AnchorDeck, Roofnado StormTread, Roofnado ShingleLock or Roofnado StormTread XW	Mechanically attached	90
Roofnado LapLock PSU	Any type (per <a href="#">Table 2</a> )	90
Roofnado AnchorDeck PSU	Mechanically attached	90

5.10 Tile Slippage Limitations: When loading roof tiles on the underlayment, the maximum roof pitch shall be as follows. These pitch limitations can only be exceeded by using battens or loading boards during loading of the roof tiles.

TABLE 6: TILE SLIPPAGE LIMITATIONS			
UNDERLAYMENT	TILE PROFILE	STAGING METHOD	MAXIMUM STAGING PITCH
Roofnado LapLock PSU	Flat or Lugged	Max. 10-tile stack	4:12

5.11 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 the report holder on [Page 1](#) of this PEER.

## 6. INSTALLATION:

6.1 **Roofnado Roof Underlayments** shall be installed in accordance with **Sentry Building Innovations** installation instructions subject to the [Limitations of Use](#) herein and the specifics noted below.

6.1.1 Consult Sentry Building Innovations requirements for back-nailing at pitch of 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 Roofnado AnchorDeck, Roofnado StormTread, Roofnado ShingleLock or Roofnado StormTread XW:

#### 6.3.1 **Non-Tile Applications:**

Shall be installed in compliance with requirements for a synthetic underlayment (ASTM D8257) in **FBC 1507.1.1.1** or **FBC Residential R905.1.1.1** for the type of prepared roof covering to be installed, and the manufacturer's installation instructions.

### 6.4 Roofnado LapLock PSU:

#### 6.4.1 **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 **FBC Residential R905.1.1.1** for the type of prepared roof covering to be installed, and the manufacturer's installation instructions.

When installed over a mechanically attached base sheet of FBC Approved ASTM D226 Type II felt or ASTM D4869, Type III or IV felt, the base sheet shall be fastened in accordance with **FBC 1507.1.1** or **R905.1.1**.

Roofnado AnchorDeck PSU followed by Roofnado LapLock PSU is allowable for use under mechanically attached prepared roof systems. Limits of use are those associated with the top-layer material. This is not a requirement, but is allowable if a 2-ply underlayment system is desired

#### 6.4.2 **Tile Applications:**

Shall be installed in compliance with requirements for a Self-Adhered Membrane in the **FRSA/TRI Florida Manual, 7th Edition**, and the manufacturer's installation instructions.

Refer to [Section 5.8](#) for attachment limitations.

Refer to [Table 6](#) for tile staging limitations.

### 6.5 Roofnado AnchorDeck PSU:

#### 6.5.1 **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 **FBC Residential R905.1.1.1** for the type of prepared roof covering to be installed, and the manufacturer's installation instructions.

When installed over a mechanically attached base sheet of FBC Approved ASTM D226 Type II felt or ASTM D4869, Type III or IV felt, the base sheet shall be fastened in accordance with **FBC 1507.1.1** or **R905.1.1**.

**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:**

[ICC-NTA \(QUA3504\)](#), (574) 773-7975, [vbrown@icc-nta.org](mailto:vbrown@icc-nta.org)

- END OF PEER -

<sup>i</sup> Building officials, Designers of Record and other Authorities Having Jurisdiction may contact [info@nemoetc.com](mailto:info@nemoetc.com) to obtain manufacturing location information for products evaluated herein.

<sup>ii</sup> Agreement between purchaser and seller, as set forth in Section 4.3, Note 1 of ASTM D8257-20, should be established as to slip resistance of Roofnado AnchorDeck, Roofnado StormTread, Roofnado ShingleLock and Roofnado StormTread XW.

<sup>iii</sup> Agreement between purchaser and seller, as set forth in Section 4.3, Note 1 of ASTM D1970-17, should be established as to slip resistance of Roofnado LapLock PSU and Roofnado AnchorDeck PSU.

<sup>iv</sup> For wood shakes and shingles, product is used as min. 3 ¾-inch wide joint-strips per FBC 1507.1.1.1(2) / FBC R905.1.1.1(2) or installed in full-coverage atop ASTM D226, Type II felt or ASTM D4869 Type III or IV felt mechanically attached in accordance with FBC Table 1507.1.1.1 or FBC Residential Table R905.1.1.1.

<sup>v</sup> Refer to Tile Manufacturer's or Adhesive Manufacturer's Florida Product Approval for Overturning Moment Resistance Performance.