



**NEMO|etc.**

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ENGINEER

TEST

CONSULT

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

**Marco Industries, Inc.**

4150 S. 100<sup>th</sup> E. Ave.  
Tulsa, OK 74146  
**(800) 800-8590**

**PEER-MRC-001.A.R3**

**FL32035-R3 (NON-HVHZ)**

Date of Issuance: 04/10/2020

**Revision 3: 02/26/2024**

**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: HydraShell™ Roof Underlayments (NON-HVHZ)**

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

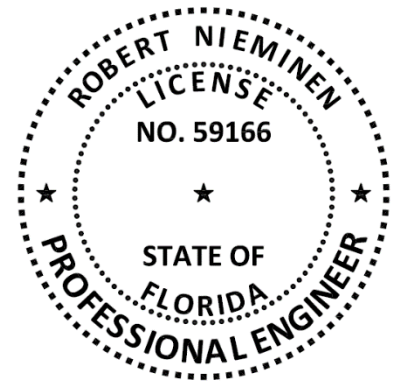
**CONTINUED COMPLIANCE:** This PEER is valid until such time as the named product(s) changes, the referenced Quality Assurance or production facility location(s) changes, or Code provisions that relate to the product(s) change. Acceptance of our PEERs by the named client constitutes agreement to notify 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 5.

**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:** **HydraShell Roof Underlayments**, as produced by **Marco Industries**, 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
1507.1.1, 1507.2.9.2 / R905.1.1, R905.2.8.2	Material standard	ASTM D1970
TAS 110	Accelerated Weathering	ASTM D4798

**3. REFERENCES:**

ENTITY	EXAMINATION	REFERENCE	DATE
NEMO	PEER	PEER-ACT-001.A.R5	02/26/2024
NEMO	Traceability	SPE	02/26/2024
ICC NTA (QUA3504)	Quality Assurance	Inspection Report (ML3)	06/12/2023

**4. PRODUCT DESCRIPTION:**

TABLE 1: EVALUATED UNDERLAYMENTS			
PRODUCT	MATERIAL STANDARD	PLANT(s) <sup>1</sup>	DESCRIPTION
HydraShell Supreme SA	ASTM D1970 <sup>2</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.

<sup>1</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>2</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.

5.5 **HydraShell 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			
HydraShell Supreme SA	Yes	No	No	Yes	Yes	Yes <sup>3</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).

5.7 **Allowable Substrates:**

TABLE 3: ALLOWABLE SUBSTRATE OPTIONS FOR ADHERED UNDERLAYMENTS				
UNDERLAYMENT	APPLICATION	SUBSTRATES (DESIGNED TO MEET CODE)		
		TYPE	PRIMER	MATERIAL(S)
HydraShell Supreme SA	self-adhering	Deck / sheathing	(Optional) ASTM D41	Plywood or OSB
		Base Sheet	None	ASTM D226, Type II felt

5.8 **Attachment Limitations:**

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**.

5.9 **Exposure Limitations:**

TABLE 4: EXPOSURE LIMITATIONS		
UNDERLAYMENT	PREPARED ROOF COVER INSTALLATION TYPE	MAXIMUM EXPOSURE (DAYS)
HydraShell Supreme SA	Mechanically attached	90

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

<sup>3</sup> For wood shakes and shingles, product is used as min. 3 ¼-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.

**6. INSTALLATION:**

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

6.1.1 Consult Marco Industries 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 Refer to [Section 6.4](#) for underlayments having prescriptive codified minimum attachment

6.4 Underlayment Assemblies with Prescriptive Minimum Attachment for use in NON-TILE applications:

6.4.1 **CODE REFERENCE: 1507.1.1.1 or R905.1.1.1, Option 1:** Underlayment adhered to deck

DECK DESCRIPTION:	Code-minimum wood deck to the satisfaction of the Authority Having Jurisdiction
UNDERLAYMENT:	BASE PLY: (Optional) <b>HydraShell Supreme SA</b> self-adhered in accordance with FBC Section 1507.1.1.1(1) or R905.1.1.1(1) and back-nailed in accordance with the manufacturer's requirements. CAP PLY: <b>HydraShell Supreme SA</b> self-adhered in accordance with FBC Section 1507.1.1.1(1) or R905.1.1.1(1) and back-nailed in accordance with the manufacturer's requirements.
SURFACING:	FBC Approved asphalt shingles, metal roof panels or metal shingles, slate or slate type shingles, subject to the allowable roof covers in <a href="#">Table 2 herein</a> .

6.4.2 **CODE REFERENCE: 1507.1.1.1 or R905.1.1.1, Option 1 combined with Option 2 or 3:** Optional self-adhering strips to deck-joints followed by base sheet mechanically fastened to deck followed by underlayment adhered to base sheet

DECK DESCRIPTION:	Code-minimum wood deck to the satisfaction of the Authority Having Jurisdiction								
SECONDARY WATER BARRIER:	(Optional) Min. 3 ¼-inch wide strips of <b>HydraShell Supreme SA</b> or other FBC Approved joint-strip product self-adhered over joints of the roof deck prior to installation of subsequent layer(s) in accordance with FBC Section 1507.1.1.1(2) or R905.1.1.1(2). Do not overlap end-joints or T-joints. All end-joints and T-joints shall be butted firmly side by side, flush with each other but not overlapped.								
BASE SHEET:	One (1) layer of FBC Approved ASTM D226, Type II felt, in accordance with FBC Table 1507.1.1.1 or Table R905.1.1.1, with a minimum 4-inch side lap and 6-inch end lap or two (2) layers of FBC Approved ASTM D226, Type II felt in accordance with FBC Section 1507.1.1.1(3) or R905.1.1.1(3), mechanically fastened to deck								
FASTENERS:	Min. 0.083-inch diameter annular ring or deformed shank nails with metal or plastic caps* with a nominal cap diameter of not less than 1-inch and minimum thickness as follows. <table border="1"> <thead> <tr> <th>Cap Type</th> <th>Minimum thickness</th> </tr> </thead> <tbody> <tr> <td>Metal cap</td> <td>32 ga. sheet metal</td> </tr> <tr> <td>Power-driven metal cap</td> <td>0.010-inch</td> </tr> <tr> <td>Plastic cap</td> <td>0.035-inch (outside edge thickness)</td> </tr> </tbody> </table> The nail shall be of sufficient length to penetrate through the roof sheathing, or not less than 0.75-inch into the roof sheathing.	Cap Type	Minimum thickness	Metal cap	32 ga. sheet metal	Power-driven metal cap	0.010-inch	Plastic cap	0.035-inch (outside edge thickness)
Cap Type	Minimum thickness								
Metal cap	32 ga. sheet metal								
Power-driven metal cap	0.010-inch								
Plastic cap	0.035-inch (outside edge thickness)								
*NOTE:	Metal caps are required where the ultimate design wind speed, $V_{ult}$ , equals or exceeds 170 mph.								
FASTENING:	Grid pattern of 12-inches between the overlaps and 6-inch spacing at the overlaps, in accordance with FBC Table 1507.1.1.1 or Table R905.1.1.1 or FBC Section 1507.1.1.1(3) or R905.1.1.1(3).								
UNDERLAYMENT:	BASE PLY: (Optional) <b>HydraShell Supreme SA</b> self-adhering and back-nailed in accordance with the manufacturer's requirements. CAP PLY: <b>HydraShell Supreme SA</b> self-adhering and back-nailed in accordance with the manufacturer's requirements.								
SURFACING:	FBC Approved asphalt shingles, metal roof panels or metal shingles, slate or slate type shingles, subject to the allowable roof covers in <a href="#">Table 2 herein</a> .								

**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 -

FBC NON-HVHZ