



NEMO|etc.

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ENGINEER

TEST

CONSULT

P.E. EVALUATION REPORT (PEER)

Drexel Metals, Inc.

204 Railroad Drive
Ivyland, PA 18974
(800) 272-4482

PEER-HNTDMI-001.R4

FL46439-R3

Date of Issuance: 01/22/2024

Revision 4: 06/02/2025

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 product described herein has been evaluated for compliance with the **8th Edition (2023) Florida Building Code** [sections noted herein](#).

DESCRIPTION: Defend-R Roof Insulations

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

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: "NEMO P.E. Evaluated" may be displayed in advertising literature. If any portion of the PEER is displayed, then it shall be 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 4.

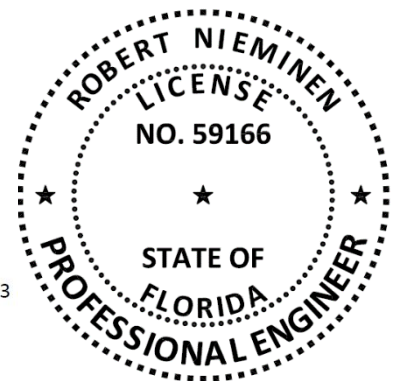
Prepared by:

Digitally signed by
Robert Nieminen
Date: 2025.06.02
'11:12:37 -04'00

This item has been digitally signed and sealed by Robert Nieminen, P.E.

Printed copies of this document are not considered signed and sealed, and the signature must be verified on any electronic copies.

Robert Nieminen, Florida P.E. 59166, FBC ANE1983
NEMO ETC, LLC, Florida CA #32455



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.

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ROOFING COMPONENT EVALUATION:
1. SCOPE:

Product Category: Roofing
Sub-Category: Insulation
Product Approval Method: Method 1, Option D – Codified Material, Evaluation by Engineer
Compliance Statement: **Defend-R Roof Insulations**, as produced by **Drexel Metals, Inc.**, have demonstrated compliance with the following sections of the referenced Codes through testing in accordance with the following Standards. Compliance is subject to the [Installation Requirements](#) and [Limitations of Use](#) set forth herein.

2. STANDARDS:

CODE	SECTION	PROPERTY	STANDARD
2023 Florida Building Code	1508.2	Material standard	ASTM C1289
	1520.1	Physical Properties	TAS 110, Section 8
	2603.3	Surface-burning characteristics	ASTM E84 ¹
2023 Florida Building Code, Energy Conservation	C303.1.4, R303.1.1.1	Thermal Resistance (R-value)	CAN/ULC-S770-15

3. REFERENCES:

ENTITY	EXAMINATION	REFERENCE	DATE
NEMO	PEER	PEER-HNT-001.R13	05/30/2025
NEMO	Traceability	PCL	11/03/2023
NEMO	Traceability	PCL	04/21/2025
UL, LLC (QUA9625)	Quality Control	Service Confirmation; FL, IL, NY, PA, TX, UT	01/16/2024

4. PRODUCT DESCRIPTION:

The following roof insulations are mechanically attached or adhered to approved substrates using fasteners, stress plates and adhesives, as outlined in the Roof System Florida Product Approval.

TABLE 1: SUMMARY OF EVALUATED INSULATIONS							
PRODUCT	ASTM C1289			DIMENSIONAL OFFERING		PLANTS	
	TYPE	CLASS	GRADE	THICK (IN)	DIMENSIONS (FT)	NON-HVHZ (ASTM C1289)	HVHZ (TAS 110)
Defend-R	II	1	2 or 3	1 to 4.5	4x4, 4x8 or 4x12	FL, IL, NY, PA, TX, UT	FL, IL, PA, UT
Defend-R (Tapered)	II	1	2 or 3	0.5 to 4.5	4x4	FL, IL, NY, PA, TX, UT	FL, IL, PA, UT
Defend-R Coated Glass	II	2	2 or 3	0.5 to 4.5	4x4 or 4x8	FL, IL, NY, PA, TX, UT	FL, IL, PA, UT
Defend-R Coated Glass (Tapered)	II	2	2 or 3	0.5 to 4.5	4x4	FL, IL, NY, PA, TX, UT	FL, IL, PA, UT
Defend-R Nail Base (OSB)	V	N/A	N/A	1.5 to 4	nominal 4x8	IL	N/A
Defend-R Nail Base (plywood)	V	N/A	N/A	1.5 to 4	nominal 4x8	IL	IL
Defend-R Vent (OSB)	V	N/A	N/A	2.5 to 5	4x8	FL, IL, NY, PA, UT	N/A
Defend-R Vent (plywood)	V	N/A	N/A	2.5 to 5	4x8	FL, IL, NY, PA, UT	FL, IL, PA, UT

¹ Numerical ratings as determined by ASTM E84 are not intended to reflect hazards presented by these materials under actual fire conditions.

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 **Defend-R Nail Base** and **Defend-R Vent** with **OSB as the top surface** are not for use in FBC High Velocity Hurricane Zone as defined in FBC Chapter 2 (Broward and Miami-Dade Counties).
- 5.3 This PEER does not include evaluation of wind resistance or fire classification.
- 5.3.1 Refer to roof system [Florida Product Approval](#) or [Miami-Dade NOA](#) for uplift resistance.
- 5.3.2 Refer to **FBC 1505** or **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.
- 5.3.3 If **Defend-R Roof Insulation** is not listed in the roof system Florida Product Approval, a request may be made to the Authority Having Jurisdiction for local-approval provided that wind resistance data (**FBC 1504.3.1**), external fire classification data (**FBC 1505** or **FBC HVHZ 1516**) and internal fire resistance data (**NFPA 276** or **UL1256 per FBC 1508.1** and **FBC 2603.4.1.5**), as applicable, is provided, specifically with the subject roof cover.
- 5.4 **Thermal Resistance (R-Value):**
- 5.4.1 Table 2 below lists the Long-Term Thermal Resistance (R-Value) when tested by an accredited testing laboratory in accordance with CAN/ULC-S770-15 for compliance with FBC, Energy Conservation Code sections C303.1.4 and R303.1.1.1.

TABLE 2: LONG-TERM THERMAL RESISTANCE (R-VALUE)		
PRODUCT	THICKNESS (INCH)	R-VALUE (H·FT ² ·°F/BTU)
Defend-R	1.0	5.7
	2.0	10.8
	3.0	16.3
	4.0	22.1
Defend-R Coated Glass	3.0	16.3
	4.0	22.1

- 5.5 All products in the roof assembly shall have quality assurance in accordance with the F.A.C. [Rule 61G20-3](#).

6. INSTALLATION:

Defend-R Roof Insulation shall be installed in accordance with **Drexel Metals, Inc.** published installation instructions, coupled with attachment requirements set forth in the roof system [Florida Product Approval](#) or [Miami-Dade NOA](#) (for wind resistance) and fire classification listings.

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 product and production locations having met codified material standards.

9. QUALITY ASSURANCE ENTITY:

[UL \(QUA9625\)](#): (360) 817-5512; bsai.inspections@ul.com

- END OF PEER -