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ENGINEER

TEST

CONSULT

P.E. EVALUATION REPORT (PEER)

Polyglass USA, Inc.

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Deerfield Beach, FL 33442
(866) 794-9659

PEER-PLYG-005.B.R2

FL42093-R2 (HVHZ)

Date of Issuance: 08/07/2023

Revision 2: 07/24/2025

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 compliance with the **8th Edition (2023) Florida Building Code, High Velocity Hurricane Zone** [sections noted herein](#).

DESCRIPTION: Mapeseal GC Waterproofing Systems (HVHZ)

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

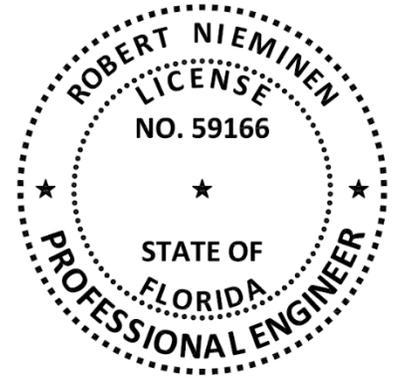
CONTINUED COMPLIANCE: This PEER is valid until such time as the named product(s) changes, the referenced Quality Assurance or production facility location(s) changes, or Code provisions that relate to the product(s) change. Acceptance of our PEERs by the named client constitutes agreement to notify NEMO 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 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 4, plus 2-pages of Appendix.

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 SYSTEMS EVALUATION:

1. SCOPE:

Product Category: Roofing
Sub-Category: Waterproofing
Product Approval Method: Method 1, Option D – Codified Material, Evaluation by Engineer
Compliance Statement: Mapeseal GC Systems, as produced by Polyglass USA, Inc., have demonstrated compliance with the following sections of the **8th Edition (2023) Florida Building Code, High Velocity Hurricane Zone (HVHZ)** through testing in accordance with the following Standards. Compliance is subject to the [Installation Requirements](#) and [Limitations of Use](#) set forth herein.

2. STANDARDS:

<u>Section</u>	<u>Property</u>	<u>Standard</u>
1504.3.1	Wind resistance	TAS 114, Appendix D
1507.15.2	Material standard	ASTM C836

3. REFERENCES:

<u>Entity</u>	<u>Examination</u>	<u>Reference</u>	<u>Date</u>
PRI (TST5878)	ASTM C836	708T0120	11/28/2022
PRI (TST5878)	Physicals, DSV	708T0122	02/02/2023
PRI (TST5878)	Physicals, DSV	708T0128	02/02/2023
PRI (TST5878)	Physicals, DSV	708T0160	05/21/2023
NEMO (TST6049)	TAS 114(D)	4a-PLYG-22-LSWUS-05.A	05/24/2023
Polyglass	Equivalency Declaration	SPE	01/15/2024
UL LLC (QUA9625)	Quality Control	Service Confirmation (TX)	07/19/2023
UL LLC (QUA9625)	Quality Control	Service Confirmation (CA)	09/22/2023

4. PRODUCT DESCRIPTION:

4.1 This PEER covers **Mapeseal GC Systems** applied to Approved substrates as outlined in the [Limitations of Use](#) herein. The following products make up the subject systems.

TABLE 1A: EVALUATED PRODUCTS			
TYPE	PRODUCT	MATERIAL STANDARD	PLANT(S)
Single-component, moisture cure waterproofing	Mapeseal GC	ASTM C836	Garland, TX
Fabric	Mapeseal LMR Fabric	Not codified (See 4.2)	Gardena, CA
Trowel-grade detailing accessory	Mapeproof Liquid Membrane	Not codified (See 4.2)	Garland, TX

4.2 For components which have no codified material standard, the 3rd party verified, physical properties data below is offered as a point-of-reference for use by the Authority Having Jurisdiction at their discretion.

TABLE 1B: TYPICAL NOMINAL PROPERTIES FOR NON-CODIFIED COMPONENTS				
COMPONENT	PROPERTY		TEST STANDARD	RESULT
Mapeseal LMR Fabric	Breaking strength (lbf/in.)	MD	ASTM D5034	16
		XMD		19
	Elongation (%)	MD		17
		XMD		22
	Tear strength (lbf)	MD	ASTM D4533	9
		XMD		7
Bursting strength, Mullen (psi)			ASTM D751	51
Mapeseal Liquid Membrane	Solids content (%)		ASTM D1644	100
	Tensile strength, 46-mil DFT (psi)		ASTM D412, Die C	349
	Elongation, 46-mil DFT (%)			1034
	Adhesion in peel, mortar substrate (pli)		ASTM D903 per D6083	16

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 exclusively for use in FBC High Velocity Hurricane Zone jurisdictions, as defined in FBC Chapter 2 (Broward and Miami-Dade Counties).
- 5.3 The evaluation herein pertains to above-deck roof components; deck-attachment details pertain to ‘as-tested’ conditions under [Testing Application Standard TAS 114, Appendix J](#). Roof decks shall be in accordance with **FBC HVHZ** requirements to the satisfaction of the Authority Having Jurisdiction.
- 5.4 This PEER does not include evaluation of fire classification. Refer to **FBC 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.
- 5.5 This PEER does not include evaluation of roof edge termination. Refer to [Roofing Application Standard RAS 111](#) for requirements and limitations regarding edge securement for low-slope roofs.
- 5.6 Refer to **FBC HVHZ 1521** for requirements and limitations regarding recover installations.
- 5.6.1 RESERVED
- 5.6.2 For bonded insulation or membrane over existing substrates in a re-roof (tear off) or recover installation, the existing deck or existing roof surface shall be examined for compatibility with the adhesive to be installed. If any surface conditions exist that bring system performance into question, field uplift testing in accordance with [Testing Application Standard TAS 124](#) shall be conducted on mock-ups of the proposed new roof assembly.
- 5.6.3 RESERVED

- 5.7 Refer to Appendix 1 for system attachment requirements for wind load resistance.
- 5.7.1 “MDP” = 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 [Testing Application Standard TAS 114](#) has already been applied). Refer to **FBC HVHZ 1620** and [Roofing Application Standard RAS 128](#) for determination of design wind loads.
- 5.7.2 RESERVED
- 5.7.3 For tables and/or assemblies marked with an asterisk*, the maximum design pressure (MDP) limitation shall be applicable to all roof pressure zones. Rational analysis is not permitted.
- 5.8 All components in the roof assembly shall have quality assurance audit in accordance with **F.A.C. Rule 61G20-3**. Refer to the HVHZ [Product Approval](#) or [Miami-Dade NOA](#) of the component manufacturer for components listed in Appendix 1 that are produced by a Product Manufacturer other than the report holder on [Page 1](#) of this PEER.
- 5.8.1 For proprietary overburden products listed in Appendix 1, which are produced by a Product Manufacturer other than the report holder on Page 1 of this PEER:
- Neither NEMO ETC, LLC nor Robert Nieminen, P.E. purport to have evaluated said overburden components for Code compliance. The scope of evaluation in Appendix 1 is limited to the as-tested interface between said overburden components and the waterproofing systems referenced therein.
 - Refer to the HVHZ [Product Approval](#) or [Miami-Dade NOA](#) of the component manufacturer to confirm Quality Assurance in accordance with **F.A.C. Rule 61G20-3**.
 - Proprietary exterior elevated flooring systems shall demonstrate compliance with [FBC 3115](#) to the satisfaction of the Authority Having Jurisdiction.
 - Independent exterior elevated flooring systems are not permitted in HVHZ jurisdictions (reference 3115.4.1).

6. INSTALLATION:

Mapeseal GC Systems shall be installed in accordance with **Polyglass USA, Inc.** current, published installation instructions, subject to the [Limitations of Use](#) noted herein. Flashing and detailing shall be in accordance with Polyglass published installation instructions using Polyglass specified materials to establish a watertight condition.

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 products and production locations having met codified material standards.

9. QUALITY ASSURANCE ENTITY:

[UL, LLC. – QUA9625](#); (847) 664-1668; bsai.inspections@ul.com

- THE 2-PAGES THAT FOLLOW FORM PART OF THIS PEER -

APPENDIX 1: ATTACHMENT REQUIREMENTS FOR WIND UPLIFT RESISTANCE

The following notes apply to the systems outlined herein:

1. The roof system evaluation herein pertains to above-deck roof components. Roof decks and structural members shall be in accordance with FBC HVHZ requirements to the satisfaction of the Authority Having Jurisdiction. Deck-attachment details pertain to 'as-tested' conditions under [Testing Application Standard](#) TAS 114, Appendix J.
2. For tables and/or assemblies marked with an asterisk*, the maximum design pressure for the selected assembly shall meet or exceed critical design pressure determined in accordance with FBC Chapter 16. No rational analysis is permitted for these systems.
3. For re-roof (tear off) installation, the existing deck shall be examined for compatibility with the adhesive to be installed. If any surface conditions exist that bring system performance into question, field uplift testing in accordance shall be conducted on mock-ups of the proposed new roof assembly. Field uplift testing shall be in accordance with [Testing Application Standard](#) TAS 124.
4. The seeding and back-rolling of aggregate shall be in accordance with Polyglass published requirements, with an even broadcast to refusal. Any loose aggregate should be removed prior to recoating.
5. "MDP" = Maximum Design Pressure is the result of testing for wind load resistance based on allowable wind loads. Refer to FBC (HVHZ) 1620 and [Roofing Application Standard](#) RAS 128 for determination of design wind loads.
6. Overburden of soil and plantings (for 'garden roofs'; root barriers, filter fabric, drainage components, EPS / XPS insulation, etc.) or concrete topping slabs, that are specified by the Designer of Record, acceptable to the Authority Having Jurisdiction and do not form part of the load path to the waterproofing system, are permissible over the assemblies noted herein with no adverse effect on the wind uplift performance of the system. The Authority Having Jurisdiction may require integrity flood testing (ASTM D5957) or Electric Field Vector Mapping tests of all waterproofing systems prior to placement of overburden materials. Testing, if required by the Authority Having Jurisdiction, should be conducted by a qualified testing agency or professional.
- 6.1 For proprietary overburden components referenced herein, produced by a Product Manufacturer other than the report holder on Page 1 of this PEER:
 - Neither NEMO ETC, LLC nor Robert Nieminen, P.E. purport to have evaluated said overburden components for Code compliance. The scope of evaluation is limited to the as-tested interface between said overburden components and the waterproofing systems.
 - Refer to the HVHZ [Product Approval](#) or [Miami-Dade NOA](#) of the component manufacturer to confirm Quality Assurance in accordance with F.A.C. [Rule 61G20-3](#).
 - Proprietary exterior elevated flooring systems shall demonstrate compliance with [FBC 3115](#) to the satisfaction of the Authority Having Jurisdiction.
 - Independent exterior elevated flooring systems are not permitted in HVHZ jurisdictions (reference 3115.4.1).

**TABLE 1: CONCRETE DECKS – NEW CONSTRUCTION OR REROOF (TEAR-OFF)
SYSTEM TYPE F: BONDED WATERPROOFING***

System No.	Deck (Note 1)	Waterproofing					Aggregate (Note 4)	Overburden (Note 6)	MDP (psf)*
		Primer	Base Coat	Reinforcement	Intermediate Coat	Top Coat			
C-1.	Structural Concrete	None	Mapeseal GC, min. 60-wet-mils	(Optional) Mapeseal LMR Fabric, set into wet base coat	None	(Optional) Mapeseal GC, min. 60-wet-mils	None	Optional FBC Approved extruded polystyrene and/or drainage course, followed by structural concrete topping slab	N/A
C-2.	Structural Concrete	None	Mapeseal GC, min. 60-wet-mils	(Optional) Mapeseal LMR Fabric, set into wet base coat	(Optional) Mapeseal GC, min. 60-wet-mils	(Optional) Mapeseal GC, min. 20-wet-mils	kiln dried 16/30 mesh silica sand, broadcast to refusal; remove loose-sand after full cure	Exterior grade ceramic plaza deck tiles (min. 12 x 12 x ½-inch) fully embedded into ANSI A118.4 polymer modified mortar, using a ¼-inch notched trowel per ANSI A108.5	-540.0
C-3.	Structural Concrete	None	Mapeseal GC, min. 60-wet-mils	(Optional) Mapeseal LMR Fabric, set into wet base coat	None	(Optional) Mapeseal GC, min. 60-wet-mils	None	As specified by the Designer of Record and acceptable to the Authority Having Jurisdiction	-930.0