



DEPARTMENT OF REGULATORY AND ECONOMIC RESOURCES (RER)
BOARD AND CODE ADMINISTRATION DIVISION

MIAMI-DADE COUNTY
PRODUCT CONTROL SECTION
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NOTICE OF ACCEPTANCE (NOA)

Flex Membrane International
2670 Leisch's Bridge Road, Suite 400
Leesport, PA. 19533

SCOPE:

This NOA is being issued under the applicable rules and regulations governing the use of construction materials. The documentation submitted has been reviewed and accepted by Miami-Dade County RER - Product Control Section to be used in Miami Dade County and other areas where allowed by the Authority Having Jurisdiction (AHJ).

This NOA shall not be valid after the expiration date stated below. The Miami-Dade County Product Control Section (In Miami Dade County) and/or the AHJ (in areas other than Miami Dade County) reserve the right to have this product or material tested for quality assurance purposes. If this product or material fails to perform in the accepted manner, the manufacturer will incur the expense of such testing and the AHJ may immediately revoke, modify, or suspend the use of such product or material within their jurisdiction. RER reserves the right to revoke this acceptance, if it is determined by Miami-Dade County Product Control Section that this product or material fails to meet the requirements of the applicable building code.

This product is approved as described herein, and has been designed to comply with the Florida Building Code including the High Velocity Hurricane Zone of the Florida Building Code.

DESCRIPTION: Flex TPO Single Ply Roofing System over Wood Decks.

LABELING: Each unit shall bear a permanent label with the manufacturer's name or logo, city, state and following statement: "Miami-Dade County Product Control Approved", unless otherwise noted herein.

RENEWAL of this NOA shall be considered after a renewal application has been filed and there has been no change in the applicable building code negatively affecting the performance of this product.

TERMINATION of this NOA will occur after the expiration date or if there has been a revision or change in the materials, use, and/or manufacture of the product or process. Misuse of this NOA as an endorsement of any product, for sales, advertising or any other purposes shall automatically terminate this NOA. Failure to comply with any section of this NOA shall be cause for termination and removal of NOA.

ADVERTISEMENT: The NOA number preceded by the words Miami-Dade County, Florida, and followed by the expiration date may be displayed in advertising literature. If any portion of the NOA is displayed, then it shall be done in its entirety.

INSPECTION: A copy of this entire NOA 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 NOA consists of pages 1 through 8.
The submitted documentation was reviewed by Alex Tigera.



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Expiration Date: 09/22/15
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ROOFING SYSTEM APPROVAL

Category:	Roofing
Sub-Category:	Single Ply Roofing
Material:	TPO
Deck Type:	Wood
Maximum Design Pressure	-97.5 psf

TRADE NAMES OF PRODUCTS MANUFACTURED OR LABELED BY APPLICANT:

TABLE 1

<u>Product</u>	<u>Dimensions</u>	<u>Test Specification</u>	<u>Product Description</u>
Flex TPO II	Various	ASTM D 6878 TAS 131	Thermoplastic olefin reinforced membrane.
Flex TPO II FB	Various	ASTM D 6878 TAS 131	Thermoplastic olefin reinforced, fleece-backed membrane.
Flex EG TPO Cut Edge Sealant	1 quart squeeze tube	Proprietary	Solvent based sealant for TPO cut edges.
Pliobond® 2825 Bonding Adhesive	5 gallons	Proprietary	Adhesive for fully adhered systems and membrane flashing.

APPROVED INSULATIONS:

TABLE 2

<u>Product Name</u>	<u>Product Description</u>	<u>Manufacturer (With Current NOA)</u>
Flex EG Polyiso	Polyisocyanurate foam insulation	GAF Materials Corp.
DensDeck® Roof Board	Gypsum board	Georgia Pacific
Securock® Gypsum-Fiber Roof Board	Gypsum board	USG

APPROVED FASTENERS:

TABLE 3

<u>Fastener Number</u>	<u>Product Name</u>	<u>Product Description</u>	<u>Dimensions</u>	<u>Manufacturer (With Current NOA)</u>
1.	Drill-Tec™ #14 Fastener	Insulation fastener for wood & concrete decks.		GAF Materials Corp
2.	Drill-Tec™ AccuTrac® Flat Plate	Square galvalume® coated steel plate.	Diameter: 3"	GAF Materials Corp.
3.	Drill-Tec™ XHD Plate	Round barbed galvalume® membrane plate.	2 3/8" round	GAF Materials Corp.
4.	Drill-Tec™ 2 in. Double Barbed Steel Plate	2 in. double barbed plate.	Plate Diameter: 2 in.	GAF Materials Corp.



EVIDENCE SUBMITTED:

<u>Test Agency/Identifier</u>	<u>Name</u>	<u>Report</u>	<u>Date</u>
Underwriters Laboratory, Inc.	03CA38009	UL 790	01/21/04
	R19254	ASTM D-226	09/13/01
Factory Mutual Research Corp.	3B9Q1.AM	FM 4470	01/08/98
	3020588	FM 4470	03/24/04
IRT-ARCON	3032856	FM 4470	11/24/08
	02-005	TAS 114	01/18/01
	02-008	TAS 114	01/24/02
Atlantic & Caribbean Roof Consulting, LLC	08-022	TAS 114	4/17/08
Exterior Research & Design, L.L.C.	01509.03.04-2	TAS 114-J	03/16/04
	18029.12.02-1	TAS 131	12/06/02
Trinity-ERD	G34140.04.11-2	ASTM D 6163	04/25/11
	G31360.03.10	ASTM D 6164	03/31/10
	G34140.04.11-5	ASTM D 4897	04/25/11
	G34140.04.11-4	ASTM D 4601	04/25/11



APPROVED ASSEMBLIES:

- Membrane Type:** Single Ply, TPO
- Deck Type 1:** Wood, Insulated
- Deck Description:** 1⁹/₃₂" or greater plywood or wood plank
- System Type D(1):** Membrane mechanically attached over preliminary fastened insulation to wood deck.

All General and System Limitations apply. Roof accessories not listed in Table 1 of this NOA are not approved and shall not be installed unless said accessories demonstrate compliance with prescriptive Florida Building Code requirements and are field fabricated utilizing the approved membranes listed in Table 1.

- Fire Barrier: (optional)** DensDeck® Roof Board minimum 1/4" thick preliminary fastened to deck with 4 fasteners per board.

<u>Insulation Layer</u>	<u>Insulation Fasteners (Table 3)</u>	<u>Fastener Density/ft²</u>
DensDeck, Securock® Gypsum-Fiber Roof Board Minimum 1/4" thick	N/A	N/A

- Membrane:** Flex TPO II or Flex TPO II FB 5.0' wide mechanically attached with Drill-Tec™ #14 Fasteners and Drill-Tec™ XHD Barbed Plates at 6" o.c. in the minimum 5" wide side lap and sealed with minimum 1 3/4" wide heat welds.

- Maximum Design Pressure:** -45 psf; (See General Limitation #7)



Membrane Type: Single Ply, TPO
Deck Type 1: Wood, Insulated
Deck Description: ¹⁹/₃₂" or greater plywood attached to structural wood supports spaced 24" o.c. using 8d common nails spaced 6" o.c. at all panel edges and intermediary supports.
System Type D(2): Membrane mechanically attached over preliminary fastened insulation to wood deck.

All General and System Limitations apply. Roof accessories not listed in Table 1 of this NOA are not approved and shall not be installed unless said accessories demonstrate compliance with prescriptive Florida Building Code requirements and are field fabricated utilizing the approved membranes listed in Table 1.

<u>Insulation Layer</u>	<u>Insulation Fasteners</u> <u>(Table 3)</u>	<u>Fastener</u> <u>Density/ft²</u>
EnergyGuard™ Polyiso Insulation, EnergyGuard™ RA Polyiso Insulation, EnergyGuard™ RN Polyiso Insulation		
Minimum 1.5" thick	N/A	N/A
Membrane:	Flex TPO II or Flex TPO II FB mechanically fastened using Drill-Tec™ #14 Fasteners and Drill-Tec™ 2 in. Double Barbed Steel Plates spaced 6" o.c. in rows spaced 55" o.c. The outside 1.75" of the 5" lap is heat welded and the fasteners are centered within the remaining 3.25" lap area.	
Maximum Design Pressure:	-52.5 psf; (See General Limitation #7)	



Membrane Type: Single Ply, TPO
Deck Type 1: Wood, Insulated
Deck Description: 1⁹/₃₂" or greater plywood or wood plank.
System Type E(1): A mechanically attached anchor sheet with membrane fully adhered.

All General and System Limitations apply. Roof accessories not listed in Table 1 of this NOA are not approved and shall not be installed unless said accessories demonstrate compliance with prescriptive Florida Building Code requirements and are field fabricated utilizing the approved membranes listed in Table 1.

Fire Barrier: DensDeck® Roof Board minimum 1/4" thick preliminary fastened to deck with 4 fasteners per board.
(optional)

Anchor sheet: GAFGLAS® #80 Ultima™ Base Sheet, Stratavent® Eliminator™ Nailable Venting Base Sheet, Ruberoid® 20 or Ruberoid® Mop Smooth 1.5 base sheet mechanically fastened to deck as described below.

Fastening Options: Anchor sheets attached to deck with approved minimum 1 1/4" annular ring shank nails and 1 5/8" tin caps at a fastener spacing of 9" o.c. at the 4" lap and in two staggered rows 9" o.c. in the field.

Membrane: Flex TPO II FB adhered to anchor sheet in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs./sq.

Maximum Design Pressure: -60 psf, (See General Limitation #7)



Membrane Type: Single Ply, TPO
Deck Type 1: Wood, Insulated
Deck Description: ¹⁹/₃₂" plywood nailed 6" o.c. at the field of the sheet with #8 ring shank nails and 4" o.c. at the perimeter of the sheet with #10 ring shank nails. Plywood installed over wood supports spaced 24" o.c.
System Type E(2): A mechanically attached anchor sheet with membrane fully adhered.

All General and System Limitations apply. Roof accessories not listed in Table 1 of this NOA are not approved and shall not be installed unless said accessories demonstrate compliance with prescriptive Florida Building Code requirements and are field fabricated utilizing the approved membranes listed in Table 1.

Fire Barrier: DensDeck® Roof Board minimum 1/4" thick preliminary fastened to deck with 4 fasteners per board.
(optional)

Membrane: Flex TPO II or Flex TPO II FB 5.0' wide membranes mechanically fastened through the wood deck into the wood deck supports at a minimum row spacing of 48" o.c. with Drill-Tec™ #14 Fastener and 3" Drill-Tec™ AccuTrac plates spaced 6" o.c. in the minimum 5" wide side lap of the sheets followed by applying a minimum of 1 1/2" wide heat weld.

Maximum Design Pressure: -97.5 psf, (See General Limitation #7)



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GENERAL LIMITATIONS:

1. Fire classification is not part of this acceptance; refer to a current Approved Roofing Materials Directory for fire ratings of this product.
2. Insulation may be installed in multiple layers. The first layer shall be attached in compliance with Product Control Approval guidelines. All other layers shall be adhered in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs./sq., or mechanically attached using the fastening pattern of the top layer
3. All standard panel sizes are acceptable for mechanical attachment. When applied in approved asphalt, panel size shall be 4' x 4' maximum.
4. An overlay and/or recovery board insulation panel is required on all applications over closed cell foam insulations when the base sheet is fully mopped. If no recovery board is used the base sheet shall be applied using spot mopping with approved asphalt, 12" diameter circles, 24" o.c.; or strip mopped 8" ribbons in three rows, one at each side lap and one down the center of the sheet allowing a continuous area of ventilation. Encircling of the strips is not acceptable. A 6" break shall be placed every 12' in each ribbon to allow cross ventilation. Asphalt application of either system shall be at a minimum rate of 12 lbs./sq.

Note: Spot attached systems shall be limited to a maximum design pressure of -45 psf.

5. Fastener spacing for insulation attachment is based on a Minimum Characteristic Force (F') value of 275 lbf., as tested in compliance with Testing Application Standard TAS 105. If the fastener value, as field-tested, are below 275 lbf. insulation attachment shall not be acceptable.
6. Fastener spacing for mechanical attachment of anchor/base sheet or membrane attachment is based on a minimum fastener resistance value in conjunction with the maximum design value listed within a specific system. Should the fastener resistance be less than that required, as determined by the Building Official, a revised fastener spacing, prepared, signed and sealed by a Florida Registered Engineer, Architect, or Registered Roof Consultant may be submitted. Said revised fastener spacing shall utilize the withdrawal resistance value taken from Testing Application Standards TAS 105 and calculations in compliance with Roofing Application Standard RAS 117.
7. Perimeter and corner areas shall comply with the enhanced uplift pressure requirements of these areas. Fastener densities shall be increased for both insulation and base sheet as calculated in compliance with Roofing Application Standard RAS 117 and/or RAS 137. Calculations prepared, signed and sealed by a Florida registered Professional Engineer, Registered Architect, or Registered Roof Consultant **(When this limitation is specifically referred within this NOA, General Limitation #9 will not be applicable.)**
8. All attachment and sizing of perimeter nailers, metal profile, and/or flashing termination designs shall conform to Roofing Application Standard RAS 111 and applicable wind load requirements.
9. The maximum designed pressure limitation listed shall be applicable to all roof pressure zones (i.e. field, perimeters, and corners). Neither rational analysis, nor extrapolation shall be permitted for enhanced fastening at enhanced pressure zones (i.e. perimeters, extended corners and corners). **(When this limitation is specifically referred within this NOA, General Limitation #7 will not be applicable.)**
10. All products listed herein shall have a quality assurance audit in accordance with the Florida Building Code and Rule 9N-3 of the Florida Administrative Code.

END OF THIS ACCEPTANCE



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