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, Corp
5103A Pottsville Pike
Reading, PA 19605

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 Recover 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.

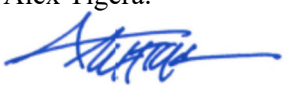
RENEWAL of this NOA shall be considered after a renewal application has been filed and there has been no change in the applicable building code negatively affecting the performance of this product.

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 revises NOA No. 20-0923.02 and consists of pages 1 through 20.
The submitted documentation was reviewed by Alex Tigera.



ROOFING SYSTEM APPROVAL

Category:	Roofing
Sub-Category:	Single Ply Roofing
Material:	TPO
Deck Type:	Recover
Maximum Design Pressure	See Specific Deck Type

TRADE NAMES OF PRODUCTS MANUFACTURED OR LABELED BY APPLICANT:

TABLE 1

Product	Dimensions	Test Specification	Product Description
Flex TPO II	Various	TAS 131 ASTM D 6878	Thermoplastic olefin reinforced single-ply membrane.
Flex TPO II FB	Various	TAS 131 ASTM D 6878	Thermoplastic olefin reinforced, fleece backed single-ply membrane.
Flex TPO II 45 Utility Flashing Membrane	Various	Proprietary	Reinforced flashing membrane manufactured from Flex TPO.
Flex EG TPO Cut Edge Sealant	1 quart squeeze tube	Proprietary	Clear solvent based sealant for TPO cut edges.

APPROVED INSULATIONS:

TABLE 2

Product Name	Product Description	Manufacturer (With Current NOA)
Flex EG Polyiso	Polyisocyanurate foam insulation	Flex Membrane International, Corp.
SECUROCK ® Gypsum-Fiber Roof Board	Gypsum board	USG Corp.
DensDeck® Roof Board	Gypsum board	Georgia Pacific
Structodek® High Density Fiberboard Roof Insulation	High-density fiberboard	Blue Ridge FiberBoard, Inc
Retro-Fit Board	Perlite insulation board	Johns Manville
ENRGY 3	Polyisocyanurate foam insulation	Johns Manville
FescoBoard	Perlite insulation board	Johns Manville
ACFoam-II	Polyisocyanurate foam insulation	Atlas Roofing Corporation
Multi-Max FA-3	Polyisocyanurate foam insulation	RMax Operating, LLC

APPROVED FASTENERS/ADHESIVES:

TABLE 3

Fastener Number	Product Name	Product Description	Dimensions	Manufacturer (With Current NOA)
1	#15 Roofgrip	Truss head, self-drilling, pinch point, high thread fastener for us in wood or steel decks.	#15 x 16" Max. Length, #3 Phillips Head	OMG Inc.
2.	#14 Roofgrip	Truss head, self-drilling, pinch point, high thread fastener for use in steel, wood or concrete decks.	#14 x 16" Max. Length, #3 Phillips Head.	OMG Inc.
3.	OMG 2-3/8" Barbed XHD Plate	Round galvanized steel stress plates for use with OMG™ fasteners	2-3/8" Round	OMG Inc.
4.	OMG 2-3/4" Super XHD Barbed Plate	Round galvanized steel stress plates for use with OMG® fasteners	2-3/4" Round	OMG Inc.
5.	OMG Super XHD	Truss head, self-drilling, drill point, high thread fastener for use in steel decks.	#21 x 16" Max. Length, #3 Phillips Head	OMG Inc.
6.	RhinoBond® TPO SXHD Plate	Gold primer coated plate for use with TPO membranes.	3" Round	OMG Inc.
7.	RhinoBond Insulation Plate (TPO)	Gold primer coated plate for use with TPO membranes.	3" Round	OMG Inc.
8.	OMG Eyehook Accuseam Plate	Round Galvalume® steel plate for use with OMG™ fasteners.	2-3/8" Round	OMG Inc.
9.	RhinoBond TreadSafe Plate (TPO)	Round, coated Galvalume® plate (Gold primer coating) used for TPO membranes	3" Round	OMG Inc.
10.	Pliobond 2835 Bonding Adhesive	Adhesive for fully adhered systems and membrane flashing.	5 gallon pail	Ashland, Inc.
11.	LA505 Bonding Adhesive for TPO Membranes	A contact type bonding adhesive for TPO single ply roofing membranes and flashings	5 gallon pail	ITW Polymers Sealants North America
12.	Flex EG WB 181 TPO Bonding Adhesive	A water based adhesive for TPO based membranes.	5 gallon pail	Flex Membrane International

EVIDENCE SUBMITTED:

Test Agency/Identifier	Name	Report	Date
Factory Mutual Research Corporation	4470	3034749	10.16.2008
	4470	3030813	11.05.2007
	4470	3034394	02.27.2009
	4470	3033135	11.24.2008
	4470	3024051	03.28.2006
	4470	3036141	08.10.2009
	4470	3031350	09.27.2007
	4470	3032856	11.24.2008
	4470	3038318	12.10.2010
	4470	3036614	06.09.2009
	4470	3040234	02.23.2011
PRI Construction Materials Technologies	Physical Properties E 2178	GAF-270-02-02 GAF-276-02-01REV	11.15.2010 01.03.2011
Underwriters Laboratories Inc.	Physical Properties	09CA55838	11.04.2010
Exterior Research & Design, LLC	TAS 131	18029.12.02-1	12.06.2002

DECK STRESS ANALYSIS CALCULATIONS/REPORTS

Engineer/Agency	Identifier	Assemblies	Date
FM Approval Deck Limitations	N/A	C(1), C(2), C(3), D(1), D(2), D(3), D(4)	01/01/13

APPROVED ASSEMBLIES:

Membrane Type: Single Ply, TPO

Deck Type 7I: Recover Insulated

Deck Description: Structural Concrete deck (minimum 2500 psi)

System Type A: Insulation adhered to existing asphaltic roof. Membrane is subsequently fully adhered to insulation.

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.

One or more layers of any of the following insulations.

Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft^2
DensDeck® Prime® Roof Board, SECUROCK® Gypsum-Fiber Roof Board Minimum 0.25″ thick	**N/A**	**N/A**

Note: All Insulation board are adhered to the existing asphaltic roof cover with OlyBond 500® Adhesive or OlyBond® 500 Green applied in ¾ - 1 inch wide beads spaced 12 in o.c. and walked in. Please refer to Roofing Application Standard RAS 117 for insulation attachment.

Membrane: Flex TPO II fully adhered in Pliobond® 2835 Bonding Adhesive applied at a total rate of 1.67 gal/sq per manufacturer's installation instructions. Half of the adhesive is applied to the substrate and the other half is applied to the back surface of the roof cover. The top surface of the membrane is broomed or rolled per manufacturer's installation instructions to ensure complete bonding. The minimum 3" wide membrane side laps are sealed with minimum 1.5" wide heat welds for automatic machine welding. Weld width shall be a minimum 2" for hand welding.

OR

(Only for use with SECUROCK® Gypsum-Fiber Roof Board Insulation Layer) Flex TPO II fully adhered in LA505 Bonding Adhesive for TPO Membranes applied at a total rate of 0.91 gal/sq per manufacturer's installation instructions. Half of the adhesive is applied to the substrate and the other half is applied to the back surface of the roof cover. The top surface of the membrane is broomed or rolled per manufacturer's installation instructions to ensure complete bonding. The minimum 3" wide membrane side laps are sealed with minimum 1.5" wide heat welds for automatic machine welding. Weld width shall be minimum 2" for hand welding.

OR

Flex TPO II fully adhered in Flex EG WB 181 TPO Bonding Adhesive applied at a total rate of 0.83 – 1.0 gal./sq per manufacturer's installation instructions. One quarter of the adhesive is applied to the back of the roof cover and three quarters of the adhesive is applied to the substrate. The top surface of the membrane is broomed or rolled per manufacturer's installation instructions to ensure complete bonding. The minimum 3" wide membrane side laps are sealed with minimum 1.5" wide heat welds for automatic machine welding. Weld width shall be minimum 2" for hand welding.

Maximum Design Pressure: -120 psf. (See General limitation #9)

Membrane Type: Single Ply, TPO

Deck Type 7I: Recover Insulated

Deck Description: Minimum 22 gauge, Grade 33 steel deck secured to minimum 0.25″ thick steel structural supports spaced maximum, 72″ o.c. with ICH Traxx/5, ICH Traxx/4, Teks 4 or Teks 5 fasteners spaced 6″ o.c. at each bearing. Deck side laps are secured 24″ o.c. with ICH Traxx/1 or Stitch Teks 1 fasteners.
This Tested Assembly has been analyzed for allowable deck stress. See Evidence Submitted Table.

System Type C(1): Insulation is mechanically attached to roof deck. Membrane is subsequently fully adhered to insulation.

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.

One or more layers of any of the following insulations.

Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft^2
SECUROCK® Gypsum-Fiber Roof Board Minimum 0.25″ thick	**1, 3, 8**	**1:1.6 ft^2**

Note: Insulation shall be mechanically attached with fasteners and density described. Insulation panels listed are minimum sizes and dimensions; if larger panels are used the number of fasteners per board shall be increased maintaining the same fastener density (See Roofing Application Standard RAS 117 for fastening details).

Membrane: Flex TPO II fully adhered in Pliobond® 2835 Bonding Adhesive applied at a total rate of 1.67 gal/sq per manufacturer's installation instructions. Half of the adhesive is applied to the substrate and the other half is applied to the back surface of the roof cover. The top surface of the membrane is broomed or rolled per manufacturer's installation instructions to ensure complete bonding. The minimum 3" wide membrane side laps are sealed with minimum 1.5" wide heat welds for automatic machine welding. Weld width shall be a minimum 2" for hand welding.
OR
Flex TPO II fully adhered in Flex EG WB 181 TPO Bonding Adhesive applied at a total rate of 0.83 - 1.0 gal./sq per manufacturer's installation instructions. One quarter of the adhesive is applied to the back of the roof cover and three quarters of the adhesive is applied to the substrate. The top surface of the membrane is broomed or rolled per manufacturer's installation instructions to ensure complete bonding. The minimum 3" wide membrane side laps are sealed with minimum 1.5" wide heat welds for automatic machine welding. Weld width shall be minimum 2" for hand welding.

Maximum Design Pressure: -52.5 psf. (See General limitation #7)

Membrane Type: Single Ply, TPO

Deck Type 7I: Recover Insulated

Deck Description: Minimum 22 gauge steel deck secured to minimum 0.25″ thick steel structural supports spaced maximum, 72″ o.c. with ICH Traxx/5, ICH Traxx/4, Teks 4 or Teks 5 fasteners spaced 6″ o.c. at each bearing. Deck side laps are secured 24″ o.c. with ICH Traxx/1 or Stitch Teks 1 fasteners. **This Tested Assembly has been analyzed for allowable deck stress. See Evidence Submitted Table.**

System Type C(2): Insulation is mechanically attached to roof deck. Membrane is subsequently fully adhered to insulation.

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.

One or more layers of any of the following insulations.

Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft^2
Structodek® High Density Fiberboard Roof Insulation Minimum 0.5″ thick	**1, 3, 8**	**1:1 ft^2**

Note: Insulation shall be mechanically attached with fasteners and density described. Insulation panels listed are minimum sizes and dimensions; if larger panels are used the number of fasteners per board shall be increased maintaining the same fastener density (See Roofing Application Standard RAS 117 for fastening details).

Membrane: Flex TPO II fully adhered in Flex EG WB 181 TPO Bonding Adhesive applied at a total rate of 0.83 – 1.0 gal./sq per manufacturer's installation instructions. One quarter of the adhesive is applied to the back of the roof cover and three quarters of the adhesive is applied to the substrate. The top surface of the membrane is broomed or rolled per manufacturer's installation instructions to ensure complete bonding. The minimum 3" wide membrane side laps are sealed with minimum 1.5" wide heat welds for automatic machine welding. Weld width shall be minimum 2" for hand welding.
OR
Flex TPO II fully adhered in Pliobond® 2835 Bonding Adhesive applied at a total rate of 1.67 gal/sq per manufacturer's installation instructions. Half of the adhesive is applied to the substrate and the other half is applied to the back surface of the roof cover. The top surface of the membrane is broomed or rolled per manufacturer's installation instructions to ensure complete bonding. The minimum 3" wide membrane side laps are sealed with minimum 1.5" wide heat welds for automatic machine welding. Weld width shall be a minimum 2" for hand welding.
OR

Membrane: (Continued)	Flex TPO II fully adhered in LA505 Bonding Adhesive for TPO Membranes applied at a total rate of 0.91 gal/sq per manufacturer's installation instructions. Half of the adhesive is applied to the substrate and the other half is applied to the back surface of the roof cover. The top surface of the membrane is broomed or rolled per manufacturer's installation instructions to ensure complete bonding. The minimum 3" wide membrane side laps are sealed with minimum 1.5" wide heat welds for automatic machine welding. Weld width shall be minimum 2" for hand welding.
Maximum Design Pressure:	-67.5 psf. (See General limitation #7)

Membrane Type: Single Ply, TPO

Deck Type 7I: Recover Insulated

Deck Description: Minimum 22 gauge steel deck, grade 80, is secured to minimum 0.25″ thick steel structural supports spaced maximum 72″ o.c. with ICH Traxx/5 fasteners spaced 6″ o.c. at each bottom rib. Deck side laps are secured 24″ o.c. with ICH Traxx/1 fasteners.
This Tested Assembly has been analyzed for allowable deck stress. See Evidence Submitted Table.

System Type C(3): All insulation is loose laid with preliminary attachment to roof deck. Membrane is subsequently mechanically fastened through insulation to the roof 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.

One or more layers of any of the following insulations.

Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft^2
DensDeck® Roof Board, SECUROCK® Gypsum-Fiber Roof Board Minimum 0.25″ thick	**N/A**	**N/A**
Flex EG Polyiso, ACFoam-II Minimum 1″ thick	**N/A**	**N/A**
ENRGY 3, ENRGY 3 (Tapered), Structodek® High Density Fiberboard Roof Insulation Minimum 0.5″ thick	**N/A**	**N/A**

Insulation Note: All insulation layers shall be simultaneously, preliminarily secured with the RhinoBond® membrane fasteners installed as described below for membrane attachment. Please refer to Roofing Application Standard RAS 117 for insulation attachment requirements.

RhinoBond Plate Note: When using RhinoBond Insulation Plates (TPO) or RhinoBond® TPO SXHD Plates over steel decks, ensure that the combined thickness of the existing roof assembly and new insulation is minimum 1". This thickness shall be measured from the top rib of the steel deck.

RhinoBond® Tread Safe Plate Note: The total insulation thickness shall be 2.0" minimum when using RhinoBond TreadSafe Plates (TPO). A 5/8" diameter pilot hole is required when using RhinoBond TreadSafe Plates with wood fiber or gypsum top layer insulation.

Membrane: Flex TPO II is secured with RhinoBond® TPO SXHD Plates, RhinoBond Insulation Plates (TPO) or RhinoBond TreadSafe Plates (TPO) and OMG Super XHD fasteners. Stress plates and fasteners are placed on a 24″ x 24″ grid and fasteners are driven through the insulation and into the roof deck. The roof cover is bonded to stress plates using the RhinoBond® Portable Bonding Tool per manufacturer's installation instructions. Weighted cooling magnets are placed over the bonded membrane/plates for a minimum of 45 seconds. Side laps are minimum 3″ wide and sealed with minimum 1.5″ wide heat welds for automatic machine welding. Weld width shall be minimum 2" for hand welding.

Maximum Design Pressure: -60 psf. (See General limitation #7)

Membrane Type: Single Ply, TPO

Deck Type 7I: Recover Insulated

Deck Description: Minimum 22 gauge, Grade 33 steel deck.
OR
Structural Concrete (minimum 2500 psi)

System Type C(4): All layers of insulation are mechanically attached to roof deck. Membrane is subsequently adhered to stress plates used to fasten insulation layer.

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.

One or more layers of any of the following insulations.

Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft^2
DensDeck® Roof Board, SECUROCK® Gypsum-Fiber Roof Board Minimum 0.25″ thick	**N/A**	**N/A**
Flex EG Polyiso, ACFoam-II Minimum 1″ thick	**N/A**	**N/A**
ENRGY 3, ENRGY 3 (Tapered), Structodek® High Density Fiberboard Roof Insulation Minimum 0.5″ thick	**N/A**	**N/A**

Insulation Note: All insulation layers shall be simultaneously, preliminarily secured with the RhinoBond® membrane fasteners installed as described below for membrane attachment. Please refer to Roofing Application Standard RAS 117 for insulation attachment requirements.

RhinoBond Plate Note: When using RhinoBond Insulation Plates (TPO) or RhinoBond® TPO SXHD Plates over steel decks, ensure that the combined thickness of the existing roof assembly and new insulation is minimum 1". This thickness shall be measured from the top rib of the steel deck.

RhinoBond® Tread Safe Plate Note: The total insulation thickness shall be 2.0" minimum when using RhinoBond TreadSafe Plates (TPO). A 5/8" diameter pilot hole is required when using RhinoBond TreadSafe Plates with wood fiber or gypsum top layer insulation.

Membrane: Flex TPO II is secured with RhinoBond Insulation Plates (TPO) or RhinoBond TreadSafe Plates (TPO) with #15 Roofgrip fasteners (steel deck only) or with #14 Roofgrip fasteners (structural concrete deck only). Fasteners are applied at a rate of 6 fasteners per 48 x 96 in. board. Fasteners are located in each of the four corners of the board and at mid-span of the 96 in. length. All fasteners are 12 in. from the board edges. Fasteners are driven through the insulation and into the roof deck. The roof cover is bonded to stress plates using RhinoBond® Portable Bonding Tool per manufacturer's installation instructions. Weighted cooling magnets are placed over the bonded membrane/plates for a minimum of 45 seconds. Side laps are minimum 3″ wide and sealed with minimum 1.5″ wide heat welds for automatic machine welding. Weld width shall be minimum 2" for hand welding.

Maximum Design Pressure: -45 psf. (See General limitation #9)

Membrane Type: Single Ply, TPO

Deck Type 7I: Recover Insulated

Deck Description: Minimum 22 gauge, Grade 80 steel deck secured to minimum 0.25″ thick structural supports spaced at maximum 60″ o.c. using Teks 4, Teks 5, ICH TRAXX/4 or ICH TRAXX/5 fasteners spaced maximum 6” o.c. along each support. The deck side laps are fastened with Stitch Teks 1 or ICH TRAXX/1 fasteners spaced at maximum 24″ o.c. along each side lap.
This Tested Assembly has been analyzed for allowable deck stress. See Evidence Submitted Table.

System Type D(1): All insulation is loose laid with preliminarily attachment to roof deck. Membrane is subsequently mechanically fastened through insulation to the roof 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.

One or more layers of any of the following insulations.

Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft^2
DensDeck® Roof Board, SECUROCK® Gypsum-Fiber Roof Board Minimum 0.25″ thick	**N/A**	**N/A**
Structodek® High Density Fiberboard Roof Insulation, Retro-Fit Board Minimum 0.5″ thick	**N/A**	**N/A**
Flex EG Polyiso, ACFoam-II, ENRGY 3 Minimum 1″ thick	**N/A**	**N/A**

Note: All insulation shall have preliminary attachment, prior to the installation of the roofing membrane at a minimum application rate of two fasteners per board for insulation boards having no dimension greater than 4 ft., and four fasteners for any insulation board having no dimension greater than 8 ft. Please refer to Roofing Application Standard RAS 117 for insulation attachment requirements.

Membrane: Flex TPO II or Flex TPO II FB attached through the preliminary attached insulation as follows.

OMG 2-3/8” Barbed XHD Plates and #15 Roofgrip fasteners spaced 6″ o.c. within laps spaced 114″ o.c. Side laps are minimum 6″ wide and sealed with a minimum 1.625″ wide heat welds for automatic machine welding. Weld width shall be minimum 2” wide for hand welding.

Maximum Design Pressure: -52.5 psf. (See General limitation #7)

Membrane Type: Single Ply, TPO

Deck Type 7I: Recover Insulated

Deck Description: Minimum 20 gauge, Grade 80, 1.5″ deep, type B wide rib steel roof deck is secured to minimum 0.25″ thick structural supports spaced at maximum 72″ o.c. with Teks 4, Teks 5, ICH Traxx/5 fasteners spaced at maximum 6″ o.c. at the support. The deck side laps are secured with Stitch Teks 1 or ICH Traxx/1 fasteners spaced at a max 24″ o.c.
This Tested Assembly has been analyzed for allowable deck stress. See Evidence Submitted Table.

System Type D(2): All insulation is loose laid with preliminarily attachment to roof deck. Membrane is subsequently mechanically fastened through insulation to the roof 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.

One or more layers of any of the following insulations.

Base Insulation Layer	**Insulation Fasteners (Table 3)**	**Fastener Density/ft^2**
Flex EG Polyiso, ACFoam-II, ENRGY 3, Multi-Max FA-3 Minimum 1.5″ thick	**N/A**	**N/A**
Flex EG Polyiso, ACFoam-II Minimum 1.0″ thick	**N/A**	**N/A**
DensDeck® Roof Board Minimum 0.25″ thick	**N/A**	**N/A**
Retro-Fit Board Minimum 0.5″ thick	**N/A**	**N/A**
FescoBoard Minimum 0.75″ thick	**N/A**	**N/A**

Top Insulation Layer (Optional)	**Insulation Fasteners (Table 3)**	**Fastener Density/ft^2**
DensDeck® Roof Board Minimum 0.25″ thick	**N/A**	**N/A**
Retro-Fit Board Minimum 0.5″ thick	**N/A**	**N/A**
FescoBoard Minimum 0.75″ thick	**N/A**	**N/A**

Note: All insulation shall have preliminary attachment, prior to the installation of the roofing membrane at a minimum application rate of two fasteners per board for insulation boards having no dimension greater than 4 ft., and four fasteners for any insulation board having no dimension greater than 8 ft. Please refer to Roofing Application Standard RAS 117 for insulation attachment requirements.

Membrane:	Flex TPO II or Flex TPO II FB attached through the insulation to the deck as described below:
Fastening:	Membrane is secured with OMG 2-3/4" Super XHD Barbed Plates and OMG Super XHD fasteners spaced maximum 6″ o.c. with laps spaced at maximum 114″ o.c. Side laps are minimum 6″ wide and sealed with a minimum 1.875″ wide heat weld for automatic machine welding. Weld width shall be minimum 2" wide for hand welding.
Maximum Design Pressure:	-60 psf. (See General limitation #7)

Membrane Type: Single Ply, TPO

Deck Type 7I: Recover Insulated

Deck Description: Minimum 22 gauge, Grade 33, 1.5″ deep, type B wide rib steel roof deck is secured to minimum 0.25″ thick structural supports spaced at maximum 72″ o.c. with Teks 4, Teks 5, ICH Traxx/5 fasteners spaced at maximum 6″ o.c. at the support. The deck side laps are secured with Stitch Teks 1 or ICH Traxx/1 fasteners spaced at a max 24″ o.c.
This Tested Assembly has been analyzed for allowable deck stress. See Evidence Submitted Table.

System Type D(3): All insulation is loose laid with preliminarily attachment to roof deck. Membrane is subsequently mechanically fastened through insulation to the roof 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.

One or more layers of any of the following insulations.

Base Insulation Layer	**Insulation Fasteners (Table 3)**	**Fastener Density/ft^2**
Flex EG Polyiso, ACFoam-II, ENRGY 3, Multi-Max FA-3 **Minimum 1.5″ thick**	**N/A**	**N/A**
Flex EG Polyiso, ACFoam-II **Minimum 1.0″ thick**	**N/A**	**N/A**
DensDeck® Roof Board **Minimum 0.25″ thick**	**N/A**	**N/A**
Retro-Fit Board **Minimum 0.5″ thick**	**N/A**	**N/A**
FescoBoard **Minimum 0.75″ thick**	**N/A**	**N/A**

Top Insulation Layer (Optional)	**Insulation Fasteners (Table 3)**	**Fastener Density/ft^2**
DensDeck® Roof Board **Minimum 0.25″ thick**	**N/A**	**N/A**
Retro-Fit Board **Minimum 0.5″ thick**	**N/A**	**N/A**
FescoBoard **Minimum 0.75″ thick**	**N/A**	**N/A**

Note: All insulation shall have preliminary attachment, prior to the installation of the roofing membrane at a minimum application rate of two fasteners per board for insulation boards having no dimension greater than 4 ft., and four fasteners for any insulation board having no dimension greater than 8 ft. Please refer to Roofing Application Standard RAS 117 for insulation attachment requirements.

Membrane: Flex TPO II or Flex TPO II FB attached through the insulation to the deck as described below:

Fastening #1 Membrane is secured with OMG 2-3/8" Barbed XHD Plates and #15 Roofgrip fasteners spaced maximum 6″ o.c. with laps spaced at maximum 54″ o.c. Side laps are minimum 6″ wide and sealed with a minimum 1.5″ wide heat weld for automatic machine welding. Weld width shall be minimum 2" wide for hand welding.
Maximum Design Pressure: -60 psf; (See General limitation #7)

Fastening #2 Membrane is secured with OMG 2-3/8" Barbed XHD Plates and #15 Roofgrip fasteners or OMG 2-3/4" Super XHD Barbed Plates and OMG Super XHD fasteners spaced maximum 12″ o.c. with laps spaced at maximum 54″ o.c. Side laps are minimum 6″ wide and sealed with a minimum 1.5″ wide heat weld for automatic machine welding. Weld width shall be minimum 2" wide for hand welding.
Maximum Design Pressure: -45 psf; (See General limitation #7)

Membrane Type: Single Ply, TPO

Deck Type 7I: Recover Insulated

Deck Description: Minimum 22 gauge, Grade 80, 1.5″ deep, type B wide rib steel roof deck is secured to minimum 0.25″ thick structural supports spaced at maximum 72″ o.c. with Teks 4, Teks 5, ICH Traxx/5 fasteners spaced at maximum 6″ o.c. at the support. The deck side laps are secured with Stitch Teks 1 or ICH Traxx/1 fasteners spaced at a max 24″ o.c.
This Tested Assembly has been analyzed for allowable deck stress. See Evidence Submitted Table.

System Type D(4): All insulation is loose laid with preliminarily attachment to roof deck. Membrane is subsequently mechanically fastened through insulation to the roof 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.

One or more layers of any of the following insulations.

Base Insulation Layer	**Insulation Fasteners (Table 3)**	**Fastener Density/ft^2**
Flex EG Polyiso, ACFoam-II, ENRGY 3, Multi-Max FA-3 **Minimum 1.5″ thick**	**N/A**	**N/A**
Flex EG Polyiso, ACFoam-II **Minimum 1.0″ thick**	**N/A**	**N/A**
DensDeck® Roof Board **Minimum 0.25″ thick**	**N/A**	**N/A**
Retro-Fit Board **Minimum 0.5″ thick**	**N/A**	**N/A**
FescoBoard **Minimum 0.75″ thick**	**N/A**	**N/A**

Top Insulation Layer (Optional)	**Insulation Fasteners (Table 3)**	**Fastener Density/ft^2**
DensDeck® Roof Board **Minimum 0.25″ thick**	**N/A**	**N/A**
Retro-Fit Board **Minimum 0.5″ thick**	**N/A**	**N/A**
FescoBoard **Minimum 0.75″ thick**	**N/A**	**N/A**

Note: All insulation shall have preliminary attachment, prior to the installation of the roofing membrane at a minimum application rate of two fasteners per board for insulation boards having no dimension greater than 4 ft., and four fasteners for any insulation board having no dimension greater than 8 ft. Please refer to Roofing Application Standard RAS 117 for insulation attachment requirements.

Membrane:	Flex TPO II or Flex TPO II FB attached through the insulation to the deck as described below:
Fastening:	Membrane is secured with OMG 2-3/8" Barbed XHD Plates and #15 Roofgrip fasteners spaced maximum 6″ o.c. with laps spaced at maximum 90″ o.c. Side laps are minimum 6″ wide and sealed with a minimum 1.5″ wide heat weld for automatic machine welding. Weld width shall be minimum 2" wide for hand welding.
Maximum Design Pressure:	-45 psf. (See General limitation #7)

Membrane Type:	Single Ply, TPO
Deck Type 7I:	Recover Non-Insulated
Deck Description:	Structural Concrete (minimum 2500 psi) or Min. 22 ga., Grade 33 Steel Deck
System Type F:	Membrane fully adhered to existing granular roof system.

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.

Membrane:	Flex TPO II FB is fully adhered to the existing granule surfaced roof covering using hot asphalt applied at 25 lbs./sq. The top surface of the membrane is broomed per manufacturer's installation instructions to ensure complete bonding of the adhesive. The minimum 3" wide side laps are sealed with minimum 1.5" wide heat welds for automatic machine welding. Weld width shall be minimum 2" wide for hand welding.
Maximum Design Pressure:	-405 psf; (See General Limitation #9)

RECOVER SYSTEM LIMITATIONS:

1. All System Limitations and General Limitations shall apply. See specific deck type Notice of Acceptance for deck type System Limitations.

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 61G20-3 of the Florida Administrative Code.

END OF THIS ACCEPTANCE