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 Single Ply PVC Roof Systems 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. 19-0114.06 and consists of pages 1 through 20.
The submitted documentation was reviewed by Alex Tigera.

ROOFING SYSTEM APPROVAL

Category:	Roofing
Sub-Category:	Single Ply
Material:	PVC
Deck Type:	Recover
Maximum Design Pressure:	See specific deck assemblies.

TRADE NAMES OF PRODUCTS MANUFACTURED OR LABELED BY APPLICANT:

TABLE 1

Product	Dimensions	Test Specification	Product Description
Flex Tripolymer MF/R	45, 50, 60, 120 mils	ASTM D4434	Polyester reinforced PVC membrane for mechanical attachment or adhered application.
Flex Tripolymer FB	45, 60, 80, 120 mils	ASTM D4434	Polyester felt-backed PVC membrane for application in hot asphalt or adhesive.
Flex MFR PVC	50, 60, 80 mils	ASTM D4434	PVC membrane for mechanical attachment.
Flex MFR PVC FB	50, 60, 80 mils	ASTM D4434	Polyester felt-backed PVC membrane for adhered applications.
Flex Substrate Adhesive	5 gallon	Proprietary	Adhesive used to bond Flex Tripolymer FB membrane to substrate.
Flex Rubber Emulsion Adhesive	Various	Proprietary	Adhesive used to bond Flex Tripolymer FB membrane to substrate.
Flex FB Low Rise Adhesive	Various	Proprietary	Adhesive used to bond Flex Tripolymer FB to substrate.
Flex Substrate 2375	Various	Proprietary	Synthetic rubber adhesive

APPROVED INSULATIONS:

TABLE 2

Product Name	Product Description	Manufacturer (With Current NOA)
EnergyGuard Polyiso Insulation	Polyisocyanurate foam insulation	GAF
Flex EG Polyiso	Polyisocyanurate foam insulation	Flex Membrane International, Corp.
Dens Deck	Silicon treated gypsum	Georgia-Pacific Gypsum LLC
DensDeck Prime	Silicon treated gypsum	Georgia-Pacific Gypsum LLC
ENRGY 3	Isocyanurate Insulation	Johns Manville Corp.
ENRGY 25 PSI	Isocyanurate Insulation	Johns Manville Corp.
Fesco Foam	Isocyanurate Insulation with perlite facer	Johns Manville Corp.
Multi-Max FA-3	Polyisocyanurate foam insulation	RMax Operating LLC.
ACFoam-II	Polyisocyanurate foam insulation	Atlas Roofing Corp.
ACFoam-III	Polyisocyanurate foam insulation	Atlas Roofing Corp.
Flex ISO II	Polyisocyanurate foam insulation	Flex Membrane International, Corp.
Flex ISO III	Polyisocyanurate foam insulation	Flex Membrane International, Corp.
SECUROCK Gypsum-Fiber Roof Board	Gypsum coverboard	United States Gypsum Corporation

APPROVED FASTENERS/ADHESIVES:

TABLE 3

Fastener Number	Product Name	Product Description	Dimensions	Manufacturer (With Current NOA)
1.	Dekfast DF-#12-PH3	Insulation and membrane fastener	Various	SFS Group USA, Inc.
2.	Dekfast DF-#14-PH3	Insulation and membrane fastener	Various	SFS Group USA, Inc.
3.	Dekfast PLT-H-2-7/8	Insulation and membrane fastener	Various	SFS Group USA, Inc.
4.	#14 Roofgrip	Insulation and membrane fastener	Various	OMG, Inc.
5.	Recessed Metal Plate	Galvalume stress plate	3" square	OMG, Inc.
6.	3 in. Round Metal Plate	Galvalume stress plate	3” round	OMG, Inc.
7.	OMG 3” Galvalume Steel Plate	Galvalume stress plate	3" round	OMG, Inc.
8.	OMG Plastic Plate	Plastic plates for fasteners.	3" round	OMG, Inc.
9.	Dekfast DF-#15-PH3	Insulation fastener for use in concrete, wood and steel decks	Various	SFS Group USA, Inc.
10.	Dekfast PLT-R-3	Galvalume AZ55 stress plate	3" round	SFS Group USA, Inc.
11.	RhinoBond Insulation Plate	Metal plate with an adhesive top	3” round	OMG, Inc.
12.	OMG Super XHD	Truss head, self-drilling, pinch point, high thread fastener	#21 x 16” max. length	OMG, Inc.
13.	*Isoweld* F1-P-6.8-PVC	Round, coated galvalume plate (Silver and Gold) used for PVC membranes	3” round	SFS Group USA, Inc.
14.	Dekfast DF-#12-HW1/4	Insulation and membrane fastener	Various	SFS Group USA, Inc.
15.	LA432M Bonding Adhesive	Low VOC membrane adhesive	Contact Manufacturer	ITW TACC, a Division of Illinois Tool Works, Inc.
16.	FA636 Water Borne Adhesive	Water based membrane adhesive	Contact Manufacturer	ITW TACC, a Division of Illinois Tool Works, Inc.
17.	Millennium One Step Foamable Adhesive	Polyurethane one-step, all-purpose, foamable adhesive	Contact Manufacturer	H.B. Fuller Company
18.	Millennium PG-1 Pump Grade Adhesive	Polyurethane two component low rise adhesive	Contact Manufacturer	H.B. Fuller Company
19.	OMG OlyBond 500	Spray polyurethane foam insulation adhesive	Contact Manufacturer	OMG, Inc.
20.	Polyset CR-20	Polyurethane two component low rise insulation adhesive	Contact Manufacturer	ICP Adhesives and Sealants, Inc.
21.	Polyset Board-Max	Polyurethane two component low rise insulation adhesive	Contact Manufacturer	ICP Adhesives and Sealants, Inc.

EVIDENCE SUBMITTED:

Test Agency/Identifier	Name	Report	Date
FM Approvals	2W5A3.AM	FM 4470	12/22/93
	3033126	FM 4470	07/11/08
	3044073	FM 4470	06/20/12
	RR203780	FM 4470	01/19/16
UL LLC	R9228	UL 790	07/10/18
Trinity|ERD	F42130.06.13	ASTM D4434	06/05/13
	F42130.06.13-1	ASTM D4434	06/05/13
	F42130.09.13	ASTM D4434	09/13/13
	SFS-SC10010.02.16	TAS 114	02/29/16
NEMO|etc.	FMI-SC15845.01.18	FM 4474/UL1897/TAS 114	01/18/18

DECK STRESS ANALYSIS CALCULATIONS/REPORTS

Engineer/Agency	Identifier	Assemblies:	Date
Robert Nieminen, P.E.	Calculations Letter	C(2), C(3) ,C(4), C(7), C(8)	07/06/16
Robert Nieminen, P.E.	Calculations Letter	F(1)	12/03/18
FM Approval Deck Limitations	N/A	C(1), C(5), C(6), D	01/01/13

APPROVED ASSEMBLIES

Membrane Type: Single Ply, PVC

Deck Type 7I: Recover, Insulated

Deck Description: 2500 psi structural concrete

System Type A(1): All layers of insulation fully adhered; 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.

Existing Roof: Existing smooth-surfaced built up roof (BUR), gravel-surface built-up roof (BUR) with loose gravel removed or granule-surface SBS modified bitumen over existing structural concrete.

One or more layers of the following.

Base Insulation Layer:	**Insulation Fasteners (Table 3)**	**Fastener Density/ft^2**
Flex ISO II, ACFoam-II Minimum 1.5" thick	**N/A**	**N/A**
Top Insulation Layer (Optional):	**Insulation Fasteners (Table 3)**	**Fastener Density/ft^2**
DensDeck Prime, SECUROCK Gypsum-Fiber Roof Board Minimum $^1/_4$" thick	**N/A**	**N/A**

Note: Insulation layers shall be adhered to the deck with Millennium One Step Foamable Adhesive, Millennium PG-1 Pump Grade Adhesive, OMG OlyBond 500, Polyset CR-20 or Polyset Board-Max applied in ¾-inch ribbons spaced maximum 12-inch o.c. Please refer to Roofing Application Standard RAS 117 for insulation attachment. Insulation listed as base layer only shall be used only as base layers with a second layer of approved top layer insulation installed as the final membrane substrate. Composite insulation panels used as a top layer shall be placed with the Polyisocyanurate side facing down.

Membrane: Flex Tripolymer MF/R or Flex MFR PVC adhered to the substrate and roof cover underside with Flex Substrate 2375 at a rate of 55-70 ft^2/gal. or LA432M Bonding Adhesive at a rate of 120 ft^2/gal.
Or
Flex MFR PVC FB adhered to the substrate only with Flex FB Low Rise Adhesive applied at continuous ribbons spaced maximum 12-inch o.c., Polyset CR-20 applied as a "Spatter pattern" at a rate of 3.75 lbs./sq., or FA636 Water Borne Adhesive at a rate of 100 ft^2/gal.
Or
Flex Tripolymer FB adhered to the substrate only with Flex FB Low Rise Adhesive applied at continuous ribbons spaced maximum 12-inch o.c., Flex Rubber Emulsion Adhesive at a rate of 60 ft^2/gal., Polyset CR-20 applied as a "Spatter pattern" at a rate of 3.75 lbs./sq., or FA636 Water Borne Adhesive at a rate of 100 ft^2/gal.

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

Membrane Type: Single Ply, PVC

Deck Type 7I: Recover, Insulated

Deck Description: 2500 psi structural concrete

System Type A(2): All layers of insulation fully adhered; 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.

Existing Roof: Existing smooth-surfaced built up roof (BUR), gravel-surface built-up roof (BUR) with loose gravel removed or granule-surface SBS modified bitumen over existing structural concrete.

One or more layers of the following.

Base Insulation Layer:	**Insulation Fasteners (Table 3)**	**Fastener Density/ft^2**
Flex ISO II, ACFoam-II Minimum 1.5" thick	**N/A**	**N/A**
Top Insulation Layer (Optional):	**Insulation Fasteners (Table 3)**	**Fastener Density/ft^2**
Flex ISO II, ACFoam-II Minimum 1.5" thick	**N/A**	**N/A**

Note: Insulation layers shall be adhered to the deck with Millennium PG-1 Pump Grade Adhesive, OMG OlyBond 500, Polyset CR-20 or Polyset Board-Max applied in ¾-inch ribbons spaced maximum 12-inch o.c. Please refer to Roofing Application Standard RAS 117 for insulation attachment. Insulation listed as base layer only shall be used only as base layers with a second layer of approved top layer insulation installed as the final membrane substrate. Composite insulation panels used as a top layer shall be placed with the Polyisocyanurate side facing down.

Membrane: Flex Tripolymer MF/R or Flex MFR PVC adhered to the substrate and roof cover underside with Flex Substrate 2375 at a rate of 55-70 ft^2/gal. or LA432M Bonding Adhesive at a rate of 120 ft^2/gal.
Or
Flex MFR PVC FB adhered to the substrate only with Polyset CR-20 applied as a "Spatter pattern" at a rate of 3.75 lbs./sq., or FA636 Water Borne Adhesive at a rate of 100 ft^2/gal.
Or
Flex Tripolymer FB adhered to the substrate only with Flex Rubber Emulsion Adhesive at a rate of 60 ft^2/gal., Polyset CR-20 applied as a "Spatter pattern" at a rate of 3.75 lbs./sq., or FA636 Water Borne Adhesive at a rate of 100 ft^2/gal.

Maximum Design Pressure: -157.5 psf. (See General Limitation #9.)

Membrane Type: Single Ply, PVC

Deck Type 7I: Recover, Insulated

Deck Description: 2500 psi structural concrete

System Type A(3): All layers of insulation fully adhered; 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.

Existing Roof: Existing smooth-surfaced built up roof (BUR), gravel-surface built-up roof (BUR) with loose gravel removed or granule-surface SBS modified bitumen over existing structural concrete.

One or more layers of the following.

Base Insulation Layer:	**Insulation Fasteners (Table 3)**	**Fastener Density/ft^2**
Flex ISO II, ACFoam-II Minimum 1.5" thick	**N/A**	**N/A**
Top Insulation Layer (Optional):	**Insulation Fasteners (Table 3)**	**Fastener Density/ft^2**
Flex ISO II, ACFoam-II Minimum 1.5" thick	**N/A**	**N/A**

Note: Insulation layers shall be adhered to the deck with Millennium One Step Foamable Adhesive applied in ¾-inch ribbons spaced maximum 12-inch o.c. Please refer to Roofing Application Standard RAS 117 for insulation attachment. Insulation listed as base layer only shall be used only as base layers with a second layer of approved top layer insulation installed as the final membrane substrate. Composite insulation panels used as a top layer shall be placed with the Polyisocyanurate side facing down.

Membrane: Flex Tripolymer MF/R or Flex MFR PVC adhered to the substrate and roof cover underside with Flex Substrate 2375 at a rate of 55-70 ft^2/gal. or LA432M Bonding Adhesive at a rate of 120 ft^2/gal.
Or
Flex MFR PVC FB adhered to the substrate only with Polyset CR-20 applied as a "Spatter pattern" at a rate of 3.75 lbs./sq., or FA636 Water Borne Adhesive at a rate of 100 ft^2/gal.
Or
Flex Tripolymer FB adhered to the substrate only with Flex Rubber Emulsion Adhesive at a rate of 60 ft^2/gal., Polyset CR-20 applied as a "Spatter pattern" at a rate of 3.75 lbs./sq., or FA636 Water Borne Adhesive at a rate of 100 ft^2/gal.

Maximum Design Pressure: -195 psf. (See General Limitation #9.)

Membrane Type: Single Ply, PVC

Deck Type 7I: Recover, Insulated

Deck Description: 2500 structural concrete

System Type A(4): All layers of insulation fully adhered; 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.

Existing Roof: Existing smooth-surfaced built up roof (BUR), gravel-surface built-up roof (BUR) with loose gravel removed or granule-surface SBS modified bitumen over existing structural concrete.

One or more layers of the following.

Base Insulation Layer:	**Insulation Fasteners (Table 3)**	**Fastener Density/ft^2**
Flex ISO II, ACFoam-II Minimum 1.5" thick	**N/A**	**N/A**

Note: Base insulation layer shall be adhered to the deck with Millennium PG-1 Pump Grade Adhesive applied in ¾-inch ribbons spaced maximum 12-inch o.c. Please refer to Roofing Application Standard RAS 117 for insulation attachment. Insulation listed as base layer only shall be used only as base layers with a second layer of approved top layer insulation installed as the final membrane substrate. Composite insulation panels used as a top layer shall be placed with the Polyisocyanurate side facing down.

Top Insulation Layer:	**Insulation Fasteners (Table 3)**	**Fastener Density/ft^2**
DensDeck Prime, SECUROCK Gypsum-Fiber Roof Board Minimum 1/4" thick	**N/A**	**N/A**

Note: Top insulation layer shall be adhered to the deck with Millennium One Step Foamable Adhesive, Millennium PG-1 Pump Grade Adhesive, OMG OlyBond 500, Polyset CR-20 or Polyset Board-Max applied in ¾-inch ribbons spaced maximum 12-inch o.c. Please refer to Roofing Application Standard RAS 117 for insulation attachment. Insulation listed as base layer only shall be used only as base layers with a second layer of approved top layer insulation installed as the final membrane substrate. Composite insulation panels used as a top layer shall be placed with the Polyisocyanurate side facing down.

Membrane: Flex Tripolymer MF/R or Flex MFR PVC adhered to the substrate and roof cover underside with Flex Substrate 2375 at a rate of 55-70 ft^2/gal. or LA432M Bonding Adhesive at a rate of 120 ft^2/gal.
Or
Flex MFR PVC FB adhered to the substrate only with Polyset CR-20 applied as a "Spatter pattern" at a rate of 3.75 lbs./sq., or FA636 Water Borne Adhesive at a rate of 100 ft^2/gal.
Or
Flex Tripolymer FB adhered to the substrate only with Flex Rubber Emulsion Adhesive at a rate of 60 ft^2/gal., Polyset CR-20 applied as a "Spatter pattern" at a rate of 3.75 lbs./sq., or FA636 Water Borne Adhesive at a rate of 100 ft^2/gal.

Maximum Design Pressure: -237.5 psf. (See General Limitation #9.)

Membrane Type: Single Ply, PVC

Deck Type 7I: Recover, Insulated

Deck Description: Min. 22 ga., Type B, Grade 33 steel deck secured 6" o.c. with ITW Buildex ICH TRAXX/5 screws to supports spaced max. 6 ft o.c. Side laps secured with ITW Buildex ICH TRAXX/1 screws spaced max 24" o.c.

This Tested Assembly has been analyzed for allowable deck stress. See Evidence Submittted Table.

System Type C(1): Membrane heat welded to fastener plates mechanically attaching 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 the following.

Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft^2
Flex ISO II, Flex ISO III, ACFoam-II, ACFoam-III, ENRGY 3, ENRGY 3 25 PSI, Multi-Max FA-3 Minimum 1.5" thick	**11 & 12**	**1:6 ft^2**

Note: All layers of insulation shall be mechanically attached using RhinoBond Insulation Plates, with a 2 ft x 2 ft grid pattern, and the fastener density listed above. The insulation panels listed are minimum sizes and dimensions; if larger panels are used, the number of fasteners shall be increased maintaining the same fastener density. See Roofing Application Standard RAS 117 for fastening details.

Membrane: Flex Tripolymer MF/R heat welded to insulation layer with RhinoBond Insulation Plate bonding tool at a rate of 6 sec per plate so the tool reaches 400°F (204°C). Side laps are sealed with a minimum 2.0" heat weld.

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

Membrane Type: Single Ply, PVC

Deck Type 7I: Recover, Insulated

Deck Description: Structural concrete or min. 22 ga., Type B, Grade 80 steel deck secured 6" o.c. with ITW Buildex ICH TRAXX/5 screws to supports spaced max. 6 ft o.c. Side laps secured with ITW Buildex ICH TRAXX/1 screws spaced max 36" o.c. *The deck shall record a Minimum Characteristic Resistance Force (MCRF) of 450 lbf when tested with fasteners, listed in this assembly, installed through to the deck in accordance with TAS 105.

This Tested Assembly has been analyzed for allowable deck stress. See Evidence Submittted Table.

System Type C(2): Membrane heat welded to fastener plates mechanically attaching 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 the following.

Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft^2
Flex ISO II, ACFoam-II Minimum 1.5" thick	**N/A**	**N/A**

Note: All layers of insulation shall have preliminary attachment prior to the application of Isoweld plates and fasteners as outline below. See membrane description for fastener details. Please refer to Roofing Application Standard RAS 117 for insulation attachment.

Membrane: Flex MFR PVC (50-mil) roof cover shall be heat welded to bonding plates as specified below:

Fastening: Insulation shall be mechanically attached with Dekfast DF-#12-PH3, Dekfast DF-#14-PH3 and Dekfast DF-#15-PH3 fasteners and *Isoweld* F1-P-6.8-PVC plates spaced 12" o.c. in fastener rows spaced 60" o.c. Membrane shall be bonding to plates with SFS Isoweld 3000 stand-up bonding tool. Side laps are sealed with a minimum 1.5" heat weld.

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

Membrane Type: Single Ply, PVC

Deck Type 7I: Recover, Insulated

Deck Description: Structural concrete or min. 22 ga., Type B, Grade 40 steel deck secured 6" o.c. with 5/8" diameter puddle welds to supports spaced max. 6 ft o.c. Side laps secured with ITW Buildex ICH TRAXX/1 screws spaced max 36" o.c. *The deck shall record a Minimum Characteristic Resistance Force (MCRF) of 420 lbf when tested with fasteners, listed in this assembly, installed through to the deck in accordance with TAS 105.

This Tested Assembly has been analyzed for allowable deck stress. See Evidence Submittted Table.

System Type C(3): Membrane heat welded to fastener plates mechanically attaching 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 the following.

Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft^2
Flex ISO II, ACFoam-II Minimum 1.5" thick	**N/A**	**N/A**

Note: All layers of insulation shall have preliminary attachment prior to the application of Isoweld plates and fasteners as outline below. See membrane description for fastener details. Please refer to Roofing Application Standard RAS 117 for insulation attachment.

Membrane: Flex MFR PVC (50-mil) roof cover shall be heat welded to bonding plates as specified below:

Fastening: Insulation shall be mechanically attached with Dekfast DF-#15-PH3 fasteners and *Isoweld* F1-P-6.8-PVC plates spaced 2' o.c. in staggered fastener rows spaced 2' o.c (grid pattern). Membrane shall be bonding to plates with SFS Isoweld 3000 stand-up bonding tool. Side laps are sealed with a minimum 1.5" heat weld.

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

Membrane Type: Single Ply, PVC

Deck Type 7I: Recover, Insulated

Deck Description: Structural concrete or min. 22 ga., Type B, Grade 40 steel deck secured 6" o.c. with ITW buildex ICH TRAXX/5 screws to supports spaced max. 6 ft o.c. Side laps secured with ITW Buildex ICH TRAXX/1 screws spaced max 36" o.c. *The deck shall record a Minimum Characteristic Resistance Force (MCRF) of 630 lbf when tested with fasteners, listed in this assembly, installed through to the deck in accordance with TAS 105.

This Tested Assembly has been analyzed for allowable deck stress. See Evidence Submittted Table.

System Type C(4): Membrane heat welded to fastener plates mechanically attaching 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 the following.

Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft^2
Flex ISO II, ACFoam-II Minimum 1.5" thick	**N/A**	**N/A**

Note: All layers of insulation shall have preliminary attachment prior to the application of Isoweld plates and fasteners as outline below. See membrane description for fastener details. Please refer to Roofing Application Standard RAS 117 for insulation attachment.

Membrane: Flex MFR PVC (50-mil) roof cover shall be heat welded to bonding plates as specified below:

Fastening: Insulation shall be mechanically attached with Dekfast DF-#15-PH3 fasteners and *Isoweld* F1-P-6.8-PVC plates spaced 2' o.c. in staggered fastener rows spaced 3' o.c (grid pattern). Membrane shall be bonding to plates with SFS Isoweld 3000 stand-up bonding tool. Side laps are sealed with a minimum 1.5" heat weld.

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

Membrane Type: Single Ply, PVC

Deck Type 7I: Recover, Insulated

Deck Description: Min. 22 ga., Type B, Grade 33 steel deck secured 6" o.c. with ITW Buildex ICH TRAXX/5 screws to supports spaced max. 6 ft o.c. Side laps secured with ITW Buildex ICH TRAXX/1 screws spaced max 24" o.c.

This Tested Assembly has been analyzed for allowable deck stress. See Evidence Submittted Table.

System Type C(5): Membrane heat welded to fastener plates mechanically attaching 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 the following.

Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft^2
Flex ISO II, Flex ISO III, ACFoam-II, ACFoam-III, ENRGY 3, ENRGY 3 25 PSI, Multi-Max FA-3 Minimum 1.5" thick	**11 & 12**	**1:4 ft^2**

Note: All layers of insulation shall be mechanically attached using RhinoBond Insulation Plates, with a 2 ft x 2 ft grid pattern, and the fastener density listed above. Please refer to Roofing Application Standard RAS 117 for insulation attachment. The insulation panels listed are minimum sizes and dimensions; if larger panels are used, the number of fasteners shall be increased maintaining the same fastener density.

Membrane: Flex Tripolymer MF/R heat welded to insulation layer with RhinoBond Insulation Plate bonding tool at a rate of 6 sec per plate so the tool reaches 400°F (204°C). Side laps are sealed with a minimum 2.0" heat weld.

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

Membrane Type: Single Ply, PVC

Deck Type 7I: Recover, Insulated

Deck Description: Min. 22 ga., Type B, Grade 33 steel deck secured 6" o.c. with ITW Buildex ICH TRAXX/5 screws to supports spaced max. 6 ft o.c. Side laps secured with ITW Buildex ICH TRAXX/1 screws spaced max 24" o.c.

This Tested Assembly has been analyzed for allowable deck stress. See Evidence Submittted Table.

System Type C(6): Membrane heat welded to fastener plates mechanically attaching 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 the following.

Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft^2
Flex ISO II, Flex ISO III, ACFoam-II, ACFoam-III, ENRGY 3, ENRGY 3 25 PSI, Multi-Max FA-3 Minimum 1.5" thick	**11 & 12**	**1:4 ft^2**

Note: All layers of insulation shall be mechanically attached using RhinoBond Insulation Plates, with a 2 ft x 2 ft grid pattern, and the fastener density listed above. Please refer to Roofing Application Standard RAS 117 for insulation attachment. The insulation panels listed are minimum sizes and dimensions; if larger panels are used, the number of fasteners shall be increased maintaining the same fastener density.

Membrane: Flex Tripolymer MF/R heat welded to insulation layer with RhinoBond Insulation Plate bonding tool at a rate of 6 sec per plate so the tool reaches 400°F (204°C). Side laps are sealed with a minimum 1.5" heat weld.

Maximum Design Pressure: -75 psf. (See General Limitation #7.)

Membrane Type: Single Ply, PVC

Deck Type 7I: Recover, Insulated

Deck Description: Structural concrete or min. 22 ga., Type B, Grade 40 steel deck secured 6" o.c. with 5/8" diameter puddle welds to supports spaced max. 6 ft o.c. Side laps secured with ITW Buildex ICH TRAXX/1 screws spaced max 36" o.c. *The deck shall record a Minimum Characteristic Resistance Force (MCRF) of 495 lbf when tested with fasteners, listed in this assembly, installed through to the deck in accordance with TAS 105.

This Tested Assembly has been analyzed for allowable deck stress. See Evidence Submittted Table.

System Type C(7): Membrane heat welded to fastener plates mechanically attaching 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 the following.

Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft^2
Flex ISO II, ACFoam-II Minimum 1.5" thick	**N/A**	**N/A**

Note: All layers of insulation shall have preliminary attachment prior to the application of Isoweld plates and fasteners as outline below. See membrane description for fastener details. Please refer to Roofing Application Standard RAS 117 for insulation attachment.

Membrane: Flex MFR PVC (50-mil) roof cover shall be heat welded to bonding plates as specified below:

Fastening: Insulation shall be mechanically attached with Dekfast DF-#15-PH3 fasteners and *Isoweld* F1-P-6.8-PVC plates spaced 1.5' o.c. in staggered fastener rows spaced 3' o.c (grid pattern). Membrane shall be bonding to plates with SFS Isoweld 3000 stand-up bonding tool. Side laps are sealed with a minimum 1.5" heat weld.

Maximum Design Pressure: -82.5 psf. (See General Limitation #7.)

Membrane Type: Single Ply, PVC

Deck Type 7I: Recover, Insulated

Deck Description: Structural concrete or min. 22 ga., Type B, Grade 80 steel deck secured 6" o.c. with ITW Buildex ICH TRAXX/5 screws to supports spaced max. 5 ft o.c. Side laps secured with ITW Buildex ICH TRAXX/1 screws spaced max 30" o.c. *The deck shall record a Minimum Characteristic Resistance Force (MCRF) of 450 lbf when tested with fasteners, listed in this assembly, installed through to the deck in accordance with TAS 105.

This Tested Assembly has been analyzed for allowable deck stress. See Evidence Submittted Table.

System Type C(8): Membrane heat welded to fastener plates mechanically attaching 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 the following.

Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft^2
Flex ISO II, ACFoam-II Minimum 1.5" thick	**N/A**	**N/A**

Note: All layers of insulation shall have preliminary attachment prior to the application of Isoweld plates and fasteners as outline below. See membrane description for fastener details. Please refer to Roofing Application Standard RAS 117 for insulation attachment.

Membrane: Flex MFR PVC (50-mil) roof cover shall be heat welded to bonding plates as specified below:

Fastening: Insulation shall be mechanically attached with Dekfast DF-#15-PH3 fasteners and *Isoweld* F1-P-6.8-PVC plates spaced 6" o.c. in fastener rows spaced 60" o.c. Membrane shall be bonding to plates with SFS Isoweld 3000 stand-up bonding tool. Side laps are sealed with a minimum 1.5" heat weld.

Maximum Design Pressure: -90 psf. (See General Limitation #7.)

Membrane Type: Single Ply, PVC

Deck Type 7I: Recover, Insulated

Deck Description: Min. 16-22 ga., Type B, Grade 33 steel deck secured 6" o.c. with ITW Buildex ICH TRAXX/5 screws to supports spaced max. 6 ft o.c. Side laps secured with ITW Buildex ICH TRAXX/1 screws spaced max 24" o.c.

This Tested Assembly has been analyzed for allowable deck stress. See Evidence Submittted Table.

System Type D: Membrane mechanically attached over preliminary fastened 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.

Vapor Retarder: Any UL or FM approved vapor retarder may be installed on the deck or over the base layer of insulation.

One or more layers of the following.

Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft^2
EnergyGuard Polyiso Insulation, Flex EG Polyiso, Multi Max FA-3 Minimum 1.3" thick	**N/A**	**N/A**
ENRGY 3, ENRGY 3 25 PSI Minimum 1.4" thick	**N/A**	**N/A**

Note: Top layer shall have preliminary attachment, prior to the installation of the membrane sheet, 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. All layers of insulation and base sheet shall be simultaneously fastened. See membrane sheet below for fasteners and density.

Membrane: Flex Tripolymer MF/R or Flex MFR PVC attached through preliminary attached insulation to the deck as described below.

Fastening: OMG 2" Barbed Plates and approved fasteners placed 6" o.c. in the membrane lap seams not more than 55" o.c.

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

Membrane Type: Single Ply, PVC

Deck Type 7: Recover, Non-Insulated

Deck Description: Min. 22 ga., Type B, Grade 80 steel deck secured 6" o.c. with Tek/5 screws with ¾" washers to supports spaced max. 5 ft. o.c. Side laps secured with Tek/1 screws spaced max 12" o.c.

This Tested Assembly has been analyzed for allowable deck stress. See Evidence Submittted Table.

System Type F: Membrane fully adhered to 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.

Existing Roof: Existing smooth-surfaced built up roof (BUR) or granule-surface SBS modified bitumen, consisting of 0.5-inch SECUROCK Gypsum-Fiber Roof Board mechanically attached to the steel deck followed by asphalt BUR and a flood coat of hot asphalt.

Membrane: Flex MFR PVC FB or Tripolymer FB adhered to deck with Flex FB Low Rise Adhesive applied at continuous ribbons spaced maximum 6-inch o.c. or Polyset CR-20 applied as a "Spatter pattern" at a rate of 3.75 lbs./sq.

Maximum Design Pressure: -60 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.
2. All assemblies listed herein shall be installed in compliance with the applicable sections of FBC 1521. Uplift performance of assemblies bonded to existing roofing system shall be verified per 1521.10. Uplift performance of assemblies mechanically attached through existing roofing system shall be verified per 1521.11.

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