MIAMI-DADE COUNTY
PRODUCT CONTROL SECTION
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DEPARTMENT OF REGULATORY AND ECONOMIC RESOURCES (RER)
BOARD AND CODE ADMINISTRATION DIVISION

NOTICE OF ACCEPTANCE (NOA)

Johns Manville Corporation
717 17th Street
Denver, CO 80202

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: Johns Manville APP Modified Bitumen Roofing 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 renews and revises NOA No. 16-0504.11 and consists of pages 1 through 21.
The submitted documentation was reviewed by Jorge L. Acebo.

ROOFING SYSTEM APPROVAL

Category:	Roofing
Sub-Category:	Modified Bitumen
Materials:	APP/SBS
Deck Type:	Recover
Maximum Design Pressure:	See Specific Deck Types

TRADE NAMES OF PRODUCTS MANUFACTURED OR LABELED BY APPLICANT:

TABLE 1

Product	Dimensions	Test Specification	Product Description
JM APP Base	39-3/8" x 48'10"	ASTM D6509	APP modified asphalt, fiberglass reinforced, smooth surfaced base sheet.
APPeX 4S	39-3/8" x 32'10"	ASTM D6222 Type I Grade S	APP modified asphalt, polyester reinforced, smooth surfaced membrane **for use as a Base and/or Ply Sheet only**.
APPeX 4.5M	39-3/8" x 32'10"	ASTM D6222 Type I Grade G	APP modified asphalt, polyester reinforced, mineral surfaced membrane.
APPeX 4.5M FR	39-3/8" x 32'10"	ASTM D6222 Type I Grade G	APP modified asphalt, polyester reinforced, fire-retardant, mineral surfaced membrane.
Tricor M FR	39-3/8" x 34'1"	ASTM D6223	APP modified asphalt, polyester / glass reinforced, granule surfaced membrane.
Tricor M FR CR	39-3/8" x 34'1"	ASTM D6223	APP modified asphalt, polyester / glass reinforced, coated granule surfaced membrane.
DynaFast 180 HW	39-3/8" x 49'2"	ASTM D6164	SBS modified asphalt, polyester reinforced, smooth surfaced sheet.
DynaFast 250 HW	39-3/8" x 32'10"	ASTM D6164	SBS modified asphalt, polyester reinforced, smooth surfaced base sheet.
DynaWeld 250 S	39-3/8" x 32'-10"	ASTM D6164 Type II Grade S	SBS modified asphalt, polyester reinforced, smooth surfaced sheet.
DynaBase HW	39-3/8" x 49'2"	ASTM D6163 Type 1 Grade S	SBS modified asphalt, glass fiber reinforced, smooth surfaced sheet.
JM Roofing System Urethane Adhesive	N/A	Proprietary	A two-part urethane insulation adhesive.
JM Two Part Urethane Insulation Adhesive	N/A	Proprietary	A two-part urethane insulation adhesive.
JM Two-Part UIA	N/A	Proprietary	A two-part urethane insulation adhesive.
JM Two Part Urethane Insulation Adhesive Canister	N/A	Proprietary	Self-contained two-part, low-rise foam adhesive.

Product	Dimensions	Test Specification	Product Description
JM Two-Part UIA Canister	N/A	Proprietary	Self-contained two-part, low-rise foam adhesive

APPROVED INSULATIONS:

TABLE 2

Product Name	Product Description	Manufacturer (With Current NOA)
ENRGY 3, ENRGY 3 25 PSI, ValuTherm, ValuTherm 25 PSI, R-Panel, R-Panel 25 PSI	Polyisocyanurate Insulation.	Johns Manville
ENRGY 3 AGF, ENRGY 3 AGF 25 PSI, ENRGY 3 CGF, ENRGY 3 CGF 25 PSI, ValuTherm AGF, ValuTherm AGF 25 PSI, ValuTherm CGF, ValuTherm CGF 25 PSI	Polyisocyanurate Insulation with glass reinforced facers	Johns Manville
ENRGY 3 FR, ENRGY 3 FR 25 PSI	Polyisocyanurate Insulation with inorganic coated glass reinforced facers; bottom face is premium coated for combustible decks.	Johns Manville
Fesco Foam, DuraFoam	Polyisocyanurate Insulation with perlite facer.	Johns Manville
DuraBoard	High-density perlite roof insulation.	Johns Manville

APPROVED FASTENERS:

TABLE 3

Fastener Number	Product Name	Product Description	Dimensions	Manufacturer (With Current NOA)
1.	UltraFast Fastener	Insulation fastener for wood and steel.	#12 x 8" max. Length, #3 Phillips head.	Johns Manville
2.	UltraFast 3” Round Metal Plate or Ultra Fast Square Metal Plate	Galvalume AZ55 steel plate	3” round 3” square	Johns Manville
3.	Structural Concrete Deck Fastener	Insulation fastener for concrete decks.	0.214” min. dia. x 12” max. length; wafer head	Johns Manville
4.	All Purpose Fastener	Insulation fastener for wood, concrete and steel.	#14 x 4” max. #3Phillips hd	Johns Manville
5.	High Load Fastener	Insulation and membrane fastener for steel, wood, or concrete	#15 x 14" max. #3Phillips hd	Johns Manville
6.	High Load Plate	Membrane seam plate	2-3/8” round steel plate	Johns Manville
7.	Polymer Membrane Batten	Plastic membrane batten strips	1” x 250’	OMG, Inc.
8.	High Load LH	fastener for steel, wood, or concrete	#15 x 14" max. Oversize #3 Phillips head	Johns Manville
9.	APB Plates	Membrane plates	2” round steel plate	Johns Manville
10.	Trufast Deep Well Coiled Batten Bar	galvalume coated steel membrane batten	1” x 100’ coil	Altenloh, Brink & Co. U.S., Inc.
11.	Trufast Twin Loc-Nail Assembled Fastener	Base sheet fastener with and without integrated Plate.	Min. 1.8” length	Altenloh, Brink & Co. U.S., Inc.
12.	Trufast Twin Loc Coiled Batten Bar	Oval pre-punched metal batten bar	1” x100’ coil	Altenloh, Brink & Co. U.S., Inc.

EVIDENCE SUBMITTED:

Test Agency	Test Identifier	Description	Date
FM Approvals	J.I. 3002823	4470	04/01/99
	3037540	4450	10/20/10
	3063554	4470	02/15/18
UL LLC	R10167	UL 790	05/12/21
Exterior Research & Design, LLC	02843.02.05-10-R1	TAS 114/117	02/07/07
Trinity | ERD	JM-11190.03.16	TAS 114(J)	03/11/16
PRI Construction Materials Technologies, LLC	JMC-053-02-01	ASTM D5147/D6222	05/01/13
	JMC-054-02-01	ASTM D5147/D6223	06/04/12
	JMC-055-02-01	ASTM D 6509	05/29/12
	JMC-070-02-01	ASTM D 2178 TYPE IV	04/17/12
	JMC-071-02-01	ASTM D 2178 TYPE VI	04/17/12
	JMC-072-02-02	ASTM D4601	06/04/12
	JMC-074-02-01	ASTM D4897	04/17/12
	JMC-075-02-01.2	ASTM D6164	12/27/13
	JMC-093-02-01	ASTM D4601	08/02/12
	JMC-113-02-01	ASTM D6164	04/19/13
	JMC-107-02-01.8	ASTM D903/D1876/D5147 TAS 117(A)/(B)/114(C)	09/17/20
	JMC-108-02-01	TAS 114(J)	04/16/13
	JMC-114-02-01	TAS 114(J)	08/20/13
	JMC-126-02-01	TAS 114(J)	04/17/13
	JMC-131-02-01 Rev 1	TAS 114(J)	08/20/13
	JMC-141-02-01	TAS 114(J)	04/18/13
	JMC-167-02-01	TAS 114(C)	08/05/13
	JMC-168-02-01	TAS 114(J)	08/20/13
	JMC-222-02-01.1	TAS 114(J)	03/12/15
	JMC-222-02-02	TAS 114(J)	04/22/15
	JMC-222-02-04	TAS 114(J)	08/14/15
	JMC-242-02-01	TAS 114(J)	11/18/15

DECK STRESS ANALYSIS CALCULATIONS/REPORTS

Engineer/Agency	Identifier	Assemblies	Date
Zachary R. Priest, P.E.	Signed/Sealed Calculations	C(2)	04/07/16
		D(1), D(2), D(3)	04/22/16
		D(4), E(1), E(2), E(3), E(4)	04/25/16
		C(4)	05/06/16
Robert Nieminen, P.E.	Signed/Sealed Calculations	C(3)	03/11/16

APPROVED ASSEMBLIES

Membrane Type: APP

Deck Type 1I: Recover, Insulated

Deck Description: $^{15}/_{32}$" or greater CDX plywood fastened with 0.113" x 2-3/8" ring shank nails at 6" o.c. for existing construction over wood supports spaced maximum 24" o.c. The deck should record a Minimum Characteristic Resistance Force (MCRF) of 180 lbf when tested with UltraFast Fasteners and UltraFast Square Metal Plates.

System Type B: Base layer of insulation mechanically attached, top layer fully adhered with approved asphalt or adhesive.

All General and System limitations apply.

One or more layers of any of the following insulations:

Base Insulation Layer	**Insulation Fasteners (Table 3)**	**Fastener Density/ft^2**
ENRGY 3, ENRGY 3 25 PSI, ValuTherm, ValuTherm 25 PSI, R-Panel, R-Panel 25 PSI, ENRGY 3 CGF, ENRGY 3 CGF 25 PSI, ValuTherm CGF, ValuTherm CGF 25 PSI, ENRGY 3 FR, ENRGY 3 FR 25 PSI		
Minimum 1.5" thick	**1 with 2**	**1:1.33 ft^2**

Note: Base layer 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).

Top Insulation Layer	**Insulation Fasteners (Table 3)**	**Fastener Density/ft^2**
JM SECUROCK Gypsum-Fiber Roof Board		
Minimum ½" thick	**N/A**	**N/A**

Note: Top layer of insulation shall be adhered with JM Roofing System Urethane Adhesive, JM Two Part Urethane Insulation Adhesive, JM Two-Part UIA, JM Two Part Urethane Insulation Adhesive Canister, JM Two-Part UIA Canister and applied in ¾" to 1" wide beads spaced maximum 12" o.c. Please refer to Roofing Application Standard RAS 117 for insulation attachment.

Base Sheet:	DynaFast 180 HW, or DynaFast 250 HW fully bonded by torch adhering with minimum 3" side laps
Ply Sheet (Optional):	One or more plies of DynaFast 180 HW, DynaWeld 250 S or DynaFast 250 HW heat welded while maintaining minimum 4" side laps
Membrane:	One or more plies of APPeX 4.5M FR, Tricor M FR, or Tricor M FR CR heat welded while maintaining 4" side laps
Maximum Design Pressure:	-67.5 psf. (See General Limitation #7).

Membrane Type: APP

Deck Type 7I: Recover

Deck Description: Concrete or 18-22 ga. steel, Grade 33 steel deck.

System Type C(1): Single insulation layer mechanically attached.

All General and System Limitations apply.

One or more layers of any of the following insulations:

Insulation Layer	**Insulation Fasteners (Table 3)**	**Fastener Density/ft^2**
DuraBoard Minimum ¾" thick	**1 with 2**	**1:1.33 ft²**

Note: All layers of insulation shall be mechanically attached using 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. Insulation fasteners shall be tested for withdrawal resistance in compliance with Testing Application Standard TAS 105 to confirm compliance with the wind load requirements. Please refer to Roofing Application Standard RAS 117 for insulation attachment.

Base Sheet: One ply of JM APP Base heat welded while maintaining 4" side laps and 6" end laps.

Ply Sheet: None.

Membrane: One or more plies of APPeX 4.5M or APPeX 4.5M FR heat welded while maintaining 4" side laps and 6" end laps.

Surfacing (Optional): Install the following for all systems that do not achieve acceptable fire ratings through the use of FR membrane sheets.

1. 400 lb./sq. gravel or 300 lb./sq. slag in a flood coat of approved mopping asphalt at a rate of 60 lb./sq.

Maximum Design Pressure: -67.5 psf. (See General Limitation #9.)

Membrane Type: APP

Deck Type 7I: Recover, Insulated

Deck Description: Structural Concrete or Minimum 22 gage, type B, Grade 33 steel attached to supports having a maximum span of 6 ft. o.c. with 5/8" diameter puddle welds at each flute. The steel deck side laps stitched 24" o.c. with ¼'-14x7/8" HWH screws. The deck should record a Minimum Characteristic Resistance Force (MCRF) of 174 lbf when tested with UltraFast Fasteners (steel) or Structural Concrete Deck Fastener and All Purpose Fastener (concrete) in accordance with TAS 105.

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

System Type C(2): All layers of insulation simultaneously mechanically fastened.

All General and System limitations apply.

One or more layers of the following insulations:

Base Insulation Layer (Optional)	**Insulation Fasteners (Table 3)**	**Fastener Density/ft²**
ENRGY 3, ENRGY 3 25 PSI, ValuTherm, ValuTherm 25 PSI, R-Panel, R-Panel 25 PSI, ENRGY 3 AGF, ENRGY 3 AGF 25 PSI, ValuTherm AGF, ValuTherm AGF 25 PSI, ENRGY 3 CGF, ENRGY 3 CGF 25 PSI, ValuTherm CGF, ValuTherm CGF 25 PSI, ENRGY 3 FR, ENRGY 3 FR 25 PSI,		
Minimum ½" thick	**N/A**	**N/A**

Note: Both layers of insulation shall be simultaneously mechanically fastened; see top layer below for fasteners and density.

Top Insulation Layer	**Insulation Fasteners (Table 3)**	**Fastener Density/ft²**
JM SECUROCK Gypsum Fiber Roof Board		
Minimum ¼" thick	**1 with 2 (square plates only) (Steel)** **3 or 4 with 2 (square plates only) (Concrete)**	**1:1.45 ft²**

Note: All layers of insulation shall be mechanically attached using 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. Please refer to Roofing Application Standard RAS 117 for insulation attachment.

Base Sheet: DynaFast 180 HW, or DynaFast 250 HW fully bonded by torch adhering with minimum 3" side laps

Ply Sheet (Optional): One or more plies of DynaFast 180 HW, DynaWeld 250 S or DynaFast 250 HW heat welded while maintaining minimum 4" side laps

Membrane: One or more plies of APPeX 4.5M FR, Tricor M FR, or Tricor M FR CR heat welded while maintaining 4" side laps

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

Membrane Type: APP

Deck Type 7I: Recover, Insulated

Deck Description: Structural Concrete or Minimum 22 gage, type B, Grade 40 steel attached to supports having a maximum span of 6 ft. o.c. with 5/8" diameter puddle. The steel deck side laps stitched 20" o.c. with Tek/1 screws. The deck should record a Minimum Characteristic Resistance Force (MCRF) of 213 lbf when tested with UltraFast Fasteners (steel) or Structural Concrete Deck Fastener and All Purpose Fastener (concrete) in accordance with TAS 105.

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

System Type C(3): All layers of insulation simultaneously mechanically fastened.

All General and System limitations apply.

One or more layers of the following insulations:

Base Insulation Layer	**Insulation Fasteners (Table 3)**	**Fastener Density/ft²**
ENRGY 3, ENRGY 3 25 PSI, ValuTherm, ValuTherm 25 PSI, R-Panel, R-Panel 25 PSI, ENRGY 3 AGF, ENRGY 3 AGF 25 PSI, ValuTherm AGF, ValuTherm AGF 25 PSI, ENRGY 3 CGF, ENRGY 3 CGF 25 PSI, ValuTherm CGF, ValuTherm CGF 25 PSI, ENRGY 3 FR, ENRGY 3 FR 25 PSI, Minimum 1.5" thick	**N/A**	**N/A**

Note: Both layers of insulation shall be simultaneously mechanically fastened; see top layer below for fasteners and density.

Top Insulation Layer	**Insulation Fasteners (Table 3)**	**Fastener Density/ft²**
JM SECUROCK Gypsum Fiber Roof Board Minimum ¼" thick	**1 with 2 (square plates only) (Steel) 3 or 4 with 2 (square plates only) (Concrete)**	**1:1.78 ft²**

Note: All layers of insulation shall be mechanically attached using 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. Please refer to Roofing Application Standard RAS 117 for insulation attachment.

Base Sheet: DynaFast 180 HW, or DynaFast 250 HW fully bonded by torch adhering with minimum 3" side laps

Ply Sheet (Optional): One or more plies of DynaFast 180 HW, DynaWeld 250 S or DynaFast 250 HW heat welded while maintaining minimum 4" side laps

Membrane: One or more plies of APPeX 4.5M FR, Tricor M FR, or Tricor M FR CR heat welded while maintaining 4" side laps

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

Membrane Type: APP

Deck Type 7I: Recover, Insulated

Deck Description: Structural Concrete or Minimum 22 ga. Type B, Grade 80 steel deck attached to supports spaced a maximum 6-ft o.c. with Traxx/5 screws. The steel deck side laps stitched 30" o.c. with Traxx/1 screws. The deck should record a Minimum Characteristic Resistance Force (MCRF) of 267 lbf when tested with Structural Concrete Deck Fastener and All Purpose Fastener in accordance with TAS 105.

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

System Type C(4): All layers of insulation simultaneously mechanically fastened.

All General and System limitations apply.

One or more layers of the following insulations:

Base Insulation Layer	**Insulation Fasteners (Table 3)**	**Fastener Density/ft²**
ENRGY 3, ENRGY 3 25 PSI, ValuTherm, ValuTherm 25 PSI, R-Panel, R-Panel 25 PSI, ENRGY 3 AGF, ENRGY 3 AGF 25 PSI, ValuTherm AGF, ValuTherm AGF 25 PSI, ENRGY 3 CGF, ENRGY 3 CGF 25 PSI, ValuTherm CGF, ValuTherm CGF 25 PSI, ENRGY 3 FR, ENRGY 3 FR 25 PSI, Fesco Foam, DuraFoam		
Minimum 2" thick	**N/A**	**N/A**

Note: Both layers of insulation shall be simultaneously mechanically fastened; see top layer below for fasteners and density.

Top Insulation Layer	**Insulation Fasteners (Table 3)**	**Fastener Density/ft²**
JM SECUROCK Gypsum-Fiber Roof Board		
Minimum ½" thick	**1 with 2 (Round plates only) (Steel)** **3 or 4 with 2 (Round plates only) (Concrete)**	**1:1.78 ft²**

Note: All layers of insulation shall be mechanically attached using 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. Please refer to Roofing Application Standard RAS 117 for insulation attachment.

Base Sheet: One or more plies of APPeX 4S, torch adhered while maintaining 4" side laps and 6" end laps.

Membrane: One or more plies of APPeX 4.5M or APPeX 4.5M FR heat welded while maintaining 4" side laps and 6" end laps.

Maximum Design Pressure: -75 psf. (See general limitation #7).

Membrane Type: APP

Deck Type 7I: Recover

Deck Description: Minimum 22 ga., Grade 50 steel deck with supports at a maximum 6 ft o.c. 5/8" diameter puddle welds 6" o.c. along each intermediate support. *The deck should record a Minimum Characteristic Resistance Force (MCRF) of 311 lbf when tested with High Load Fasteners in accordance with TAS 105.

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

System Type D(1): All layers of insulation simultaneously mechanically fastened with base sheet

All General and System limitations apply.

Insulation Layer	**Insulation Fasteners (Table 3)**	**Fastener Density/ft^2**
ENRGY 3, ENRGY 3 25 PSI, ValuTherm, ValuTherm 25 PSI, R-Panel, R-Panel 25 PSI, ENRGY 3 AGF, ENRGY 3 AGF 25 PSI, ValuTherm AGF, ValuTherm AGF 25 PSI, ENRGY 3 CGF, ENRGY 3 CGF 25 PSI, ValuTherm CGF, ValuTherm CGF 25 PSI, ENRGY 3 FR, ENRGY 3 FR 25 PSI		
Minimum 1.5" thick	**N/A**	**N/A**

Note: Insulation shall be loose-laid and membrane mechanically fastened. See base sheet attachment below for fasteners and density. Refer to Roofing Application Standard RAS 117 for insulation attachment requirements.

Base Sheet: One ply of DynaFast 180 HW, or DynaFast 250 HW mechanically fastened through the insulation with High Load Fastener and APB Plates or High Load Plate spaced 6" o.c. in the center of the minimum 4" torch welded side laps.

Note: Base sheet fasteners shall be tested for withdrawal resistance in compliance with Testing Application Standard TAS 105 to confirm compliance with the wind load requirements of applicable Building Code.

Ply Sheet (Optional): One or more plies of DynaFast 180 HW, DynaWeld 250 S or DynaFast 250 HW heat welded while maintaining minimum 4" side laps

Membrane: One or more plies of APPeX 4.5M FR, Tricor M FR, or Tricor M FR CR heat welded while maintaining 4" side laps

Maximum Design Pressure: - 105 psf. (See General Limitation #7.)

Membrane Type: SBS

Deck Type 7I: Recover

Deck Description: Minimum 22 ga., Grade 33 steel deck with supports at a maximum 6 ft o.c. 5/8" diameter puddle welds 6" o.c. along each intermediate support. *The deck should record a Minimum Characteristic Resistance Force (MCRF) of 398 lbf when tested with High Load Fasteners in accordance with TAS 105.

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

System Type D(2): All layers of insulation simultaneously mechanically fastened with base sheet

All General and System limitations apply.

Insulation Layer	**Insulation Fasteners (Table 3)**	**Fastener Density/ft^2**
ENRGY 3, ENRGY 3 25 PSI, ValuTherm, ValuTherm 25 PSI, R-Panel, R-Panel 25 PSI, ENRGY 3 AGF, ENRGY 3 AGF 25 PSI, ValuTherm AGF, ValuTherm AGF 25 PSI, ENRGY 3 CGF, ENRGY 3 CGF 25 PSI, ValuTherm CGF, ValuTherm CGF 25 PSI, ENRGY 3 FR, ENRGY 3 FR 25 PSI		
Minimum 1.5" thick	**N/A**	**N/A**

Note: Insulation shall be loose-laid and membrane mechanically fastened. See base sheet attachment below for fasteners and density. Refer to Roofing Application Standard RAS 117 for insulation attachment requirements.

Base Sheet: One ply of DynaFast 180 HW, or DynaFast 250 HW mechanically fastened through the insulation with High Load Fastener and High Load Plate spaced 12" o.c. in the center of the minimum 4" torch welded side laps.

Note: Base sheet fasteners shall be tested for withdrawal resistance in compliance with Testing Application Standard TAS 105 to confirm compliance with the wind load requirements of applicable Building Code.

Ply Sheet (Optional): One or more plies of DynaFast 180 HW, DynaWeld 250 S or DynaFast 250 HW heat welded while maintaining minimum 4" side laps.

Membrane: One or more plies of APPeX 4.5 M FR, Tricor M FR, or Tricor M FR CR heat welded while maintaining 4" side laps.

Maximum Design Pressure: - 67.5 psf. (See General Limitation #7.)

Membrane Type: APP

Deck Type 7I: Recover

Deck Description: Minimum 22 ga., Grade 40 steel deck with supports at a maximum 6 ft o.c. 5/8" diameter puddle welds 6" o.c. along each intermediate support. *The deck should record a Minimum Characteristic Resistance Force (MCRF) of 533 lbf when tested with High Load Fasteners in accordance with TAS 105.

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

System Type D(3): All layers of insulation simultaneously mechanically fastened with base sheet

All General and System limitations apply.

Insulation Layer	**Insulation Fasteners (Table 3)**	**Fastener Density/ft^2**
ENRGY 3, ENRGY 3 25 PSI, ValuTherm, ValuTherm 25 PSI, R-Panel, R-Panel 25 PSI, ENRGY 3 AGF, ENRGY 3 AGF 25 PSI, ValuTherm AGF, ValuTherm AGF 25 PSI, ENRGY 3 CGF, ENRGY 3 CGF 25 PSI, ValuTherm CGF, ValuTherm CGF 25 PSI, ENRGY 3 FR, ENRGY 3 FR 25 PSI		
Minimum 1" thick	**N/A**	**N/A**

Note: Insulation shall be loose-laid and membrane mechanically fastened. See base sheet attachment below for fasteners and density. Refer to Roofing Application Standard RAS 117 for insulation attachment requirements.

Base Sheet: One ply of DynaFast 180 HW, or DynaFast 250 HW mechanically fastened through the insulation with High Load LH and Polymer Membrane Batten or High Load Fastener and Trufast Deep Well Coiled Batten Bar spaced 6" o.c. in the center of the minimum 4" torch welded side laps in rows 71" o.c.

Note: Base sheet fasteners shall be tested for withdrawal resistance in compliance with Testing Application Standard TAS 105 to confirm compliance with the wind load requirements of applicable Building Code.

Ply Sheet (Optional): One or more plies of DynaFast 180 HW, DynaWeld 250 S or DynaFast 250 HW heat welded while maintaining minimum 4" side laps.

Membrane: One or more plies of APPeX 4.5 M FR, Tricor M FR, or Tricor M FR CR heat welded while maintaining 4" side laps.

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

Membrane Type: APP/SBS

Deck Type 7I: Recover

Deck Description: Minimum 22 ga., Grade 33 Steel deck with supports at a maximum 6 ft o.c. #12-24 x 1-1/4" HWH self-drilling screws 6" o.c. along each intermediate support. Laps stitched with ¼"-14 x 7/8" HWH self-drilling screws at 24" o.c. *The deck should record a Minimum Characteristic Resistance Force (MCRF) of 307 lbf when tested with High Load Fasteners in accordance with TAS 105.

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

System Type D(4): All layers of insulation simultaneously mechanically fastened with base sheet

All General and System Limitations apply.

Insulation Layer	**Insulation Fasteners (Table 3)**	**Fastener Density/ft^2**
ENRGY 3, ENRGY 3 25 PSI, ValuTherm, ValuTherm 25 PSI, R-Panel, R-Panel 25 PSI, ENRGY 3 AGF, ENRGY 3 AGF 25 PSI, ValuTherm AGF, ValuTherm AGF 25 PSI, ENRGY 3 CGF, ENRGY 3 CGF 25 PSI, ValuTherm CGF, ValuTherm CGF 25 PSI, ENRGY 3 FR, ENRGY 3 FR 25 PSI		
Minimum 1" thick	**N/A**	**N/A**

Note: Insulation shall be loose-laid and membrane mechanically fastened. See base sheet attachment below for fasteners and density. Refer to Roofing Application Standard RAS 117 for insulation attachment requirements.

Base Sheet: One ply of DynaFast 250 HW mechanically fastened through the insulation with High Load Fastener and High Load Plate spaced 6" o.c. in every other lap of the minimum 4" torch welded side laps in rows 70" o.c.

Note: Base sheet fasteners shall be tested for withdrawal resistance in compliance with Testing Application Standard TAS 105 to confirm compliance with the wind load requirements of applicable Building Code.

Ply Sheet (Optional): One or more plies of DynaFast 180 HW, DynaWeld 250 S or DynaFast 250 HW heat welded while maintaining minimum 4" side laps.

Membrane: One or more plies of APPeX 4.5 M FR, Tricor M FR, or Tricor M FR CR heat welded while maintaining 4" side laps.

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

Membrane Type: APP/SBS

Deck Type 7I: Recover

Deck Description: Wood deck secured with #8 wood screws spaced 6" o.c. to supports having maximum 24" o.c. spacing. *The deck should record a Minimum Characteristic Resistance Force (MCRF) of 265 lbf when tested with High Load Fasteners in accordance with TAS 105.

System Type D(5): All layers of insulation simultaneously mechanically fastened with base sheet

All General and System Limitations apply.

Insulation Layer	**Insulation Fasteners (Table 3)**	**Fastener Density/ft^2**
ENRGY 3, ENRGY 3 25 PSI, ValuTherm, ValuTherm 25 PSI, R-Panel, R-Panel 25 PSI, ENRGY 3 AGF, ENRGY 3 AGF 25 PSI, ValuTherm AGF, ValuTherm AGF 25 PSI, ENRGY 3 CGF, ENRGY 3 CGF 25 PSI, ValuTherm CGF, ValuTherm CGF 25 PSI, ENRGY 3 FR, ENRGY 3 FR 25 PSI Minimum 1.5" thick	**N/A**	**N/A**

Note: Insulation shall be loose-laid and membrane mechanically fastened. See base sheet attachment below for fasteners and density. Refer to Roofing Application Standard RAS 117 for insulation attachment requirements.

Base Sheet: One ply of DynaFast 180 HW, or DynaFast 250 HW mechanically fastened through the insulation with High Load Fasteners & APB Plates spaced 9" o.c. in the center of the minimum 4" torch welded side laps.

Note: Base sheet fasteners shall be tested for withdrawal resistance in compliance with Testing Application Standard TAS 105 to confirm compliance with the wind load requirements of applicable Building Code.

Ply Sheet (Optional): One or more plies of DynaFast 180 HW, DynaWeld 250 S or DynaFast 250 HW heat welded while maintaining minimum 4" side laps.

Membrane: One or more plies of APPeX 4.5 M FR, Tricor M FR, or Tricor M FR CR heat welded while maintaining 4" side laps.

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

Membrane Type: APP/SBS

Deck Type 7I: Recover

Deck Description: Wood deck secured with #8 wood screws spaced 6" o.c. to supports having maximum 24" o.c. spacing. *The deck should record a Minimum Characteristic Resistance Force (MCRF) of 244 lbf when tested with High Load Fasteners in accordance with TAS 105.

System Type D(6): All layers of insulation simultaneously mechanically fastened with base sheet

All General and System Limitations apply.

Insulation Layer	**Insulation Fasteners (Table 3)**	**Fastener Density/ft^2**
ENRGY 3, ENRGY 3 25 PSI, ValuTherm, ValuTherm 25 PSI, R-Panel, R-Panel 25 PSI, ENRGY 3 AGF, ENRGY 3 AGF 25 PSI, ValuTherm AGF, ValuTherm AGF 25 PSI, ENRGY 3 CGF, ENRGY 3 CGF 25 PSI, ValuTherm CGF, ValuTherm CGF 25 PSI, ENRGY 3 FR, ENRGY 3 FR 25 PSI		
Minimum 1.5" thick	**N/A**	**N/A**

Note: Insulation shall be loose-laid and membrane mechanically fastened. See base sheet attachment below for fasteners and density. Refer to Roofing Application Standard RAS 117 for insulation attachment requirements.

Base Sheet: One ply of DynaFast 180 HW, or DynaFast 250 HW mechanically fastened through the insulation with High Load LH and Polymer Membrane Batten or High Load Fastener and Trufast Deep Well Coiled Batten Bar spaced 6" o.c. in the center of the minimum 4" torch welded side laps.

Note: Base sheet fasteners shall be tested for withdrawal resistance in compliance with Testing Application Standard TAS 105 to confirm compliance with the wind load requirements of applicable Building Code.

Ply Sheet (Optional): One or more plies of DynaFast 180 HW, DynaWeld 250 S or DynaFast 250 HW heat welded while maintaining minimum 4" side laps.

Membrane: One or more plies of APPeX 4.5 M FR, Tricor M FR, Tricor M FR CR heat welded while maintaining 4" side laps.

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

Membrane Type: APP

Deck Type 7: Recover, Non-insulated

Deck Description: Min. ¼" slurry of min. 440 psi Celcore MF Lightweight Concrete with Celcore HS Rheology Modifying Admixture cast over Structural Concrete or Min. 22 ga. Type B, Grade 33 steel deck with 1" EPS board followed by a 2" top coat of Celcore MF Lightweight Concrete after overnight cure. Curing compound applied after setting of top coat at 300 ft^2/gal. Steel Deck treated with Celcore S-1 prior to placement of Lightweight concrete. Steel deck shall be secured to structural supports spaced a maximum of 5 ft. o.c. with 5/8" diameter puddle welds at each flute. Deck side laps stitched 12" o.c. with ¼"-14 x 7/8" HWH screws. The deck should record a Minimum Characteristic Resistance Force (MCRF) of 155 lbf when tested with Twin Loc-Nails in accordance with TAS 105.

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

System Type E(1): Base sheet mechanically fastened.

All General and System limitations apply.

Base Sheet: One ply of DynaFast 180 HW or DynaFast 250 HW mechanically fastened with min.1.8" Trufast Twin-Loc Nail Assembled Fastener and Trufast Twin Loc Coiled Batten Bar spaced 6" o.c. in the center of the minimum 4" torch welded side laps.

Note: Base sheet fasteners shall be tested for withdrawal resistance in compliance with Testing Application Standard TAS 105 to confirm compliance with the wind load requirements of applicable Building Code.

Ply Sheet (Optional): One or more plies of DynaFast 180 HW, DynaWeld 250 S or DynaFast 250 HW heat welded while maintaining minimum 4" side laps.

Membrane: One or more plies of APPeX 4.5 M FR,Tricor M FR, or Tricor M FR CR heat welded while maintaining 4" side laps.

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

Membrane Type: APP/SBS

Deck Type 7: Recover

Deck Description: Min. 1/8" slurry of minimum 500 psi Celcore MF Lightweight Concrete with Celcore HS Rheology Modifying Admixture over structural concrete or Min. 22 ga. Type B, Grade 33 steel deck with 1" EPS board followed by a 2" top coat of Celcore MF Lightweight Concrete after overnight cure. Curing compound applied after setting of top coat at 300 ft^2/gal. Steel deck shall be secured to structural supports spaced a maximum 5ft o.c. with 5/8" diameter puddle welds at each flute. Deck side laps stitched 15" o.c. with ¼"-14 x 7/8" HWH screws and washers. *The deck should record a Minimum Characteristic Resistance Force (MCRF) of 178 lbf when tested with Trufast Twin-Loc Nail Assembled Fastener in accordance with TAS 105.

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

System Type E(2): Base sheet mechanically fastened.

All General and System Limitations apply.

Vapor Barrier: (**For structural concrete; Optional)** DynaBase HW torch applied to structural concrete deck prepared with ASTM D41 primer.

Base Sheet: One ply of DynaFast 180 HW, or DynaFast 250 HW mechanically fastened with Trufast Twin-Loc Nail Assembled Fastener and Trufast Twin Loc Coiled Batten Bar spaced 6" o.c. in the center of the minimum 4" torch welded side laps.

Note: Base sheet fasteners shall be tested for withdrawal resistance in compliance with Testing Application Standard TAS 105 to confirm compliance with the wind load requirements of applicable Building Code.

Ply Sheet (Optional): One or more plies of DynaFast 180 HW, DynaWeld 250 S or DynaFast 250 heat welded while maintaining minimum 4" side laps and 6" end laps.

Membrane: One or more plies of APPeX 4.5 M FR, Tricor M FR, or Tricor M FR CR heat welded while maintaining 4" side laps

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

Membrane Type: APP

Deck Type 7: Recover, Non-insulated

Deck Description: Min. 1/8" slurry of min. 450 psi Elastizell Lightweight Concrete cast over Structural Concrete or Min. 22 ga. Type B, Grade 33 steel deck with 1" EPS board followed by a 2" top coat of Elastizell Lightweight Concrete. Steel deck shall be secured to structural supports spaced a maximum of 5 ft. o.c. with 5/8" puddle welds. Laps stitched 12" o.c. with ¼"-14 x 7/8" HWH screws. The deck should record a Minimum Characteristic Resistance Force (MCRF) of 344 lbf when tested with High Load Fasteners in accordance with TAS 105.

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

System Type E(3): Base sheet mechanically fastened.

All General and System Limitations apply.

Base Sheet: One ply of DynaFast 180 HW, or DynaFast 250 HW mechanically fastened with High Load Fasteners and High Load Plates spaced 12" o.c. in the center of the minimum 5" heat welded side laps.

Note: Base sheet fasteners shall be tested for withdrawal resistance in compliance with Testing Application Standard TAS 105 to confirm compliance with the wind load requirements of applicable Building Code.

Ply Sheet (Optional): One or more plies of DynaFast 180 HW, DynaWeld 250 S or DynaFast 250 HW heat welded while maintaining minimum 4" side laps.

Membrane: One or more plies of APPeX 4.5 M FR,Tricor M FR, or Tricor M FR CR heat welded while maintaining 4" side laps.

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

Membrane Type: APP

Deck Type 7: Recover

Deck Description: Min. 1/8" slurry of minimum 200 psi Lightweight Concrete cast over Structural Concrete or Min. 22 ga. Type B, Grade 33 steel deck with 1" EPS board followed by a 2" top coat of Lightweight Concrete. Steel deck shall be secured to structural supports a maximum 5ft o.c. with 5/8" puddle welds. Laps stitched 12" o.c. with ¼"-14 x 7/8" HWH screws. *The deck should record a Minimum Characteristic Resistance Force (MCRF) of 289 lbf when tested with High Load Fasteners in accordance with TAS 105.

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

System Type E(4): Base sheet mechanically fastened over Existing SBS modified roofing.

All General and System Limitations apply.

Base Sheet: One ply of DynaFast 180 HW, or DynaFast 250 HW mechanically fastened with High Load Fasteners and High Load Plates spaced 6" o.c. in the center of the minimum 4" heat welded side laps.

Note: Base sheet fasteners shall be tested for withdrawal resistance in compliance with Testing Application Standard TAS 105 to confirm compliance with the wind load requirements of applicable Building Code.

Ply Sheet (Optional): One or more plies of DynaFast 180 HW, DynaWeld 250 S, or DynaFast 180 HW torch adhered.

Membrane: One or more plies of APPeX 4.5 M FR,Tricor M FR, or Tricor M FR CR heat welded while maintaining 4" side laps.

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

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 sidelap 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. 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 with 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