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 Steel 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. 16-0504.09 and consists of pages 1 through 14.
The submitted documentation was reviewed by Jorge L. Acebo.

MIAMI-DADE COUNTY APPROVED

ROOFING SYSTEM APPROVAL

Category:	Roofing
Sub-Category:	Modified Bitumen
Materials:	APP/SBS
Deck Type:	Steel
Maximum Design Pressure:	-105 psf.

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.
GlasPly Premier	36" x 180'	ASTM D2178 Type VI	Type VI asphalt impregnated glass felt for use in conventional and modified bitumen built-up roofing.
GlasPly IV	36" x 180'	ASTM D2178 Type IV	Type IV asphalt impregnated glass felt for use in conventional and modified bitumen built-up roofing.
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.

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
Retro-Fit Board, DuraBoard	High-density perlite roof insulation.	Johns Manville
JM SECUROCK Gypsum-Fiber Roof Board	Gypsum Fiber Board	Johns Manville

APPROVED FASTENERS:

TABLE 3

Fastener Number	Product Name	Product Description	Dimensions	Manufacturer (With Current NOA)
1.	UltraFast Fasteners	Insulation fastener for wood and steel.	#12 x 8" max. Length, #3 Phillips head	Johns Manville
2.	UltraFast 3” Round Metal Plate or UltraFast Square Metal Plate	Galvalume AZ55 steel plate	3” round & 3” square	Johns Manville
3.	High Load Fasteners	Insulation and membrane fastener for steel, wood, or concrete	#15 x 22" max. #3Phillips head	Johns Manville
4.	High Load Plates	Membrane seam plate	2-3/8” round steel plate	Johns Manville
5.	Polymer Membrane Batten	Membrane anchors	1” x 250’	Johns Manville
6.	High Load LH	fastener for steel, wood, or concrete	#15 x 14" max. Oversize #3 Phillips head	OMG, Inc.
7.	APB Plates	Membrane plates	2” round steel plate	Johns Manville
8.	Trufast Deep Well Coiled Batten Bar	Galvalume coated steel membrane batten	1” x 100’ coil	Altenloh, Brink & Co. U.S., Inc.

EVIDENCE SUBMITTED:

Test Agency	Test Identifier	Description	Date
FM Approvals	J.I. 3001482	4470	08/11/98
	J.I. 3002823	4470	04/01/99
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 D 4601	06/04/12
	JMC-074-02-01	ASTM D 4897	04/17/12
	JMC-075-02-04.2	ASTM D6164	12/27/13
	JMC-093-02-01	ASTM D 4601	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-167-02-01	TAS 114(C)	08/05/13
	JMC-168-02-01	TAS 114(J)	08/20/13
	JMC-272-02-01	TAS 114(J)	04/07/16

DECK STRESS ANALYSIS CALCULATIONS/REPORTS

Engineer/Agency	Identifier	Assemblies	Date
Zachary R. Priest, P.E.	Signed/Sealed Calculations	D(1), D(2), D(3), D(5),	04/22/16
		D(4)	04/25/16
		C(1)	05/06/16
		C(2)	04/07/16
Robert Nieminen, P.E.	Signed/Sealed Calculations	C(3)	03/11/16

APPROVED ASSEMBLIES

Membrane Type: APP

Deck Type 2I: Steel, Insulated

Deck Description: 18-22 ga., type B, Grade 80 steel deck shall be secured 6" o.c. to structural supports spaced a maximum of 6 ft. on centers with Traxx/5 screws. Deck side laps attached 30" o.c. using Traxx/1 screws.
This Tested Assembly has been analyzed for allowable deck stress. See Evidence Submitted Table.

System Type C(1): 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)**	**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 FR, Tricor M FR, or Tricor M FR CR heat welded while maintaining 4" side laps.

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

Membrane Type: APP

Deck Type 2I: Steel, Insulated

Deck Description: Minimum 22 ga. Type B (Grade 33) steel deck installed over structural supports spaced 6-ft o.c. with minimum 5/8-inch diameter puddle welds and welded to structural supports at each flute; Deck sides laps stitched maximum 24" o.c. with 1/4" – 14 x 7/8" HWH screws.
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 Minimum¼" thick	**1 with 2 (square plates only)**	**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:	One or more plies of DynaFast 180 HW, or DynaFast 250 HW torch adhered with minimum 4" slide 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 2I: Steel, Insulated

Deck Description: Minimum 22 ga. Type B, Grade 40 steel attached to structural supports spaced maximum 6 ft o.c. with minimum 5/8-inch puddle welds spaced maximum 6" o.c.. Side laps stiched with Tek/1 screws, spaced maximum 20 inch o.c.
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 0.25" thick	**1 with 2 (square plates only)**	**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 DynaFast 180 HW, or DynaFast 250 HW fully bonded by torch adhering with minimum 4" slide 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 2I: Steel, Insulated

Deck Description: Min. 22 ga., Type B, min. Grade 50 steel deck attached with 5/8" diameter puddle welds at maximum spacing of 6" o.c. at each flute with structural supports spaced a maximum 6 ft o.c.
This Tested Assembly has been analyzed for allowable deck stress. See Evidence Submitted Table.

System Type D(1): One or more layers of insulation and base sheet simultaneously 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**
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 AGF, ENRGY 3 AGF 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: Top layer shall have preliminary attachment, prior to the installation of the base/anchor 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 base/anchor sheet below for fasteners and density.

Base Sheet: One ply of DynaFast HW 180, or DynaFast 250 HW mechanically fastened through the insulation with High Load Fasteners & APB Plates spaced 6" o.c. in the center of the 4" torch welded 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: -105 psf. (See General Limitation #7.)

Membrane Type: APP

Deck Type 2I: Steel, Insulated

Deck Description: Min. 22 ga., Type B, min. Grade 40 ksi steel deck attached with 5/8" diameter puddle welds at maximum spacing of 6" o.c. at each flute with structural supports spaced a maximum 6 ft o.c.
This Tested Assembly has been analyzed for allowable deck stress. See Evidence Submitted Table.

System Type D(2): One or more layers of insulation and base sheet simultaneously 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**
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: Top layer shall have preliminary attachment, prior to the installation of the base/anchor 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 base/anchor sheet below for fasteners and density.

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 spaced 6" o.c. in the center of the minimum 4" torch welded side laps in rows maximum 71" o.c.

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

Deck Type 2I: Steel, Insulated

Deck Description: Min. 22 ga., Type B, min. Grade 33 steel deck attached with 5/8" diameter puddle welds at maximum spacing of 6" o.c. at each flute with structural supports spaced a maximum 6 ft o.c.
This Tested Assembly has been analyzed for allowable deck stress. See Evidence Submitted Table.

System Type D(3): One or more layers of insulation and base sheet simultaneously 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**
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: Top layer shall have preliminary attachment, prior to the installation of the base/anchor 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. All layers of insulation and base sheet shall be simultaneously fastened. See base/anchor sheet below for fasteners and density.

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.

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 2I: Steel, Insulated

Deck Description: Min. 22 ga. Type B, min. Grade 33 steel deck attached with #12-24 x 1-1/4" HWH self-drilling screws at maximum spacing of 6" o.c. at each flute with structural supports a maximum 6 ft o.c. Laps stitched with 1/4"-14 x 7/8" HWH self-drilling screws at 24" o.c.
This Tested Assembly has been analyzed for allowable deck stress. See Evidence Submitted Table.

System Type D(4): One or more layers of insulation and base sheet simultaneously 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**
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: Top layer shall have preliminary attachment, prior to the installation of the base/anchor 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. All layers of insulation and base sheet shall be simultaneously fastened. See base/anchor sheet below for fasteners and density.

Base Sheet: One ply of or 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 maximum 70" o.c.

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

Deck Type 2I: Steel, Insulated

Deck Description: Min. 22 ga., min. Grade 80, Type EF-steel deck attached with #12-24 x 1-1/4" DP5 HWH self-drilling screws with 3/4" O.D. washers at maximum spacing of 6" o.c. at each flute with structural supports a maximum 6 ft o.c. Laps stitched with 1/4"-14 x 7/8" HWH self-drilling screws at 24" o.c.
This Tested Assembly has been analyzed for allowable deck stress. See Evidence Submitted Table.

System Type D(5): One or more layers of insulation and base sheet simultaneously 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**
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: Top layer shall have preliminary attachment, prior to the installation of the base/anchor 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. All layers of insulation and base sheet shall be simultaneously fastened. See base/anchor sheet below for fasteners and density.

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 6" o.c. in the center of the minimum 4" torch welded 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 4.5 M 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.)

STEEL DECK SYSTEM LIMITATIONS:

1. If mechanical attachment to the structural deck through the lightweight insulating concrete is proposed, a field withdrawal resistance testing shall be performed to determine equivalent or enhanced fastener patterns and density. All testing and fastening design shall be in compliance with Testing Application Standard TAS 105 and Roofing Application Standard RAS 117, calculations shall be signed and sealed by a Florida registered Professional Engineer, Registered Architect, or Registered Roof Consultant.
2. For steel deck application where specific deck construction is not referenced: The deck shall be a minimum 22 gage attached with 5/8" puddle welds with weld washers at every flute with maximum deck spans of 5 ft. o.c.

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