MIAMI-DADE COUNTY
PRODUCT CONTROL SECTION
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BUILDING AND NEIGHBORHOOD COMPLIANCE DEPARTMENT (BNC)
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 BNC - 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. BNC 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 and the High Velocity Hurricane Zone of the Florida Building Code.

DESCRIPTION: Johns Manville Built-Up Roofing Systems Over Concrete 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. 08-0729.06 and consists of pages 1 through 26.
The submitted documentation was reviewed by Jorge L. Acebo.

MIAMI-DADE COUNTY APPROVED

NOA No: 11-0330.08
Expiration Date: 07/19/12
Approval Date: 07/28/11

ROOFING SYSTEM APPROVAL

Category:	Roofing
Sub-Category:	Built-up Roofing
Deck Type:	Concrete
Material:	Fiberglass
Maximum Design Pressure	-305 psf

TRADE NAMES OF PRODUCTS MANUFACTURED OR LABELED BY APPLICANT:

TABLE 1

Product	Dimensions	Test Specification	Product Description
DynaFlex	36" x 25' long	ASTM D 6221	SBS modified bitumen composite flashing with fiber glass scrim and two-ply polyester reinforcement, for use in conventional and modified bitumen built-up roofing assemblies for base flashings.
Expand-O-Flash	Various	N/A	Expansion joint covers manufactured from non-reinforced, form-supported elastomeric bellows with a bifurcated waterproof attachment to metal flanges. Available in various standard configurations and may be custom manufactured to specific dimensions.
Expand-O-Guard	Various	N/A	Elastomeric expansion joint cover for vertical expansion and seismic joints. Manufactured from non-reinforced, form-supported elastomeric bellows with a bifurcated waterproof attachment to metal flanges. Available in various standard configurations and may be custom manufactured to specific dimensions.
FP-10 Vents	10" deck flange, base diameter of 4" and a height of 6".	N/A	One-way roof vent, designed for use in various roof systems, for the release of pressure created by gases or moisture vapor trapped within the roofing system.
FesCant Plus Cant Strips, and Taper Edge.	Various	TAS 110	Factory pre-fabricated cant strips and taper edge, manufactured from expanded perlite insulation.
Flex-I-Drain	Various sizes from 3" to 6"	BOCA 76-61 SBCCI 89204 UBC 3236	Two piece flexible drain system composed of a Noryl deck flange, a flexible neoprene bellows and no hub connection. Available in various sizes and styles for most retro-fit applications.

Product	Dimensions	Test Specification	Product Description
GlasBase Plus	36" x 108'	ASTM D 4601	Type II asphalt impregnated and coated glass fiber base sheet for use in conventional and modified bitumen built-up roofing.
GlasKap	36" x 36	ASTM D 3909	Asphalt impregnated and coated felt surfaced with mineral granules used as the top ply in conventional built-up roof membranes.
GlasKap CR	36” x 36'	ASTM D 3909	White mineral surfaced, white acrylic coated, fiber glass cap sheet for use as the top ply in conventional built-up roof membranes
GlasKap Plus	39-3/8” x 34'	ASTM D 3909	SBS Modified Asphaltic cap sheet used as the top ply in conventional built-up roof membranes.
GlasPly IV	36" x 180'	ASTM D 4601 Type IV	Type IV asphalt impregnated glass felt for use in conventional and modified bitumen built-up roofing.
GlasPly Premier	36" x 180'	ASTM D 2178 Type VI	Type VI asphalt impregnated glass felt for use in conventional and modified bitumen built-up roofing.
GlasTite Flexible	36” x 25' long	ASTM D 4601	Asphalt composite flashing with fiberglass scrim and two-ply polyester reinforcement, for use in conventional built-up roofing assemblies for base flashings.
Bestile Industrial Roof Cement	N/A	ASTM D 4586 Type II	General purpose medium trowel grade, cement cutback asphalt mastic reinforced with non-asbestos fibers and mineral stabilizers.
MBR Flashing Cement Activator	N/A	Proprietary	Activator component for use with MBR Flashing Cement Base
MBR Flashing Cement Base	N/A	Proprietary	A two-component elastomeric, cold application adhesive, consisting of a modified proprietary compound with an asphalt base.
PermaPly 28	36" x 106’	ASTM D 4601	Type II asphalt impregnated and coated glass fiber base sheet for use in conventional and modified bitumen built-up roofing.
Presto Lok Fascia and Flashing System	Various	TAS 114	A multi-piece fascia and flashing system for built-up and modified bitumen roofing systems manufactured from aluminum or steel. Extender plates available for wide fascia applications. This assembly meets the criteria of FMRC 1-49 for wind resistance perimeter flashing.

Product	Dimensions	Test Specification	Product Description
Ventsulation Felt	36" x 36'	ASTM D 4897 Type II	Heavy duty fiber glass base sheet impregnated and coated on both sides with asphalt with or without fine mineral stabilizer. Surfaced on the bottom side with coarse mineral granules embedded in Asphaltic coating.

APPROVED INSULATIONS:

TABLE 2

Product Name	Product Description	Manufacturer (With Current NOA)
ENRGY 3	Isocyanurate Insulation.	Johns Manville
Fesco Foam, Dura Foam	Isocyanurate Insulation with perlite facer	Johns Manville
Retro-Fit Board	A high-density perlite roof insulation.	Johns Manville
Fesco Board, Tapered Fesco Board	Rigid perlite roof insulation board.	Johns Manville
AC Foam II	Isocyanurate Insulation	Atlas Roofing Corp.
BP High Strength Fiberboard	High density wood fiber insulation board	Building Products of Canada
Celotex Fiberboard	Wood fiber insulation board	Celotex
DensDeck	Silicon treated gypsum	G-P Products
ISO 95+ GL	Polyisocyanurate foam insulation	Firestone
Multi-Max FA-3	Polyisocyanurate foam insulation	Rmax, Inc.
Hytherm AP	Isocyanurate Insulation	Dow
High Density Wood Fiberboard	High Density Wood Fiber insulation board.	Generic

APPROVED FASTENERS:

TABLE 3

Fastener Number	Product Name	Product Description	Dimensions	Manufacturer (With Current NOA)
1.	#14 Roofgrip Fasteners	Insulation fastener for concrete, steel or wood decks.		OMG
2.	Metal Plate	Galvalume stress plate.	3” round 3” square	OMG
3.	Gearlok Plastic Plate	Polypropylene round plate	3.2"	OMG
4.	Structural Concrete Fastener	Insulation fastener for concrete decks.		Johns Manville
5.	JM Standard Metal Plate	Galvalume AZ55 steel plate	3” round	Johns Manville
6.	JM Plastic Plate	Polypropylene round plate	3.25” round	Johns Manville
7.	UltraFast #14	Insulation fastener for concrete deck.		Johns Manville
8.	UltraFast ASAP	Pre-assembled Insulation fastener and plate		Johns Manville
9.	UltraFast Metal Plate	Galvalume AZ55 steel plate	3” round 3” square	Johns Manville
10.	UltraFast Plastic Plate	High Density Polyolefin round plate		Johns Manville
11.	CD-10	Insulation fastener for concrete decks.		OMG
12.	Olympic Fastener #14	Insulation fastener		OMG
13.	Olympic Fastener ASAP	Pre-assembled Insulation fastener and plate		OMG
14.	Olympic Polypropylene	Polypropylene plastic plate	3.25" round	OMG
15.	Olympic G-2	Galvalume AZ55 steel plate	3.5" round	OMG
16.	Olympic Standard	Galvalume AZ50 steel plate	3" round	OMG

EVIDENCE SUBMITTED:

Test Agency/Identifier	Name	Report	Date
Factory Mutual Research Corp.	J.I. # 3001629	Class 4470	09.10.98
	J.I. # 3D4A4.AM	Class 4470	09.28.98
	J.I. # 3000949	Class 4470	06.05.98
	J.I. # 3001482	Class 4470	08.11.98
	J.I. # OZ8A9.AM	Class 4470	09.10.98
	J.I. # 3007148	Class 4450	04.19.00
	J.I. # 3006346	Class 4450	08.15.00
	3009499	Class 4470	04.04.01
	3014090	Class 4470	09.05.02
	3012974	Class 4450	06.03.02
	3011248	Class 4470	11.01.02
	3011057	Class 4470	08.10.01
	3015444	Class 4450	07.11.03
	3026130	Class 4470	04.26.06
Trinity|ERD	# 10390A.10.97-1	TAS 114 / FM 4470	10.97
	# 4361-02.04-1	TAS 114 / FM 4470	04.97
	# 10390A.12.97-1	TAS 114 / FM 4470	12.97
	10391.01.03	TAS 114 / FM 4470	01.29.03
	J7670.06.08	ASTM D3909	06.16.08
Underwriters Laboratories, Inc.	R 10167 (N)	UL 790	01.01.01
Dynatech Engineering, Inc.	4360.03.95-1	TAS 114	3.95
	4360.03.95-2		
	4361.5.95-1	TAS 114	5.95
Independent Roof Testing & Consulting of South Florida, Inc.	IRT 99006.1.20.99	TAS 114	1.20.99
	IRT 99007.1.20.99		
	IRT 99008.1.20.99		
	IRT 99016.1.20.99		
	IRT 99009.2.10.99	TAS 114	2.10.99
	IRT 99010.2.10.99		

APPROVED ASSEMBLIES

Membrane Type: BUR

Deck Type 3I: Concrete Decks, Insulated

Deck Description: 2500 psi structural concrete or concrete plank

System Type A(1): All layers of insulation adhered to deck.

All General and System limitations apply.

Base Insulation Layer	**Insulation Fasteners (Table 3)**	**Fastener Density/ft^2**
Dura Foam, Fesco Foam (Isocyanurate side down) Minimum 1.5" thick	**N/A**	**N/A**
ENRGY 3 Minimum 1.75" thick	**N/A**	**N/A**
Top Insulation Layer	**Insulation Fasteners (Table 3)**	**Fastener Density/ft^2**
Fesco Board, DuraBoard Minimum ¾" thick	**N/A**	**N/A**

Concrete deck shall be primed with ASTM D 41 asphalt primer and allowed to dry prior to application of base sheet. All insulation shall be adhered to the deck in full mopping of approved asphalt within the EVT range and at a rate of 20-40 lbs/100 ft^2. 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.

Base Sheet: PermaPly 28, GlasBase Plus, DynaBase, GlasPly Premier or GlasPly IV applied to the insulation in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs./sq.

Ply Sheet: Two or more plies of GlasPly IV or GlasPly Premier ply sheet adhered in a full mopping of hot asphalt applied within the EVT range and at a rate of 20-40 lbs./sq.

Cap Sheet: (Optional) One ply of GlasKap, GlasKap CR or GlasKap Plus adhered in a full mopping of hot asphalt applied within the EVT range and at a rate of 20-40 lbs./sq.

Surfacing: (Required if no cap sheet is used) Install the following:

1. Flood coat and gravel/slag with an application rate of 60 lbs./sq. & 400 lbs./sq., respectively.

Maximum Design Pressure: -126.5 psf (See General Limitation #9)

Membrane Type: BUR

Deck Type 3I: Concrete Decks, Insulated

Deck Description: 2500 psi structural concrete or concrete plank

System Type A(2): All layers of insulation adhered to deck.

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**
Dura Foam, Fesco Foam (Isocyanurate side down) Minimum 1.5" thick	**N/A**	**N/A**
ENRGY 3 Minimum 1.4" thick	**N/A**	**N/A**
Top Insulation Layer	**Insulation Fasteners (Table 3)**	**Fastener Density/ft^2**
Retro-Fit Board, DuraBoard Minimum ½" thick	**N/A**	**N/A**

Concrete deck shall be primed with ASTM D 41 asphalt primer and allowed to dry prior to application of base sheet. All insulation shall be adhered to the deck in full mopping of approved asphalt within the EVT range and at a rate of 20-40 lbs/100 ft^2. 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.

Base Sheet: (Optional) PermaPly 28, GlasBase Plus, DynaBase, GlasPly Premier or GlasPly IV applied to the insulation in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs./sq.

Ply Sheet: Two or more plies of GlasPly IV or GlasPly Premier ply sheet adhered in a full mopping of hot asphalt applied within the EVT range and at a rate of 20-40 lbs./sq.

Cap Sheet: (Optional) One ply of GlasKap, GlasKap CR or GlasKap Plus adhered in a full mopping of hot asphalt applied within the EVT range and at a rate of 20-40 lbs./sq.

Surfacing: (Required if no cap sheet is used) Install the following:

1. Flood coat and gravel/slag with an application rate of 60 lbs./sq. & 400 lbs./sq., respectively.

Maximum Design Pressure: -155 psf (See General Limitation #9)

Membrane Type: BUR

Deck Type 3I: Concrete Decks, Insulated

Deck Description: 2500 psi structural concrete or concrete plank

System Type A(3): All layer of insulation adhered to a primed deck. Membrane is subsequently fully or partially adhered.

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**
Base Insulation Layer	**Insulation Fasteners (Table 3)**	**Fastener Density/ft^2**
ENRGY 3 **Minimum 1.5 thick**	**N/A**	**N/A**
Top Insulation Layer	**Insulation Fasteners (Table 3)**	**Fastener Density/ft^2**
Fesco Board, DuraBoard **Minimum ¾" thick**	**N/A**	**N/A**

Note: All layers of insulation shall be adhered with approved asphalt within the EVT range and at a rate of 20-40 lbs/100 ft^2 or MBR Bonding Adhesive in 1-½" wide beads at maximum spacing of 12" 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 may be used as a top layer placed with the polyisocyanurate side facing down.

Base Sheet: PermaPly 28, GlasBase Plus, DynaBase, GlasPly Premier or GlasPly IV applied to the insulation in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs./sq.

Ply Sheet: Two or more plies of GlasPly IV or GlasPly Premier ply sheet adhered in a full mopping of hot asphalt applied within the EVT range and at a rate of 20-40 lbs./sq.

Cap Sheet: (Optional) One ply of GlasKap, GlasKap CR or GlasKap Plus adhered in a full mopping of hot asphalt applied within the EVT range and at a rate of 20-40 lbs./sq.

Surfacing: (Required if no cap sheet is used) Install the following:

1. Flood coat and gravel/slag with an application rate of 60 lbs./sq. & 400 lbs./sq., respectively.

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

Membrane Type: BUR

Deck Type 3I: Concrete Decks, Insulated

Deck Description: 2500 psi structural concrete or concrete plank

System Type A(4): All layers of insulation adhered to deck.

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, ACFoam II, Hy-Therm AP, ISO 95+ GL or Multi Max FA-3 Minimum 1.5" thick	**N/A**	**N/A**
Top Insulation Layer	**Insulation Fasteners (Table 3)**	**Fastener Density/ft^2**
Fesco Board Minimum ¾" thick	**N/A**	**N/A**

Note: All layers of insulation shall be adhered with JM Urethane Insulation Adhesive in ½" wide beads at maximum spacing of 12" 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 may be used as a top layer placed with the polyisocyanurate side facing down.

Base Sheet: (Optional) PermaPly 28, GlasBase Plus, DynaBase, GlasPly Premier or GlasPly IV applied to the insulation in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs./sq.

Ply Sheet: Two or more plies of GlasPly IV or GlasPly Premier ply sheet adhered in a full mopping of hot asphalt applied within the EVT range and at a rate of 20-40 lbs./sq.

Cap Sheet: (Optional) One ply of GlasKap, GlasKap CR or GlasKap Plus adhered in a full mopping of hot asphalt applied within the EVT range and at a rate of 20-40 lbs./sq.

Surfacing: (Required if no cap sheet is used) Install the following:

1. Flood coat and gravel/slag with an application rate of 60 lbs./sq. & 400 lbs./sq., respectively.

Maximum Design Pressure: -112.5 psf (See General Limitation #9)

Membrane Type: BUR

Deck Type 3I: Concrete Decks, Insulated

Deck Description: 2500 psi structural concrete or concrete plank

System Type A(5): All layers of insulation adhered to deck.

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, ACFoam II, Hy-Therm AP, ISO 95+ GL or Multi Max FA-3 Minimum 1.5" thick	**N/A**	**N/A**

Top Insulation Layer	**Insulation Fasteners (Table 3)**	**Fastener Density/ft^2**
DensDeck, High Density Fiberboard, BP High Strength Fiberboard, Celotex Fiberboard Minimum ½" thick	**N/A**	**N/A**

Note: All layers of insulation shall be adhered with JM Urethane Insulation Adhesive in ½" wide beads at maximum spacing of 6" 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 may be used as a top layer placed with the polyisocyanurate side facing down.

Base Sheet: (Optional) PermaPly 28, GlasBase Plus, DynaBase, GlasPly Premier or GlasPly IV applied to the insulation in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs./sq.

Ply Sheet: Two or more plies (three plies required if neither a base sheet nor a cap sheet is used) of GlasPly IV or GlasPly Premier ply sheet adhered in a full mopping of hot asphalt applied within the EVT range and at a rate of 20-40 lbs./sq.

Cap Sheet: (Optional) One ply of GlasKap, GlasKap CR or GlasKap Plus adhered in a full mopping of hot asphalt applied within the EVT range and at a rate of 20-40 lbs./sq.

Surfacing: (Required if no cap sheet is used) Install the following:

1. Flood coat and gravel/slag with an application rate of 60 lbs./sq. & 400 lbs./sq., respectively.

Maximum Design Pressure: -217.5 psf (See General Limitation #9)

Membrane Type: BUR

Deck Type 3I: Concrete Decks, Insulated

Deck Description: 2500 psi structural concrete or concrete plank

System Type A(6): All layers of insulation adhered to deck.

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, ACFoam II, Hy-Therm AP, ISO 95+ GL or Multi Max FA-3 Minimum 1.5" thick	**N/A**	**N/A**

Note: All layers of insulation shall be adhered with JM Urethane Insulation Adhesive in ½" wide beads at maximum spacing of 12" o.c. Please refer to Roofing Application Standard RAS 117 for insulation attachment. Composite insulation panels may be used as a top layer placed with the polyisocyanurate side facing down.

Base Sheet: (Optional) PermaPly 28, GlasBase Plus, DynaBase, GlasPly Premier or GlasPly IV applied to the insulation in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs./sq. If base sheet is applied directly to polyisocyanurate insulation only a spot or strip mopped application as detailed in this approval is approved; **See General Limitation #4 Maximum Design Pressure -45 psf applies.**

Ply Sheet: Two or more plies (three plies required if neither a base sheet nor a cap sheet is used) of GlasPly IV or GlasPly Premier ply sheet adhered in a full mopping of hot asphalt applied within the EVT range and at a rate of 20-40 lbs./sq. If ply sheet is applied directly to polyisocyanurate insulation only a spot or strip mopped application as detailed in this approval is approved; **See General Limitation #4 Maximum Design Pressure -45 psf applies.**

Cap Sheet: (Optional) One ply of GlasKap, GlasKap CR or GlasKap Plus adhered in a full mopping of hot asphalt applied within the EVT range and at a rate of 20-40 lbs./sq.

Surfacing: (Required if no cap sheet is used) Install the following:

1. Flood coat and gravel/slag with an application rate of 60 lbs./sq. & 400 lbs./sq., respectively.

Maximum Design Pressure: -187.5 psf (See General Limitation #9)

Membrane Type: BUR

Deck Type 3I: Concrete Decks, Insulated

Deck Description: 2500 psi structural concrete or concrete plank

System Type A(7): All layers of insulation adhered to deck.

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, ACFoam II, Hy-Therm AP, ISO 95+ GL or Multi Max FA-3 Minimum 1.5" thick	**N/A**	**N/A**

Note: All layers of insulation shall be adhered with JM Urethane Insulation Adhesive in ½" wide beads at maximum spacing of 6" o.c. Please refer to Roofing Application Standard RAS 117 for insulation attachment. Composite insulation panels may be used as a top layer placed with the polyisocyanurate side facing down.

Base Sheet: (Optional) PermaPly 28, GlasBase Plus, DynaBase, GlasPly Premier or GlasPly IV applied to the insulation in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs./sq. If base sheet is applied directly to polyisocyanurate insulation only a spot or strip mopped application as detailed in this approval is approved; **See General Limitation #4 Maximum Design Pressure -45 psf applies.**

Ply Sheet: Two or more plies (three plies required if neither a base sheet nor a cap sheet is used) of GlasPly IV or GlasPly Premier ply sheet adhered in a full mopping of hot asphalt applied within the EVT range and at a rate of 20-40 lbs./sq. If ply sheet is applied directly to polyisocyanurate insulation only a spot or strip mopped application as detailed in this approval is approved; **See General Limitation #4 Maximum Design Pressure -45 psf applies.**

Cap Sheet: (Optional) One ply of GlasKap, GlasKap CR or GlasKap Plus adhered in a full mopping of hot asphalt applied within the EVT range and at a rate of 20-40 lbs./sq.

Surfacing: (Required if no cap sheet is used) Install the following:

1. Flood coat and gravel/slag with an application rate of 60 lbs./sq. & 400 lbs./sq., respectively.

Maximum Design Pressure: -277.5 psf (See General Limitation #9)

Membrane Type: BUR

Deck Type 3I: Concrete Decks, Insulated

Deck Description: 2500 psi structural concrete or concrete plank

System Type A(8): Optional anchor sheet adhered with approved asphalt; all layers of insulation adhered with approved asphalt.

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, Fesco Foam Minimum 1" thick	**N/A**	**N/A**
Fesco Board Minimum ¾" thick	**N/A**	**N/A**
Retro-Fit Board, DuraBoard Minimum ½" thick	**N/A**	**N/A**
Top Insulation Layer (Optional)	**Insulation Fasteners (Table 3)**	**Fastener Density/ft^2**
Any insulations listed for Base Layer, above		
Tapered Fesco Board, ENRGY 3 Minimum ½" thick	**N/A**	**N/A**

Note: Concrete deck shall be primed with ASTM D 41 asphalt primer and allowed to dry prior to application of base sheet. All insulation shall be adhered to the deck in full mopping of approved asphalt within the EVT range and at a rate of 20-40 lbs/100 ft^2. 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.

Anchor Sheet: (Optional) One ply of Ventsulation Felt, GlasBase Plus or PermaPly 28 in a spot mopping of approved asphalt, 12" diameter circles, 24" o.c. at a rate of 12 lbs./sq.. If anchor sheet is applied directly to polyisocyanurate insulation only a spot or strip mopped application as detailed in this approval is approved; **See General Limitation #4 Maximum Design Pressure -45 psf applies.**

Base Sheet: (Optional) Install one ply of GlasBase Plus or PermaPly 28 directly to the insulated substrate. Adhere in a full mopping of hot asphalt applied within the EVT range and at a rate of 20-40 lbs./sq. If base sheet is applied directly to polyisocyanurate insulation only a spot or strip mopped application as detailed in this approval is approved; **See General Limitation #4 Maximum Design Pressure -45 psf applies.**

Ply Sheet: Two or more plies of GlasPly IV or GlasPly Premier adhered in a full mopping of hot asphalt applied within the EVT range and at a rate of 20-40 lbs./sq. If ply sheet is applied directly to polyisocyanurate insulation only a spot or strip mopped application as detailed in this approval is approved; **See General Limitation #4 Maximum Design Pressure -45 psf applies.**

Cap Sheet:	(Optional) One ply of GlasKap, GlasKap CR or GlasKap Plus adhered in a full mopping of hot asphalt applied within the EVT range and at a rate of 20-40 lbs./sq.
Surfacing:	(Required if no cap sheet is used) Install the following: 1. Flood coat and gravel/slag with an application rate of 60 lbs./sq. & 400 lbs./sq., respectively.
Maximum Design Pressure:	-90 psf (See General Limitation #9)

Membrane Type: BUR

Deck Type 3I: Concrete Decks, Insulated

Deck Description: 2500 psi structural concrete or concrete plank

System Type A(9): Optional base sheet adhered with approved asphalt; one or more layers of insulation adhered with approved asphalt.

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, Fesco Foam Minimum 1.5" thick	**N/A**	**N/A**
Top Insulation Layer	**Insulation Fasteners (Table 3)**	**Fastener Density/ft^2**
ENRGY 3 Minimum 1.5" thick	**N/A**	**N/A**
Fesco Board Minimum ¾" thick	**N/A**	**N/A**
Retro-Fit Board, DuraBoard Minimum ½" thick	**N/A**	**N/A**

Note: Concrete deck shall be primed with ASTM D 41 asphalt primer and allowed to dry prior to application of base sheet. All insulation shall be adhered to the deck in full mopping of approved asphalt within the EVT range and at a rate of 20-40 lbs/100 ft^2. 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.

Base Sheet: (Optional) One ply of GlasPly Premier, GlasPly IV, PermaPly 28, or GlasBase Plus adhere in a full mopping of hot asphalt applied within the EVT range and at a rate of 20-40 lbs./sq. If base sheet is applied directly to polyisocyanurate insulation only a spot or strip mopped application as detailed in this approval is approved; **See General Limitation #4 Maximum Design Pressure -45 psf applies.**

Ply Sheet: Three or more plies of GlasPly IV or GlasPly Premier adhered in a full mopping of hot asphalt applied within the EVT range and at a rate of 20-40 lbs./sq. If ply sheet is applied directly to polyisocyanurate insulation only a spot or strip mopped application as detailed in this approval is approved; **See General Limitation #4 Maximum Design Pressure -45 psf applies.**

Cap Sheet: (Optional) One ply of GlasKap, GlasKap CR or GlasKap Plus adhered in a full mopping of hot asphalt applied within the EVT range and at a rate of 20-40 lbs./sq.

Surfacing: (Required if no cap sheet is used) Install the following:

1. Flood coat and gravel/slag with an application rate of 60 lbs./sq. & 400 lbs./sq., respectively.

Maximum Design Pressure: -305 psf (See General Limitation #9)

Membrane Type: BUR

Deck Type 3I: Concrete Decks, Insulated

Deck Description: 2500 psi structural concrete or concrete plank

System Type A(10): Optional base sheet adhered with approved asphalt; one or more layers of insulation adhered with approved asphalt.

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, Fesco Foam Minimum 1.5" thick	**N/A**	**N/A**
Fesco Board Minimum 1" thick	**N/A**	**N/A**
Retro-Fit Board, DuraBoard Minimum ½" thick	**N/A**	**N/A**

Note: Concrete deck shall be primed with ASTM D 41 asphalt primer and allowed to dry prior to application of base sheet. All insulation shall be adhered to the deck in full mopping of approved asphalt within the EVT range and at a rate of 20-40 lbs/100 ft^2. 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.

Base Sheet: (Optional) Install one ply of GlasBase Plus or PermaPly 28 directly to the insulated substrate. Adhere in a full mopping of hot asphalt applied within the EVT range and at a rate of 20-40 lbs./sq. If base sheet is applied directly to polyisocyanurate insulation only a spot or strip mopped application as detailed in this approval is approved; **See General Limitation #4 Maximum Design Pressure -45 psf applies.**

Ply Sheet: Three or more plies of GlasPly IV or GlasPly Premier adhered in a full mopping of hot asphalt applied within the EVT range and at a rate of 20-40 lbs./sq. If ply sheet is applied directly to polyisocyanurate insulation only a spot or strip mopped application as detailed in this approval is approved; **See General Limitation #4 Maximum Design Pressure -45 psf applies.**

Cap Sheet: (Optional) One ply of GlasKap, GlasKap CR or GlasKap Plus adhered in a full mopping of hot asphalt applied within the EVT range and at a rate of 20-40 lbs./sq.

Surfacing: (Required if no cap sheet is used) Install the following:

1. Flood coat and gravel/slag with an application rate of 60 lbs./sq. & 400 lbs./sq., respectively.

Maximum Design Pressure: -150 psf (See General Limitation #9)

Membrane Type: BUR

Deck Type 3I: Concrete Decks, Insulated

Deck Description: 2500 psi structural concrete or concrete plank

System Type A(11): Fesco insulation adhered with approved asphalt.

All General and System limitations apply.

Insulation Layer	**Insulation Fasteners (Table 3)**	**Fastener Density/ft^2**
Fesco Board Minimum ¾" thick	**N/A**	**N/A**

Note: Concrete deck shall be primed with ASTM D 41 asphalt primer and allowed to dry prior to application of base sheet. All insulation shall be adhered to the deck in full mopping of approved asphalt within the EVT range and at a rate of 20-40 lbs/100 ft^2. 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.

Base Sheet: (Optional) Install one ply of GlasBase Plus or PermaPly 28 directly to the insulated substrate. Adhere in a full mopping of hot asphalt applied within the EVT range and at a rate of 20-40 lbs./sq..

Ply Sheet: Three or more plies of GlasPly Premier, GlasPly IV adhered in a full mopping of hot asphalt applied within the EVT range and at a rate of 20-40 lbs./sq.

Cap Sheet: (Optional) One ply of GlasKap, GlasKap CR or GlasKap Plus adhered in a full mopping of hot asphalt applied within the EVT range and at a rate of 20-40 lbs./sq.

Surfacing: (Required if no cap sheet is used) Install the following:

1. Flood coat and gravel/slag with an application rate of 60 lbs./sq. & 400 lbs./sq., respectively.

Maximum Design Pressure: -112.5 psf (See General Limitation #9)

Membrane Type: BUR

Deck Type 3I: Concrete Decks, Insulated

Deck Description: 2500 psi structural concrete or concrete plank

System Type B: Base layer of insulation mechanically fastened, optional top layer of insulation adhered with approved asphalt.

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/ft²**
ENRGY 3 Minimum 1.4" thick	**1, 4, 7, 8 11, 12 or 13**	**1:3 ft²**
ENRGY 3 Minimum 2" thick	**1, 4, 7, 8 11, 12 or 13**	**1:2 ft²**
Fesco Board, DuraBoard Minimum ¾" thick	**1, 4, 7, 8 11, 12 or 13**	**1:2 ft²**

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 (Optional)	**Insulation Fasteners (Table 3)**	**Fastener Density/ft²**
Any insulations listed for Base Layer, above		
Fesco Board Minimum ¾" thick	**N/A**	**N/A**
Retro-Fit Board Minimum ½" thick	**N/A**	**N/A**

Note: Apply top layer of insulation in a full mopping of any approved mopping asphalt within the EVT range and at a rate of 20-40 lbs/100 ft². 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 may be used as a top layer placed with the polyisocyanurate side facing down.

Base Sheet: (Optional) Install one ply of GlasBase Plus or PermaPly 28 directly to the insulated substrate. Adhere in a full mopping of hot asphalt applied within the EVT range and at a rate of 20-40 lbs./sq.. If base sheet is applied directly to polyisocyanurate insulation only a spot or strip mopped application as detailed in this approval is approved; **See General Limitation #4 Maximum Design Pressure -45 psf applies.**.

Ply Sheet:	Two or more plies of GlasPly IV or GlasPly Premier ply sheet adhered in a full mopping of hot asphalt applied within the EVT range and at a rate of 20-40 lbs./sq. If ply sheet is applied directly to polyisocyanurate insulation only a spot or strip mopped application as detailed in this approval is approved; **See General Limitation #4 Maximum Design Pressure -45 psf applies.**
Cap Sheet:	(Optional) One ply of GlasKap, GlasKap CR or GlasKap Plus adhered in a full mopping of hot asphalt applied within the EVT range and at a rate of 20-40 lbs./sq.
Surfacing:	(Required if no cap sheet is used) Install the following: 1. Flood coat and gravel/slag with an application rate of 60 lbs./sq. & 400 lbs./sq., respectively.
Maximum Design Pressure:	-52.5 psf (See General Limitation #7)

Membrane Type: BUR

Deck Type 3I: Concrete Decks, Insulated

Deck Description: 2500 psi structural concrete or concrete plank

System Type C: One or more layers of insulation simultaneously attached.

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 Minimum 2" thick	**N/A**	**N/A**
Top Insulation Layer	**Insulation Fasteners (Table 3)**	**Fastener Density/ft^2**
Retro-Fit Board Minimum ½" thick	**1, 4, 7, 8 11, 12 or 13**	**1:2 ft²**

Note: For top layer fiberglass applications, GlasFast plates shall be used.

Note: For System C, both layers of insulation shall be mechanically attached using the fastener density listed above. Refer to Roofing Application Standard RAS 117 for insulation attachment requirements. 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).

Base Sheet: (Optional) Install one ply of GlasBase Plus or PermaPly 28 directly to the insulated substrate. Adhere in a full mopping of hot asphalt applied within the EVT range and at a rate of 20-40 lbs./sq.. If base sheet is applied directly to polyisocyanurate insulation only a spot or strip mopped application as detailed in this approval is approved; see General Limitation #4.

Ply Sheet: Two or more plies of GlasPly IV or GlasPly Premier ply sheet adhered in a full mopping of hot asphalt applied within the EVT range and at a rate of 20-40 lbs./sq.

Cap Sheet: (Optional) One ply of GlasKap, GlasKap CR or GlasKap Plus adhered in a full mopping of hot asphalt applied within the EVT range and at a rate of 20-40 lbs./sq.

Surfacing: (Required if no cap sheet is used) Install the following:

1. Flood coat and gravel/slag with an application rate of 60 lbs./sq. & 400 lbs./sq., respectively.

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

Membrane Type: BUR

Deck Type 3: Concrete Decks, Non-Insulated

Deck Description: 2500 psi structural concrete or concrete plank

System Type F(1): Base sheet adhered with approved asphalt.

All General and System limitations apply.

Note: Concrete deck shall be primed with ASTM D 41 asphalt primer and allowed to dry prior to application of base sheet.

Base Sheet:	Install one ply of GlasPly Premier, GlasPly IV, GlasBase Plus, DynaBase or PermaPly 28 base sheet directly to the concrete substrate. Adhere in a full mopping of hot asphalt applied within the EVT range and at a rate of 20-40 lbs./sq.
	Note: A vented base sheet is not approved for use with this assembly.
Ply Sheet:	Two or more plies of GlasPly IV or GlasPly Premier adhered in a full mopping of hot asphalt applied within the EVT range and at a rate of 20-40 lbs./sq.
Cap Sheet:	(Optional) One ply of GlasKap, GlasKap CR or GlasKap Plus adhered in a full mopping of hot asphalt applied within the EVT range and at a rate of 20-40 lbs./sq.
Surfacing:	(Required if no cap sheet is used) Install the following: 1. Flood coat and gravel/slag with an application rate of 60 lbs./sq. & 400 lbs./sq., respectively.
Maximum Design Pressure:	-275 psf (See General Limitation #9)

Membrane Type: BUR

Deck Type 3: Concrete Decks, Non-Insulated

Deck Description: 2500 psi structural concrete or concrete plank

System Type F(2): Base sheet adhered with approved asphalt.

All General and System limitations apply.

Note: Concrete deck shall be primed with ASTM D 41 asphalt primer and allowed to dry prior to application of base sheet.

Base Sheet:	One ply of Ventsulation Felt, GlasPly Premier, GlasPly IV, GlasBase Plus, or PermaPly 28 base sheet directly to the concrete substrate. Adhere in a full mopping of hot asphalt applied within the EVT range and at a rate of 20-40 lbs./sq.
Ply Sheet:	Two or more plies of GlasPly IV or GlasPly Premier adhered in a full mopping of hot asphalt applied within the EVT range and at a rate of 20-40 lbs./sq.
Cap Sheet:	(Optional) One ply of GlasKap, GlasKap CR or GlasKap Plus adhered in a full mopping of hot asphalt applied within the EVT range and at a rate of 20-40 lbs./sq.
Surfacing:	(Required if no cap sheet is used) Install the following:

1. Flood coat and gravel/slag with an application rate of 60 lbs./sq. & 400 lbs./sq., respectively.

Maximum Design Pressure: -220 psf (See General Limitation #9)

Membrane Type: BUR

Deck Type 3: Concrete Decks, Non-Insulated

Deck Description: 2500 psi structural concrete or concrete plank

System Type F(3): Base sheet adhered with spot mopping of approved asphalt.

All General and System limitations apply.

Note: Concrete deck shall be primed with ASTM D 41 asphalt primer and allowed to dry prior to application of base sheet.

Base Sheet:	One ply of Ventsulation Felt, GlasBase Plus or PermaPly 28 in a spot mopping of approved asphalt, 12" diameter circles, 24" o.c. at a rate of 12 lbs./sq..
Ply Sheet:	Two or more plies of GlasPly IV or GlasPly Premier adhered in a full mopping of hot asphalt applied within the EVT range and at a rate of 20-40 lbs./sq.
Cap Sheet:	(Optional) One ply of GlasKap, GlasKap CR or GlasKap Plus adhered in a full mopping of hot asphalt applied within the EVT range and at a rate of 20-40 lbs./sq.
Surfacing:	(Required if no cap sheet is used) Install the following: 1. Flood coat and gravel/slag with an application rate of 60 lbs./sq. & 400 lbs./sq., respectively.
Maximum Design Pressure:	-45 psf (See General Limitation #9)

Membrane Type: BUR

Deck Type 3: Concrete Decks, Non-Insulated

Deck Description: 2500 psi structural concrete or concrete plank

System Type F(4): Base sheet adhered with full mopping of approved asphalt.

All General and System limitations apply.

Note: Concrete deck shall be primed with ASTM D 41 asphalt primer and allowed to dry prior to application of base sheet.

Base Sheet: Two or more plies of GlasBase Plus, DynaBase, GlasPly Premier, or GlasPly IV applied to the insulation in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs./sq.

Cap Sheet: (Optional) One ply of GlasKap, GlasKap CR or GlasKap Plus adhered in a full mopping of hot asphalt applied within the EVT range and at a rate of 20-40 lbs./sq.

Surfacing: (Required if no cap sheet is used) Install the following:

1. Flood coat and gravel/slag with an application rate of 60 lbs./sq. & 400 lbs./sq., respectively.

Maximum Design Pressure: -275 psf (See General Limitation #9)

CONCRETE 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 Engineer, Architect, or Registered Roof Consultant.

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. 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.)**

END OF THIS ACCEPTANCE