



**BUILDING CODE COMPLIANCE OFFICE (BCCO)
PRODUCT CONTROL DIVISION**

**MIAMI-DADE COUNTY, FLORIDA
METRO-DADE FLAGLER BUILDING
140 WEST FLAGLER STREET, SUITE 1603
MIAMI, FLORIDA 33130-1563
(305) 375-2901 FAX (305) 375-2908**

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 by Miami-Dade County Product Control Division and accepted by the Board of Rules and Appeals (BORA) 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 Division (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. BORA reserves the right to revoke this acceptance, if it is determined by Miami-Dade County Product Control Division 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 High Velocity Hurricane Zone of the Florida Building Code.

DESCRIPTION: Johns Manville Modified Bitumen Roofing Systems Over Lightweight 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 consists of pages 1 through 22.

The submitted documentation was reviewed by Frank Zuloaga, RRC



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Expiration Date: 07/26/06
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ROOFING ASSEMBLY APPROVAL

<u>Category:</u>	Roofing
<u>Sub-Category:</u>	SBS Modified Bitumen
<u>Deck Type:</u>	Lightweight Concrete
<u>Maximum Design Pressure</u>	-82.5 psf
<u>Fire Classification:</u>	See General Limitation #1

TRADE NAMES OF PRODUCTS MANUFACTURED OR LABELED BY APPLICANT:

TABLE 1

<u>Product</u>	<u>Dimensions</u>	<u>Test Specification</u>	<u>Product Description</u>
DynaBase	54'-10" x 36"; roll weight: 88 lbs.	ASTM D 6163 Type I Grade S	An SBS modified bitumen coated, fiber glass reinforced base sheet.
DynaWeld Base	39'-3/8" x 32'-10"; roll weight: 90 lbs	ASTM D 6163 Type I Grade S	An SBS modified bitumen coated, fiberglass reinforced base sheet for heat welded applications.
DynaFlex	3 x 25	ASTM D 6163 Type I Grade S	A flexible polyester/glass scrim reinforced, granular-surfaced flashing sheet.
DynaGlas	39-3/8" x 32'-10"; roll weight: 100 lbs.	ASTM D 6163 Type I Grade G	An SBS modified bitumen membrane surfaced with granules for application in hot asphalt.
DynaWeld Cap FR	39'-3/8" x 32'-10" roll weight: 110 lbs.	ASTM D 6163 Type I Grade G	A fire resistant SBS modified bitumen membrane surfaced with granules for heat weld applications.
DynaGlas 30 FR	39-3/8" x 32'-10"; roll weight: 90 lbs.	ASTM D 6163 Type I Grade G	A fire resistant SBS modified bitumen membrane surfaced with granules for application in hot asphalt.
DynaGlas FR	39-3/8" x 32'-10"; roll weight: 101 lbs.	ASTM D 6163 Type I Grade G	A fire resistant SBS modified bitumen membrane surfaced with granules for application in hot asphalt.
DynaKap	39-3/8" x 32'-10"; roll weight: 115 lbs.	ASTM D 6162 Type II Grade G	A fiberglass/polyester reinforced SBS modified bitumen membrane surfaced with granules for application in hot asphalt.
DynaKap FR	39-3/8" x 32'-10"; roll weight: 115 lbs.	ASTM D 6162 Type II Grade G	A fire resistant, fiberglass/ polyester reinforced SBS modified bitumen membrane surfaced with granules for application in hot asphalt.
DynaLastic 180	39-3/8" x 32'-10"; roll weight: 101 lbs.	ASTM D 6164 Type I Grade G	A polyester reinforced SBS modified bitumen membrane surfaced with granules for application in hot asphalt.
DynaLastic 180 FR	39-3/8" x 32'-10"; roll weight: 101 lbs.	ASTM D 6164 Type I Grade S	A 180 gram polyester mat reinforced, granular-surfaced, modified bitumen cap sheet for use in fire-rated systems.
DynaLastic 180S	37" x 36'-9" roll weight: 90 lbs.	ASTM D 6164 Type I	A 180 gram polyester mat reinforced, modified bitumen cap sheet for use in fire-rated systems.
DynaPly	39-3/8" x 32'-10"; roll weight: 90 lbs.	ASTM D 6162 Type II, Grade S	A polyester reinforced SBS modified bitumen ply sheet for use in conventional and modified bitumen built-up roof systems.



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<u>Product</u>	<u>Dimensions</u>	<u>Test Specification</u>	<u>Product Description</u>
DynaLastic 250	39-3/8" x 32'-10"; roll weight: 114 lbs.	ASTM D 6164 Type II Grade G	A 250 gram polyester mat reinforced, granular-surfaced, modified bitumen cap sheet.
DynaLastic 250 FR	39-3/8" x 32'-10"; roll weight: 115 lbs.	ASTM D 6164 Type II Grade G	A 250 gram polyester mat reinforced, granular-surfaced, modified bitumen cap sheet for use in fire-rated systems.
DynaMax	39-3/8" x 32'-10"; roll weight: 99 lbs.	ASTM D 6162 Type III Grade G	A fiberglass/polyester reinforced SBS modified bitumen membrane surfaced with granules for application in hot asphalt or heat weld.
DynaMax FR	39-3/8" x 32'-10"; roll weight: 116 lbs.	ASTM D 6162 Type III Grade G	A fire resistant, fiberglass/ polyester reinforced SBS modified bitumen membrane surfaced with granules for application in hot asphalt.
DynaClad	39-3/8" x 33'-6"; roll weight: 101 lbs.	ASTM D 6298	A foil faced, glass reinforced, SBS modified membrane for application in hot asphalt.
DynaBase XT	39-3/8" x 49'-2"	ASTM D 6163 Type II Grade S	A heavyweight glass reinforced SBS Base/Ply sheet.
DynaGlas FR XT	39-3/8" x 32'-10";	ASTM D 6163 Type II Grade S	A heavyweight glass reinforced granular surfaced SBS Cap sheet.
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.
GlasBase	36" x 108'; roll weight: 84 lbs.	ASTM D 4601 Type I	Type II asphalt impregnated and coated glass fiber base sheet for use in conventional and modified bitumen built-up roofing.
GlasBase Plus	36" x 108'; roll weight: 84 lbs.	ASTM D 4601	Type II asphalt impregnated and coated glass fiber base sheet for use in conventional and modified bitumen built-up roofing.
GlasPly IV	36" x 200'	ASTM D 2178 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.
PermaPly No. 28	36" x 108'; roll weight: 72 lbs.	ASTM D 4601 Type II	Type II asphalt impregnated and coated glass fiber base sheet for use in conventional and modified bitumen built-up roofing.
Fesco Board	various	ASTM C 728	Rigid perlite roof insulation board for built-up roofing systems; available flat or tapered.
Fesco Foam	various	ASTM C 1289	Rigid polyisocyanurate roof insulation with perlite board facing bonded to one side for use in conventional built-up and other roofing.
Fiber Glass Roof Insulation	various	ASTM C 726	Fiberglass roof insulation.
DuraBoard	various	ASTM C 728	A high density perlite roof insulation board for use in heat welded, modified bitumen systems.



<u>Product</u>	<u>Dimensions</u>	<u>Test Specification</u>	<u>Product Description</u>
Retro-Fit Board	various	ASTM C 728	A high density perlite roof insulation board for use in conventional and modified bitumen built-up roofing systems.
JM E'NRG'Y-2 or Tapered E'NRG'Y-2	various	ASTM 1289	Polyisocyanurate insulation for use with single-ply, BUR and modified bitumen roof covers (includes all Factory Mutual approved roof covers)
JM E'NRG'Y-2 Plus	various	ASTM 1289	Polyisocyanurate insulation laminated to ½" wood fiber for use with single-ply, BUR and modified bitumen roof covers (includes all Factory Mutual approved roof covers).
JM E'NRG'Y-2 Composite or Tapered Composite	various	ASTM 1289	Polyisocyanurate insulation laminated to ½" perlite for use with single-ply, BUR and modified bitumen roof covers (includes all Factory Mutual approved roof covers).
JM PSI-25 or Tapered PSI-25	various	ASTM 1289	Nominal 25 psi compressive strength polyisocyanurate insulation for single-ply, BUR and modified bitumen roof covers (includes all Factory Mutual approved roof covers).
FesCant Plus Cant Strips, and Taper Edge	various	ASTM C 728	Factory pre-fabricated cant strips and taper edge, manufactured from expanded perlite insulation.
MBR Flashing Cement Base and Activator	N/A	Proprietary	A two component elastomeric, cold application adhesive, consisting of a modified proprietary compound with an asphalt base.
MBR Utility Cement	N/A	ASTM D 4586	General purpose trowel grade, cutback bitumen cement mixture including inorganic fibers and mineral stabilizers.
MBR Bonding Cement and Activator	N/A	proprietary	A two component, elastomeric, cold application adhesive.
Bestile Industrial Roof Cement	various	ASTM D 4586, type I	A trowel grade, cutback bitumen flashing grade cement mixture including inorganic fibers and mineral stabilizers.
Flex-I-Drain	various	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.
PC/PET RetroDrain	various	N/A	Engineered resin copolymer fabricated drain for retrofit applications.
USII RetroDrain	various	N/A	One piece, aluminum fabricated drain for retrofit applications.
SuperDome RetroDrain	various	N/A	Cast aluminum, heavy-duty drain for retrofit applications.
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.



<u>Product</u>	<u>Dimensions</u>	<u>Test Specification</u>	<u>Product Description</u>
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.
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.
Presto-Lok Fascia and Flashing System	various	PA 114	A multi-piece fascia and flashing system for built-up and modified bitumen roofing systems manufactured from aluminum or steel.
DynaTred & DynaTred Plus Roof Walkway	various	N/A	Preformed, skid-resistant boards.

APPROVED INSULATIONS:

TABLE 2

<u>Product</u>	<u>Dimensions</u>	<u>Test Specification</u>	<u>Product Description</u>	<u>Manufacturer</u>
Pyrox	various	PA 110	Polyisocyanurate foam insulation	Apache Products Co. (with current PCA)
ACFoam II	various	PA 110	Polyisocyanurate foam insulation	Atlas Energy Products (with current PCA)
EPS	various	PA 110	Extruded polystyrene insulation	Generic
High Density Wood Fiberboard	various	PA 110	Wood fiber insulation board	Generic
Type X Gypsum	various		Fire resistant rated gypsum	Generic
Dens-Deck	4' x 8'	PA 110	Gypsum board	Georgia-Pacific (with current NOA)
Sturdi-Top	various	PA 110	Wood fiberboard	Georgia-Pacific (with current NOA)
Structodeck	various	PA 110	High density wood fiber	Masonite



APPROVED FASTENERS:

TABLE 3

Fastener Number	Product Name	Product Description	Dimensions	Manufacturer (With Current NOA)
1.	AccuTrac Plate	Square galvalume AZ50 steel plate	3" square	ITW Buildex (with current NOA)
2.	Lightweight Concrete (LWC) CR Base Fastener	Galvanized double spreading leg fastener for securing base sheets to lightweight insulating concrete.		Johns Manville
3.	UltraFast	Insulation fastener for wood and steel.		Johns Manville
4.	C-R Base Sheet Disc	Galvanized double spreading leg fastener for securing base sheets to lightweight insulating concrete.		Olympic Mfg. Group
5.	Base-Lok	Nylon base sheet fastener.		Simplex Nails & Fasteners

EVIDENCE SUBMITTED:

Test Agency/Identifier	Name	Report	Date
Factory Mutual Research Corporation	J.I. # 3001482	FM Approval Report	08.11.98
	J.I. # 3001629	FM Approval Report	09.10.98
	J.I. # 0Z8A9.AM		
	J.I. # 3D4A4.AM	FM Approval Report	09.28.98
	J.I. # 3000949		
	J.I.H. 107A4.AM	FM Approval Report	11.09.98
	FMRC 1994	Current Insulation and Fastening Requirements.	01.01.94
Dynatech Engineering, Inc.	3007148	FM Class 4450	04.19.00
	3006346	FM Class 4450	09.15.00
	4360.03.95-1 4360.03.95-2	Wind Uplift Classification	3.95
Underwriters Laboratories, Inc. Exterior Research & Design, LLC.	4361.5.95-1	Wind Uplift Classification	5.95
	R-10167 (N)	Fire Classification Compliance	01.01.95
	#4361-2.04.97-1	Uplift Resistance PA 114(J)	04.28.97



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<u>Test Agency/Identifier</u>	<u>Name</u>	<u>Report</u>	<u>Date</u>
	#4361-2.04. -1	Uplift Resistance PA 114(J)	04.00.97
	#10390A-10.97-1	Uplift Resistance PA 114(J)	10.00.97
	#10390A-12.97-1	Uplift Resistance PA 114(J)	12.00.97
	#4251.08.96-1	Uplift Resistance PA 114(J)	
Independent Roof Testing & Consulting, Inc.	IRT99001.1.20.99	Uplift Resistance PA 114	01.20.99
	IRT99002.1.20.99		
	IRT99003.1.20.99		
	IRT99005.1.20.99		
	IRT99013.1.20.99		



APPROVED ASSEMBLIES

- Membrane Type:** SBS
- Deck Type 4I:** Lightweight Concrete, Insulated, New Construction
- Deck Description:** Concrecel Cellular Lightweight Concrete
- System Type A(1):** Anchor sheet mechanically fastened; one or more layers of insulation adhered with approved asphalt.

Deck : Structural concrete or 18-22 ga steel deck shall be secured 6" o.c. to structural supports spaced a maximum of 5 ft on centers with 5/8" puddle welds. Followed by Concrecel Bonding agent applied to the deck at rate 1200 sq. ft/gal using a compressed air sprayer. Rigid insulation panels shall be placed in a minimum 1/4" slurry-coat of insulating concrete and allowed to cure overnight. The following day the rigid insulation shall be covered with a minimum 2 1/4" topcoat cast of Concrecel. After an additional cure time of 24 hours Concrecel Curing Compound was roller applied at a rate of 300 sq. ft/gal.

All General and System limitations apply.

Base Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft ²
E'NRG'Y 2 Minimum 1" thick	N/A	N/A
Fesco Foam Minimum 1.5" thick	N/A	N/A
Fesco, Fiber Glass Minimum 3/4" thick	N/A	N/A
Retro-Fit Minimum 1/2" thick	N/A	N/A
Top Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft ²
Any listed insulation as Base Layer, above		
Tapered E'NRG'Y 2 Minimum 1.3" thick	N/A	N/A
Tapered Fesco, Tapered Fiber Glass Minimum 3/4" thick	N/A	N/A

Note: All insulation shall be adhered to the anchor sheet in full mopping of approved hot 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.

Anchor Sheet: One ply of Glasply Premier fastened to the deck as described below:



Fastening: Fasten base sheet to deck with LWC CR Base Fasteners or Olympic CR Base Ply Fasteners at a 3" side lap 7" o.c. and 7" o.c. in two staggered rows in the center of the sheet

Ply Sheet: One or more plies of GlasBase, GlasBase Plus, PermaPly No. 28, GlasPly Premier, Glas Ply IV, DynaLastic 180 S, DynaBase, DynaBase XT, DynaBase PR or DynaPly adhered to the base sheet with approved mopping of asphalt applied within the EVT range and at a rate of 20-40 lbs./sq. or one ply DynaWeld Base heat welded.

Membrane: One ply of DynaKap, DynaKap FR, DynaMax, DynaMax FR, DynaGlas, DynaGlas FR, DynaGlas 30 FR, DynaGlas 30 FR XT, DynaLastic 180, DynaLastic 180 FR, DynaLastic 180 S, DynaLastic 250, DynaLastic 250FR or DynaPly adhered in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs./sq. or one ply DynaWeld Cap FR heat welded. (See application instructions for approved method of installation).

Or

(Only with a modified Base or Ply sheet) GlasKap Adhered in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs./sq.

Surfacing: (Optional) Install one of the following:

1. 2-3 gallons TopGard B emulsion/sq. or 2 gallons aluminum coating/sq. Coatings shall be applied according to the manufacturers' recommendations regarding specific application rates and weathering.
2. Flood coat and gravel/slag with an application rate of 60 lbs./sq. & 400 lbs./sq., respectively.

Maximum Design Pressure:

-82.5 psf (See General Limitation #7)



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Membrane Type: SBS

Deck Type 4I: Lightweight Concrete, Insulated, New Construction

Deck Description: Cellular or Aggregate Lightweight Concrete

System Type A(2): Anchor sheet mechanically fastened; one or more layers of insulation adhered with approved asphalt.

Deck : Structural concrete or 18-22 ga steel deck shall be secured 6" o.c. to structural supports spaced a maximum of 5 ft on centers with screws or puddle welds.

All General and System limitations apply.

Base Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft²
E'NRG'Y 2 Minimum 1.5" thick	N/A	N/A
Fesco Foam Minimum 1" thick	N/A	N/A
Fesco, Fiber Glass Minimum ¾" thick	N/A	N/A
Retro-Fit Minimum ½" thick	N/A	N/A
Top Insulation Layer (Optional)	Insulation Fasteners (Table 3)	Fastener Density/ft²
Tapered E'NRG'Y 2 Minimum 1.3" thick	N/A	N/A
Tapered Fesco, Tapered Fiber Glass Minimum ¾" thick	N/A	N/A

Note: All insulation shall be adhered to the anchor sheet in full mopping of approved hot 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.

Anchor Sheet: One ply of PermaPly 28, DynaBase, GlasBase, Glasply Premier or Ventsulation fastened to the deck as described below:

Fastening : Fasten base sheet with Simplex Base-Lok Fasteners, LWC CR Base Fasteners or Olympic CR Base Ply Fasteners at a 4" side lap 9" o.c. and 12" o.c. in two staggered rows in the center of the sheet.

Ply Sheet: One or more plies of GlasBase, GlasBase Plus, PermaPly No. 28, GlasPly Premier, Glas Ply IV, DynaLastic 180 S, DynaBase, DynaBase XT, DynaBase PR or DynaPly adhered to the base sheet with approved mopping of asphalt applied within the EVT range and at a rate of 20-40 lbs./sq. or one ply DynaWeld Base heat welded.



Membrane: One ply of DynaKap, DynaKap FR, DynaMax, DynaMax FR, DynaGlas, DynaGlas FR, DynaGlas 30 FR, DynaGlas 30 FR XT, DynaLastic 180, DynaLastic 180 FR, DynaLastic 180 S, DynaLastic 250, DynaLastic 250FR or DynaPly adhered in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs./sq. or one ply DynaWeld Cap FR heat welded. (See application instructions for approved method of installation).

Or

(Only with a modified Base or Ply sheet) GlasKap Adhered in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs./sq.

Surfacing: (Optional) Install one of the following:

1. 2-3 gallons TopGard B emulsion/sq. or 2 gallons aluminum coating/sq. Coatings shall be applied according to the manufacturers' recommendations regarding specific application rates and weathering.
2. 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: SBS

Deck Type 4I: Lightweight Concrete, Insulated, New Construction

Deck Description: Cellular or Aggregate Lightweight Concrete (300 psi Min.)

System Type A(3): Anchor sheet mechanically fastened; one or more layers of insulation adhered with approved asphalt.

Deck : 18-22 ga steel deck shall be secured 6" o.c. to structural supports spaced a maximum of 5 ft on centers with screws or puddle welds.

All General and System limitations apply.

Base Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft ²
E'NRG'Y 2 Minimum 1.5" thick	N/A	N/A
Fesco Foam Minimum 1" thick	N/A	N/A
Fesco, Fiber Glass Minimum ¾" thick	N/A	N/A
Retro-Fit Minimum ½" thick	N/A	N/A
Top Insulation Layer (Optional)	Insulation Fasteners (Table 3)	Fastener Density/ft ²
Tapered E'NRG'Y 2 Minimum 1.3" thick	N/A	N/A
Tapered Fesco, Tapered Fiber Glass Minimum ¾" thick	N/A	N/A

Note: All insulation shall be adhered to the anchor sheet in full mopping of approved hot 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.

Anchor Sheet: One ply of DynaBase, GlasBase, Glasply Premier or Ventsulation fastened to the deck as described below:

Fastening: Fasten anchor sheet with to through LWC to steel deck with UltraFast fasteners and Accutrak (Buildex) 3"x3" square plates at a 4" side lap 7" o.c. and 7" o.c. in two staggered rows in the center of the sheet.

Ply Sheet: One or more plies of GlasBase, GlasBase Plus, PermaPly No. 28, GlasPly Premier, Glas Ply IV, DynaLastic 180 S, DynaBase, DynaBase XT, DynaBase PR or DynaPly adhered to the base sheet with approved mopping of asphalt applied within the EVT range and at a rate of 20-40 lbs./sq. or one ply DynaWeld Base heat welded.



Membrane: One ply of DynaKap, DynaKap FR, DynaMax, DynaMax FR, DynaGlas, DynaGlas FR, DynaGlas 30 FR, DynaGlas 30 FR XT, DynaLastic 180, DynaLastic 180 FR, DynaLastic 180 S, DynaLastic 250, DynaLastic 250FR or DynaPly adhered in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs./sq. or one ply DynaWeld Cap FR heat welded. (See application instructions for approved method of installation).

Or

(Only with a modified Base or Ply sheet) GlasKap Adhered in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs./sq.

Surfacing: (Optional) Install one of the following:

1. 2-3 gallons TopGard B emulsion/sq. or 2 gallons aluminum coating/sq. Coatings shall be applied according to the manufacturers' recommendations regarding specific application rates and weathering.
2. Flood coat and gravel/slag with an application rate of 60 lbs./sq. & 400 lbs./sq., respectively.

Maximum Design Pressure:

-75 psf (See General Limitation #7)



Membrane Type: SBS

Deck Type 4: Lightweight Concrete, New Construction

Deck Description: Concrecel Cellular Lightweight Concrete

System Type E(1): Anchor sheet mechanically fastened to roof deck.

Deck : Structural concrete or 18-22 ga steel deck shall be secured 6" o.c. to structural supports spaced a maximum of 5 ft on centers with 5/8" puddle welds. Followed by Concrecel Bonding agent applied to the deck at rate 1200 sq. ft/gal using a compressed air sprayer. Rigid insulation panels shall be placed in a minimum 1/4" slurry-coat of insulating concrete and allowed to cure overnight. The following day the rigid insulation shall be covered with a minimum 2 1/4" topcoat cast of Concrecel. After an additional cure time of 24 hours Concrecel Curing Compound was roller applied at a rate of 300 sq. ft/gal.

All General and System limitations apply.

Anchor Sheet: One ply of Glasply Premier fastened to the deck as described below:

Fastening: Fasten base sheet to deck with LWC CR Base Fasteners or Olympic CR Base Ply Fasteners at a 3" side lap 7" o.c. and 7" o.c. in two staggered rows in the center of the sheet

Ply Sheet: One or more plies of GlasBase, GlasBase Plus, PermaPly No. 28, GlasPly Premier, Glas Ply IV, DynaLastic 180 S, DynaBase, DynaBase XT, DynaBase PR or DynaPly adhered to the base sheet with approved mopping of asphalt applied within the EVT range and at a rate of 20-40 lbs./sq. or one ply DynaWeld Base heat welded.

Membrane: One ply of DynaKap, DynaKap FR, DynaMax, DynaMax FR, DynaGlas, DynaGlas FR, DynaGlas 30 FR, DynaGlas 30 FR XT, DynaLastic 180, DynaLastic 180 FR, DynaLastic 180 S, DynaLastic 250, DynaLastic 250FR or DynaPly adhered in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs./sq. or one ply DynaWeld Cap FR heat welded. (See application instructions for approved method of installation).
Or
(Only with a modified Base or Ply sheet) GlasKap Adhered in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs./sq.

Surfacing: (Optional) Install one of the following:

1. 2-3 gallons TopGard B emulsion/sq. or 2 gallons aluminum coating/sq. Coatings shall be applied according to the manufacturers' recommendations regarding specific application rates and weathering.
2. Flood coat and gravel/slag with an application rate of 60 lbs./sq. & 400 lbs./sq., respectively.

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



Membrane Type: SBS
Deck Type 4: Lightweight Concrete, New Construction
Deck Description: Cellular or Aggregate Lightweight Concrete
System Type E(2): Anchor sheet mechanically fastened to roof deck.
Deck : Structural concrete or 18-22 ga steel deck shall be secured 6" o.c. to structural supports spaced a maximum of 5 ft on centers with screws or puddle welds.

All General and System limitations apply.

Anchor Sheet: One ply of PermaPly 28, DynaBase, GlasBase, Glasply Premier or Ventsulation fastened to the deck as described below:

Fastening : Fasten base sheet with Simplex Base-Lok Fasteners, LWC CR Base Fasteners or Olympic CR Base Ply Fasteners at a 4" side lap 9" o.c. and 12" o.c. in two staggered rows in the center of the sheet.

Ply Sheet: (Optional) One or more plies of GlasBase, GlasBase Plus, PermaPly No. 28, GlasPly Premier, Glas Ply IV, DynaLastic 180 S, DynaBase, DynaBase XT, DynaBase PR or DynaPly adhered to the base sheet with approved mopping of asphalt applied within the EVT range and at a rate of 20-40 lbs./sq. or one ply DynaWeld Base heat welded.

Membrane: One ply of DynaKap, DynaKap FR, DynaMax, DynaMax FR, DynaGlas, DynaGlas FR, DynaGlas 30 FR, DynaGlas 30 FR XT, DynaLastic 180, DynaLastic 180 FR, DynaLastic 180 S, DynaLastic 250, DynaLastic 250FR or DynaPly adhered in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs./sq. or one ply DynaWeld Cap FR heat welded. (See application instructions for approved method of installation).
Or
(Only with a modified Base or Ply sheet) GlasKap Adhered in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs./sq.

Surfacing: (Optional) Install one of the following:

1. 2-3 gallons TopGard B emulsion/sq. or 2 gallons aluminum coating/sq. Coatings shall be applied according to the manufacturers' recommendations regarding specific application rates and weathering.
2. 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)



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Membrane Type: SBS
Deck Type 4: Lightweight Concrete, New Construction
Deck Description: Cellular or Aggregate Lightweight Concrete (300 psi Min.)
System Type E(3): Anchor sheet mechanically fastened to roof deck.
Deck : Structural concrete or 18-22 ga steel deck shall be secured 6" o.c. to structural supports spaced a maximum of 5 ft on centers with 5/8" puddle welds.

All General and System limitations apply.

Base Sheet: One ply of DynaBase, GlasBase, Glasply Premier or Ventsulation fastened to the deck as described below:

Fastening: Fasten anchor sheet with to through LWC to steel deck with UltraFast fasteners and Accutrak (Buildex) 3"x3" square plates at a 4" side lap 7" o.c. and 7" o.c. in two staggered rows in the center of the sheet.

Ply Sheet: (Optional) One or more plies of GlasBase, GlasBase Plus, PermaPly No. 28, GlasPly Premier, Glas Ply IV, DynaLastic 180 S, DynaBase, DynaBase XT, DynaBase PR or DynaPly adhered to the base sheet with approved mopping of asphalt applied within the EVT range and at a rate of 20-40 lbs./sq. or one ply DynaWeld Base heat welded.

Membrane: One ply of DynaKap, DynaKap FR, DynaMax, DynaMax FR, DynaGlas, DynaGlas FR, DynaGlas 30 FR, DynaGlas 30 FR XT, DynaLastic 180, DynaLastic 180 FR, DynaLastic 180 S, DynaLastic 250, DynaLastic 250FR or DynaPly adhered in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs./sq. or one ply DynaWeld Cap FR heat welded. (See application instructions for approved method of installation).
Or
(Only with a modified Base or Ply sheet) GlasKap Adhered in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs./sq.

Surfacing: (Optional) Install one of the following:

1. 2-3 gallons TopGard B emulsion/sq. or 2 gallons aluminum coating/sq. Coatings shall be applied according to the manufacturers' recommendations regarding specific application rates and weathering.
2. Flood coat and gravel/slag with an application rate of 60 lbs./sq. & 400 lbs./sq., respectively.

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



Membrane Type: SBS
Deck Type 4: Lightweight Concrete, New Construction
Deck Description: Cellular or Aggregate Lightweight Concrete
System Type E(4): Anchor sheet mechanically attached to roof deck.
Deck : 18-22 ga steel deck shall be secured 6" o.c. to structural supports spaced a maximum of 5 ft on centers with 5/8" puddle welds.

All General and System limitations apply.

Anchor Sheet: One ply of PermaPly 28, DynaBase, GlasBase, Glasply Premier or Ventsulation fastened to the deck as described below:

Fastening: Fasten base sheet to deck with LWC CR Base Fasteners or Olympic CR Base Ply Fasteners at a 4" side lap 7" o.c. and two staggered rows in the center of the sheet, 9" o.c.

Ply Sheet: (Optional) One or more plies of GlasBase, GlasBase Plus, PermaPly No. 28, Glasply Premier, Glas Ply IV, DynaLastic 180 S, DynaBase, DynaBase XT, DynaBase PR or DynaPly adhered to the base sheet with approved mopping of asphalt applied within the EVT range and at a rate of 20-40 lbs./sq. or one ply DynaWeld Base heat welded.

Membrane: One ply of DynaKap, DynaKap FR, DynaMax, DynaMax FR, DynaGlas, DynaGlas FR, DynaGlas 30 FR, DynaGlas 30 FR XT, DynaLastic 180, DynaLastic 180 FR, DynaLastic 180 S, DynaLastic 250, DynaLastic 250FR or DynaPly adhered in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs./sq. or one ply DynaWeld Cap FR heat welded. (See application instructions for approved method of installation).
Or
(Only with a modified Base or Ply sheet) GlasKap Adhered in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs./sq.

Surfacing: (Optional) Install one of the following:

1. 2-3 gallons TopGard B emulsion/sq. or 2 gallons aluminum coating/sq. Coatings shall be applied according to the manufacturers' recommendations regarding specific application rates and weathering.
2. Flood coat and gravel/slag with an application rate of 60 lbs./sq. & 400 lbs./sq., respectively.

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



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Membrane Type: SBS
Deck Type 4: Lightweight Concrete, New Construction
Deck Description: Celcore Lightweight Concrete
System Type E(5): Base sheet mechanically fastened.
Deck : 18-22 ga steel deck shall be secured 6" o.c. to structural supports spaced a maximum of 5 ft on centers with 5/8" puddle welds.

All General and System limitations apply.

Base Sheet: One ply of DynaBase, GlasBase, PermaPly28, GlasPly Premier or Ventsulation fastened to the deck as described below:

Fastening: Fasten base sheet with JM LWC CR Base Fasteners or Olympic CR Base Ply Fasteners at a 4" side lap 7" o.c. and 7" o.c. in two staggered rows in the center of the sheet.

Ply Sheet: (Optional) One or more plies of GlasBase, GlasBase Plus, PermaPly No. 28, GlasPly Premier, Glas Ply IV, DynaLastic 180 S, DynaBase, DynaBase XT, DynaBase PR or DynaPly adhered to the base sheet with approved mopping of asphalt applied within the EVT range and at a rate of 20-40 lbs./sq. or one ply DynaWeld Base heat welded.

Membrane: One ply of DynaKap, DynaKap FR, DynaMax, DynaMax FR, DynaGlas, DynaGlas FR, DynaGlas 30 FR, DynaGlas 30 FR XT, DynaLastic 180, DynaLastic 180 FR, DynaLastic 180 S, DynaLastic 250, DynaLastic 250FR or DynaPly adhered in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs./sq. or one ply DynaWeld Cap FR heat welded. (See application instructions for approved method of installation).
Or
(Only with a modified Base or Ply sheet) GlasKap Adhered in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs./sq.

Surfacing: (Optional) Install one of the following:

1. 2-3 gallons TopGard B emulsion/sq. or 2 gallons aluminum coating/sq. Coatings shall be applied according to the manufacturers' recommendations regarding specific application rates and weathering.
2. Flood coat and gravel/slag with an application rate of 60 lbs./sq. & 400 lbs./sq., respectively.

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



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Membrane Type: SBS
Deck Type 4: Lightweight Concrete, New Construction
Deck Description: Concrecel Lightweight Concrete
System Type F(1): Base sheet adhered in approved asphalt.
Deck : Structural concrete or 18-22 ga steel deck shall be secured 6" o.c. to structural supports spaced a maximum of 5 ft on centers with 5/8" puddle welds. Followed by Concrecel Bonding agent applied to the deck at rate 1200 sq. ft/gal using a compressed air sprayer. Rigid insulation panels shall be placed in a minimum ¼" slurry-coat of insulating concrete and allowed to cure overnight. The following day the rigid insulation shall be covered with a minimum 2¼" topcoat cast of Concrecel. After an additional cure time of 24 hours Concrecel Curing Compound was roller applied at a rate of 300 sq. ft/gal.

All General and System limitations apply.

Base Sheet: One ply of Glasply Premier 50% strip mopped lightweight deck.
Fastening: Strip mopped with approved asphalt.
Ply Sheet: (Optional) One or more plies of GlasPly Premier adhered in a full mopping of hot asphalt applied within the EVT range and at a rate of 20-40 lbs./sq.
Membrane: One ply of DynaKap, DynaKap FR, DynaMax, DynaMax FR, DynaGlas, DynaGlas FR, DynaGlas 30 FR, DynaGlas 30 FR XT, DynaLastic 180, DynaLastic 180 FR, DynaLastic 180 S, DynaLastic 250, DynaLastic 250FR or DynaPly adhered in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs./sq. or one ply DynaWeld Cap FR heat welded. (See application instructions for approved method of installation).
Or
(Only with a modified Base or Ply sheet) GlasKap Adhered in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs./sq.
Surfacing: (Optional) Install one of the following:

1. 2-3 gallons TopGard B emulsion/sq. or 2 gallons aluminum coating/sq. Coatings shall be applied according to the manufacturers' recommendations regarding specific application rates and weathering.
2. Flood coat and gravel/slag with an application rate of 60 lbs./sq. & 400 lbs./sq., respectively.

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



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Membrane Type: SBS

Deck Type 4: Lightweight Concrete, New Construction

Deck Description: Concrecel Lightweight Concrete

System Type F(2): Base sheet adhered and mechanically fastened.

Deck : Structural concrete or 18-22 ga steel deck shall be secured 6" o.c. to structural supports spaced a maximum of 5'6" on centers with 5/8" puddle welds. Followed by Concrecel Bonding agent applied to the deck at rate 1200 sq. ft/gal using a compressed air sprayer. Rigid insulation panels shall be placed in a minimum 1/4" slurry-coat of insulating concrete and allowed to cure overnight. The following day the rigid insulation shall be covered with a minimum 2 1/4" topcoat cast of Concrecel. After an additional cure time of 24 hours Concrecel Curing Compound was roller applied at a rate of 300 sq. ft/gal.

All General and System limitations apply.

Base Sheet: One ply of GlasPly Premier 50% strip mopped and mechanically.

Fastening: For field areas of the roof, strip mopped with approved asphalt.

In addition to the strip mopping, for perimeter and corners areas that do not exceed -146 psf mechanically fasten anchor/base sheet with Simplex Base-Lok fasteners at a minimum spacing of 4" o.c. at the 4" side lap with four additional rows in field of the sheet fastened at 4" o.c.

Ply Sheet: One or more plies of GlasPly Premier, GlasPly IV, DynaBase, DynaBase XT, DynaBase PR, DynaPly, DynaLastic 180 S, GlasBase or PermaPly 28 adhered in a full mopping of hot asphalt applied within the EVT range and at a rate of 20-40 lbs./sq. or one ply DynaWeld Base heat welded.

Membrane: One ply of DynaKap, DynaKap FR, DynaMax, DynaMax FR, DynaGlas, DynaGlas FR, DynaGlas 30 FR, DynaGlas 30 FR XT, DynaLastic 180, DynaLastic 180 FR, DynaLastic 180 S, DynaLastic 250, DynaLastic 250FR or DynaPly adhered in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs./sq. or one ply DynaWeld Cap FR heat welded. (See application instructions for approved method of installation).

Or
(Only with a modified Base or Ply sheet) GlasKap Adhered in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs./sq.

Surfacing: (Optional) Install one of the following:

1. 2-3 gallons TopGard B emulsion/sq. or 2 gallons aluminum coating/sq. Coatings shall be applied according to the manufacturers' recommendations regarding specific application rates and weathering.
2. Flood coat and gravel/slag with an application rate of 60 lbs./sq. & 400 lbs./sq., respectively.

Maximum Design Pressure: -67.5 psf (See General Limitation #9 & fastening above)



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LIGHTWEIGHT INSULATING CONCRETE 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 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.
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.
3. For systems where specific lightweight insulating concrete is not referenced, the minimum design mix shall be a minimum of 300 psi.



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. **(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.)**

END OF THIS ACCEPTANCE



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