



BUILDING CODE COMPLIANCE OFFICE
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PRODUCT CONTROL DIVISION
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PRODUCT CONTROL NOTICE OF ACCEPTANCE

Johns Manville Corp.
717 17 Street (P.O. Box 5108)
Denver ,CO 80217

Your application for Notice of Acceptance (NOA) of:

Built-up Roof Systems Over LWC Decks

under Chapter 8 of the Code of Miami-Dade County governing the use of Alternate Materials and Types of Construction, and completely described herein, has been recommended for acceptance by the Miami-Dade County Building Code Compliance Office (BCCO) under the conditions specified herein.

This NOA shall not be valid after the expiration date stated below. BCCO reserves the right to secure this product or material at any time from a jobsite or manufacturer's plant for quality control testing. If this product or material fails to perform in the approved manner, BCCO may revoke, modify, or suspend the use of such product or material immediately. BCCO reserves the right to revoke this approval, if it is determined by BCCO that this product or material fails to meet the requirements of the South Florida Building Code.

The expense of such testing will be incurred by the manufacturer.

ACCEPTANCE NO.: 01-0524.10
EXPIRES: 07/26/2006

Raul Rodriguez
Chief Product Control Division

**THIS IS THE COVERSHEET, SEE ADDITIONAL PAGES FOR SPECIFIC AND GENERAL
CONDITIONS
BUILDING CODE & PRODUCT REVIEW COMMITTEE**

This application for Product Approval has been reviewed by the BCCO and approved by the Building Code and Product Review Committee to be used in Miami-Dade County, Florida under the conditions set forth above.

Francisco J. Quintana, R.A.
Director
Miami-Dade County
Building Code Compliance Office

APPROVED: 07/26/2001

ROOFING ASSEMBLY APPROVAL

Category: Roofing
Sub-Category: Built-up Roofing
Deck Type: Lightweight Concrete
Maximum Design Pressure -82.5 psf
Fire Classification: See General Limitation #1

Approval Date: **July 26, 2001**

Expiration Date: **July 26, 2006**

TRADE NAMES OF PRODUCTS MANUFACTURED OR LABELED BY APPLICANT:

<u>Product</u>	<u>Dimensions</u>	<u>Test Specification</u>	<u>Product Description</u>
Bestile Flashing Cement		ASTM D 4586	A trowel grade, cutback bitumen flashing grade cement mixture including inorganic fibers and mineral stabilizers.
CD-10	Various	PA 114	Insulation fastener for concrete decks.
Dyna Clad	39-3/8" x 33' 6"	N/A	A foil surfaced fiberglass reinforced elastomeric modified bitumen membrane for use as a cap or flashing sheet.
DynaFlex	25' long	ASTM D 5147	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.
E'NRG'Y 2	Various	ASTM C 1289	Rigid polyisocyanurate roof insulation for use in conventional built-up and other roof systems.
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.



<u>Product</u>	<u>Dimensions</u>	<u>Test Specification</u>	<u>Product Description</u>
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	PA 110	Factory pre-fabricated cant strips and taper edge, manufactured from expanded perlite insulation.
Fesco Board	Various	ASTM C 728	Rigid perlite roof insulation board for roofing systems flat or tapered.
Fesco Foam	Various	PA 110	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	PA 110	Fiberglas roof 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.
GlasBase	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.
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.
GlasFast Plate/UltraFast Screw	Various lengths	PA 114	Insulation fastener and plate assembly for fiberglass insulation only (steel and wood decks).
GlasKap	36" x 36'; Roll weight: 72 lbs.	ASTM D 3909	Asphalt impregnated and coated felt surfaced with mineral granules used as the top ply in conventional built-up roof membranes.
GlasPly IV	36" x 200'	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.



<u>Product</u>	<u>Dimensions</u>	<u>Test Specification</u>	<u>Product Description</u>
GlasTite Flexible	25' long	ASTM D 1668	Asphalt composite flashing with fiberglass scrim and two-ply polyester reinforcement, for use in conventional built-up roofing assemblies for base flashings.
Industrial Roof Cement	N/A	ASTM D 4586 Type II	General purpose medium trowel grade, cement cutback asphalt mastic reinforced with nonasbestos fibers and mineral stabilizers.
Lightweight Concrete (LWC) CR Base Fastener	various	PA 114	G-90 galvanized double spreading leg fastener for securing base sheets to lightweight insulating concrete and some poured gypsum decks.
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.
MBR Utility Cement	N/A	ASTM D 4586	General purpose trowel grade, cutback bitumen cement mixture including inorganic fibers and mineral stabilizers.
NTB 1H and 2H	various	PA 114	A glass-filled nylon, double internal hex drive head, buttress thread, 3/4" (19 mm) diameter fastener for securing roof insulation to gypsum and structural wood fiber decks.
PermaPly No. 28	36" x 108'; roll weight: 72 lbs.	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	PA 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.
UltraFast	Various lengths	PA 114	Insulation fastener assembly (steel decks only).
UltraGrip	Various lengths	PA 114	Insulation fastener assembly (steel decks only).

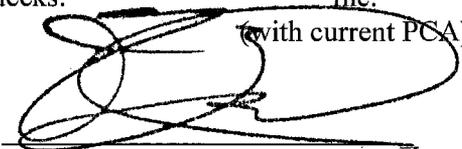


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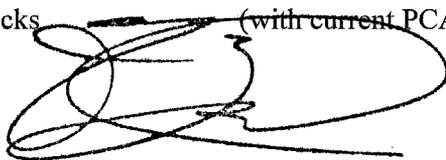
<u>Product</u>	<u>Dimensions</u>	<u>Test Specification</u>	<u>Product Description</u>
Ventsulation Felt	36" x 36'	ASTM D 4897 Type II	Heavy duty fiber glass base sheet impregnated and coated on both sides with asphalt with or without fine mineral stabilizer. Surfaced on the bottom side with coarse mineral granules embedded in asphaltic coating.
½" Retro-Fit Board	Various thicknesses	PA 110	A high-density perlite roof insulation for use in conventional and modified built-up roofing systems.

TRADE NAMES OF PRODUCTS MANUFACTURED BY OTHERS:

<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)
Celcore		PA 110	Cellular insulating concrete system	Celcore, Inc. (with current PCA)
Concrecel		PA 110	Cellular insulating concrete system.	Concrecel Int'l (with current PCA)
Elastizell		PA 110	Cellular insulating concrete system.	Elastizell Corp. (with current PCA)
Mearlcrete		PA 110	Cellular insulating concrete system.	The Mearl Corp. (with current PCA)
Dekfast Fasteners #14		PA 114	Insulation fastener for steel and concrete decks	Construction Fasteners Inc. (with current PCA)
Dekfast Hex Plate	2 7/8" x 3 1/4"	PA 114	Galvalume hex stress plate.	Construction Fasteners Inc. (with current PCA)
Dekfast Lock Plate	3" x 3 1/4"	PA 114	Polypropylene locking plate.	Construction Fasteners Inc. (with current PCA)
Dekfast Fasteners #15		PA 114	Insulation fasteners for concrete decks	Construction Fasteners Inc. (with current PCA)
Dekfast Fasteners #12		PA 114	Insulation fastener for steel and wood decks.	Construction Fasteners Inc. (with current PCA)


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<u>Product</u>	<u>Dimensions</u>	<u>Test Specification</u>	<u>Product Description</u>	<u>Manufacturer</u>
TPR		PA 114	Aluminum fastener for lightweight, gypsum and tectum decks	Creative Construction Components (with current PCA)
FM-30, FM-45, FM-60, FM-90 Fasteners		PA 114	Base ply fastening systems for lightweight concrete decks	ES Products, Inc. (with current PCA)
Asphalt Emulsion		PA 121	Asphalt emulsion	Gardner (with current PCA)
Asphalt		ASTM D 312	Type III or IV hot asphalt bitumen adhesive	generic
Asphalt Primer		ASTM D 41	Asphalt Primer	generic
EPS	various	PA 110	Extruded polystyrene insulation	generic (with current PCA)
High Density Wood Fiberboard	various	PA 110	Wood fiber insulation board	generic (with current PCA)
Oriented Strand Board	various	PA 110	Oriented strand board	generic (with current PCA)
Perlite/Urethane Composite	various	PA 110	Perlite / urethane composite board insulation	generic (with current PCA)
PermaMop		ASTM D 312	Rubberoid Asphalt	Trumbull
Polyethylene	4 mil min.		Vapor barrier / Air barrier	generic
Red Rosin	various		Rosin paper for barrier layer on wood decks	generic
Type X Gypsum	various		Fire rated water resistant type X gypsum sheating with treated core and facer	generic
Dens-Deck	4' x 8'	PA 110	Gypsum board	Georgia-Pacific (with current PCA)
Overlayment Board	4' x 8'	PA 110	Gypsum board	Georgia-Pacific (with current PCA)
Sturdi-Top	various	PA 110	Wood fiberboard	Georgia-Pacific (with current PCA)
#12 Roofgrip		PA 114	Insulation fastener for steel or wood decks	ITW Buildex (with current PCA)



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<u>Product</u>	<u>Dimensions</u>	<u>Test Specification</u>	<u>Product Description</u>	<u>Manufacturer</u>
#14 Roofgrip		PA 114	Insulation fastener steel, wood or concrete decks	ITW Buildex (with current PCA)
Gripdek Fastener		PA 114	Insulation fastener	ITW Buildex (with current PCA)
Hexcel Fastener		PA 114	Insulation fastener	ITW Buildex (with current PCA)
Hextra		PA 114	Insulation fastener and metal or plastic plate	ITW Buildex (with current PCA)
Polymer Gyptec		PA 114	Glass reinforced nylon gypsum deck fastener	ITW Buildex (with current PCA)
Premium Metal Plate	3" square	PA 114	3" square galvalume AZ55 stress plate	ITW Buildex (with current PCA)
Standard Plastic Plate	3" round	PA 114	Polyolefin plastic plate	ITW Buildex (with current PCA)
Con-Tite		PA 114	Concrete deck insulation fastener	Olympic Mfg. Group, Inc. (with current PCA)
Olympic Standard	3" round	PA 114	3" round galvalume AZ55 steel plate	Olympic Mfg. Group, Inc. (with current PCA)
Olympic Fastener #14		PA 114	Insulation fastener	Olympic Mfg. Group, Inc. (with current PCA)
Olympic Polypropylene	3.25" round	PA 114	Polypropylene plastic plate	Olympic Mfg. Group, Inc. (with current PCA)
Olympic Fastener #12		PA 114	Insulation fastener	Olympic Mfg. Group, Inc. (with current PCA)
Fiber Glass Roof Tape	6' x 300'	proprietary	Glass fiber mat together with resinous binder to reinforce fiber glass roof insulation.	Owens-Corning Fiberglas Corp. (with current PCA)
Fiberglas	various	PA 110	Fiber glass roof insulation	Owens-Corning Fiberglas Corp. (with current PCA)



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<u>Product</u>	<u>Dimensions</u>	<u>Test Specification</u>	<u>Product Description</u>	<u>Manufacturer</u>
GlasFast Fastener		PA 114	Insulation fastener assembly with recessed plastic plate	Owens-Corning Fiberglas Corp. (with current PCA)
GlasFast/Striker		PA 114	Insulation fastener assembly and metal plate for use over concrete decks	Owens-Corning Fiberglas Corp. (with current PCA)
Multi-Max	various	PA 110	Polyisocyanurate foam insulation	Rmax, Inc. (with current PCA)
HD Insul-Fixx Fastener		PA 114	Insulation fastener for use in steel and concrete decks	SFS/Stadler (with current PCA)
Insul-Fixx Fastener		PA 114	Insulation fastener for steel and wood decks	SFS/Stadler (with current PCA)
Insul-Fixx S	3" square	PA 114	3" square galvalume AZ55 stress plate	SFS/Stadler (with current PCA)
Insul-Fixx P	3" round	PA 114	3" round polyethylene stress plate	SFS/Stadler (with current PCA)
Plate Fixx Fastener		PA 114	Insulation fastening assembly	SFS/Stadler (with current PCA)
Rawl Drive		PA 114	Insulation fastener and steel and plastic stress plate for concrete deck	Powers Fasteners, Inc. (with current PCA)
Rawl Fasteners #12		PA 114	Insulation fastener for steel and wood decks	Powers Fasteners, Inc. (with current PCA)
Rawl Fasteners #14		PA 114	Insulation fastener for use in steel, wood or concrete	Powers Fasteners, Inc. (with current PCA)
Rawl 2" Plate	2" round	PA 114	2" round galvalume AZ55 membrane plate	Powers Fasteners, Inc. (with current PCA)
Rawl 3" Plate	3" round	PA 114	3" round galvalume AZ55 steel plate	Powers Fasteners, Inc. (with current PCA)
Rawl Spike		PA 114	Insulation fastener and steel and plastic stress plate for concrete deck	Powers Fasteners, Inc. (with current PCA)
Rawlite		PA 114	Insulation fastener for cementitious and gypsum decks	Powers Fasteners, Inc. (with current PCA)



<u>Product</u>	<u>Dimensions</u>	<u>Test Specification</u>	<u>Product Description</u>	<u>Manufacturer</u>
Rawlite 3" Plate	3" round	PA 114	3" round galvalume AZ55 steel plate for use with Rawlite fasteners	Powers Fasteners, Inc. (with current PCA)
Insulcel		PA 110	Cellular insulating concrete system	Siplast (with current PCA)
Structodeck	various	PA 110	High density wood fiber	Masonite (with current PCA)

EVIDENCE SUBMITTED:

<u>Test Agency/Identifier</u>	<u>Name</u>	<u>Report</u>	<u>Date</u>
Factory Mutual Research Corporation	J.I. # 3000949	FM Approval Report	06.05.98
	J.I. # 3001485	FM Approval Report	08.11.98
	J.I. # 30016299	FM Approval Report	09.10.98
	J.I. # 3D4A4.AM	FM Approval Report	09.28.98
	FMRC 1999	Current Insulation Fastening Requirements	01.01.99
Exterior Research & Design, Inc.	4361-02.04-1	Wind Uplift	04.97
	10390A.10.97-1	Wind Uplift	10.97
	10390A.12.97-1		12.97
Underwriters Laboratories, Inc.	R 10167 (N)	Fire Classification -- see current directory	01.01.95
Dynatech Engineering, Inc.	4360.03.95-1	Wind Uplift Classification	3.95
	4360.03.95-2		
	4361.5.95-1	Wind Uplift Classification	5.95
Independent Roof Testing & Consultants of South Florida	IRT 99001	Uplift Resistance	1.20.99
	IRT 99002	PA 114	
	IRT 99003		
	IRT 99005	Uplift Resistance	2.10.99
	IRT 99013	PA 114	



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APPROVED ASSEMBLIES

- Membrane Type:** BUR
- Deck Type 4I:** Lightweight Concrete, Insulated, New Construction
- Deck Description:** Concrecel Cellular Lightweight Concrete
- System Type A:** 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 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 2/4" 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.

<u>Insulation Base or Top Layer</u>	<u>Fastener Type</u>	<u>Fastening Detail No.</u> (See RAS 117)	<u>Fasteners Per Board</u>	<u>Fastener Density</u>
Approved Type(s): ACFoam-II, E'NRG'Y 2, MultiMax Minimum: 1" x 4' x 4'	N/A	N/A	N/A	N/A
Approved Type(s): Fesco Foam Minimum: 1.5" x 4' x 4'	N/A	N/A	N/A	N/A
Approved Type(s): Fesco Minimum: 3/4" x 2' x 4'	N/A	N/A	N/A	N/A
Approved Type(s): Retro-Fit Board Minimum: 1/2" x 4' x 4'	N/A	N/A	N/A	N/A
Approved Type(s): Fiber Glass Minimum: 3/4" x 4' x 4'	N/A	N/A	N/A	N/A

<u>Insulation Base or Top Layer</u>	<u>Fastener Type</u>	<u>Fastening Detail No.</u> (See RAS 117)	<u>Fasteners Per Board</u>	<u>Fastener Density</u>
One or more layers of any of the following insulations:				
Approved Type(s): Tapered Fesco Minimum: 3/4" x 4' x 4'	N/A	N/A	N/A	N/A
Approved Type(s): Tapered E'NRG'Y 2 Minimum: 1.3" x 4' x 4'	N/A	N/A	N/A	N/A
Approved Type(s): Tapered Fiber Glass Minimum: 3/4" x 4' x 4'	N/A	N/A	N/A	N/A



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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 JM LWC CR Base Fasteners, Olympic CR Base Ply Fasteners, ES CR Base Sheet 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: Two or more plies of JM 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 JM GlasKap 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 one of the following:
1. 2-3 gallons/sq. TopGard A or B emulsion or 2 gallons/sq. aluminum coating. 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: BUR

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

Deck Description: Cellular or Aggregate Lightweight Concrete (250 psi Min.)

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

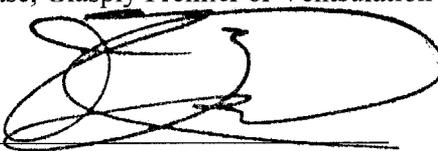
Deck : 18-22 ga steel deck shall be secured 6" o.c. to structural supports spaced a maximum of 5 ft on centers with screws or puddle welds.

All General and System Limitations apply.

<u>Insulation Base Layer</u>	<u>Fastener Type</u>	<u>Fastening Detail No.</u> (See RAS 117)	<u>Fasteners Per Board</u>	<u>Fastener Density</u>
Approved Type(s): ACFoam-II, E'NRG'Y 2, MultiMax Minimum: 1.5" x 4' x 4'	N/A	N/A	N/A	N/A
Approved Type(s): Fesco Foam Minimum: 1" x 4' x 4'	N/A	N/A	N/A	N/A
Approved Type(s): Fesco Minimum: 3/4" x 2' x 4'	N/A	N/A	N/A	N/A
Approved Type(s): Retro-Fit Board Minimum: 1/2" x 4' x 4'	N/A	N/A	N/A	N/A
Approved Type(s): Fiber Glass Minimum: 3/4" x 4' x 4'	N/A	N/A	N/A	N/A

<u>Insulation Top Layer (Optional)</u>	<u>Fastener Type</u>	<u>Fastening Detail No.</u> (See RAS 117)	<u>Fasteners Per Board</u>	<u>Fastener Density</u>
One or more layers of any of the following insulations:				
Approved Type(s): Tapered Fesco Minimum: 3/4" x 4' x 4'	N/A	N/A	N/A	N/A
Approved Type(s): Tapered E'NRG'Y 2 Minimum: 1.3" x 4' x 4'	N/A	N/A	N/A	N/A
Approved Type(s): Tapered Fiber Glass Minimum: 3/4" x 4' x 4'	N/A	N/A	N/A	N/A

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


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- Fastening : Fasten base sheet with Simplex Base-Lok Fasteners at a 3" side lap 9" o.c. and 12" o.c. in two staggered rows in the center of the sheet.
- Ply Sheet: Two or more plies of JM 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 JM GlasKap 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 one of the following:
1. 2-3 gallons/sq. TopGard A or B emulsion or 2 gallons/sq. aluminum coating. 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:** BUR
- Deck Type 4:** Lightweight Concrete, New Construction
- Deck Description:** Cellular or Aggregate Lightweight Concrete (250 psi Min.)
- System Type E:** 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 PermaPly 28, DynaBase, GlasBase, Glasply Premier or Ventsulation fastened to the deck as described below:
- Fastening:** Fasten base sheet with JM LWC CR Base Fasteners, Olympic CR Base Ply Fasteners or ES Base Sheet 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:** Two or more plies of JM 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 JM GlasKap 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 one of the following:
1. 2-3 gallons/sq. TopGard A or B emulsion or 2 gallons/sq. aluminum coating. 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:** -52.5psf (See General Limitation #7)



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Membrane Type: BUR
Deck Type 4: Lightweight Concrete, New Construction
Deck Description: Concrecel Lightweight Concrete
System Type F: Base sheet adhered in approved asphalt.

Deck : 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 lightweight deck.
Fastening: Strip mopped with approved asphalt.
Ply Sheet: One or more plies of GlasPly Premier or 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 JM GlasKap 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 one of the following:

1. 2-3 gallons/sq. TopGard A or B emulsion or 2 gallons/sq. aluminum coating. 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)



- Membrane Type:** BUR
- Deck Type 4I:** Lightweight Concrete, Insulated, New Construction
- Deck Description:** Cellular or Aggregate Lightweight Concrete (300 psi Min.)
- System Type A:** 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.

- Anchor Sheet:** One ply of DynaBase, GlasBase, Glasply Premier or Ventsulation fastened to the deck as described below:
- Fastening:** Fasten base sheet with UltraFast fasteners and Accutrac (Buildex) 3" x 3" 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** Two or more plies of GlasBase, GlasBase Plus, PermaPly No. 28, GlasPly Premier or Glas Ply IV adhered to the base sheet in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs./sq.
- Membrane:** One ply of JM GlasKap adhered in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs./sq. (See application instructions for approved method of installation).
- Surfacing:** (Optional) Install one of the following:
1. 2-3 gallons TopGard A or 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)



Membrane Type: BUR

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

Deck Description: Cellular or Aggregate Lightweight Concrete

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

All General and System limitations apply.

<u>Insulation Base or Top Layer</u>	<u>Fastener Type</u>	<u>Fastening Detail No.</u>	<u>Fasteners Per Board</u>	<u>Fastener Density</u>
Approved Type(s): ACFoam II, E'NRG'Y-2, MultiMax Minimum: 4' x 4' x 1.3"	N/A	N/A	N/A	N/A
Approved Type(s): E'NRG'Y-2 Minimum: 4' x 4' x 1.4"	N/A	N/A	N/A	N/A
Approved Type(s): Fesco Foam Minimum: 4' x 4' x 1.5"	N/A	N/A	N/A	N/A
Approved Type(s): JM Fiber Glass Roof Insulation Minimum: 3' x 4' x 3/4"	N/A	N/A	N/A	N/A
Approved Type(s): JM Fesco Board Minimum: 2' x 4' x 3/4"	N/A	N/A	N/A	N/A
Approved Type(s): JM Retro-Fit Board Minimum: 2' x 4' x 1/2"	N/A	N/A	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: Install one ply of Dynabase, Ventsulation, GlasBase, GlasBase Plus or PermaPly No. 28 base sheet mechanically fastened as described below.

Fasteners: Attach anchor sheet using JM CR Base Ply Fasteners spaced 7" o.c. in a 3" lap and 7" o.c. in two staggered rows in the center of the sheet.

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



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Cap Sheet: (Optional) One ply of GlasKap 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 one of the following:

1. 2-3 gallons/sq. TopGard A or B emulsion or 2 gallons/sq. aluminum coating. 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:** BUR
- Deck Type 4:** Lightweight Concrete, Non-insulated, New Construction
- Deck Description:** Cellular or Aggregate Lightweight Concrete
- System Type A:** Base sheet mechanically fastened.

All General and System limitations apply.

- Anchor Sheet:** Install one ply of Dynabase, Ventsulation, GlasBase, GlasBase Plus or PermaPly No. 28 base sheet mechanically fastened as described below.
- Fasteners:** Attach anchor sheet using JM CR Base Ply Fasteners, Olympic CR Base Sheet Fasteners, or ES CR Base Sheet Fasteners spaced 7" o.c. in a 3" lap and 7" o.c. in two staggered rows in the center of the sheet.
- Ply Sheet:** Two or more plies of JM 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 JM GlasKap 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 one of the following:
1. 2-3 gallons/sq. TopGard A or B emulsion or 2 gallons/sq. aluminum coating. 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:** BUR
- Deck Type 4:** Lightweight Concrete, New Construction
- Deck Description:** Celcore Lightweight Concrete
- System Type A:** 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, PermaPly 28, GlasPly Premier or Ventsulation fastened to the deck as described below:
- Fastening:** Fasten base sheet with JM LWC CR Base Fasteners, Olympic CR Base Fasteners, or ES CR Base Sheet 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** One or more plies GlasPly IV or GlasPly Premier adhered to the base sheet in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs./sq..
- Cap Sheet:** One ply of JM GlasKap adhered in a full mopping of hot asphalt 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 A or 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)



Membrane Type: BUR

Deck Type 4: Lightweight Concrete, New Construction

Deck Description: Concrecel Cellular Lightweight Concrete

System Type E: 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. 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 fastened to the deck as described below:

Fastening: Fasten base sheet to deck with JM LWC CR Base Fasteners, Olympic CR Base Ply Fasteners, ES CR Base Sheet 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: If optional GlasKap sheet is utilized, one ply 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 optional GlasKap is not utilized, two plies of GlasPly Premier or GlasPly IV installed in the same manner.

Cap Sheet: (Optional) One ply of JM GlasKap 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 one of the following:

1. 2-3 gallons/sq. TopGard A or B emulsion or 2 gallons/sq. aluminum coating. 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: BUR

Deck Type 4: Lightweight Concrete, New Construction

Deck Description: Concrecel Lightweight Concrete

System Type F: Base sheet adhered and mechanically fastened.

Deck : 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 or 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 JM GlasKap 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 one of the following:

1. 2-3 gallons/sq. TopGard A or B emulsion or 2 gallons/sq. aluminum coating. 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)



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.

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.)**



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NOTICE OF ACCEPTANCE STANDARD CONDITIONS

- 1 Renewal of this Acceptance (approval) shall be considered after a renewal application has been filed and the original submitted documentation, including test supporting data, engineering documents, are no older than eight (8) years.
- 2 Any and all approved products shall be permanently labeled with the manufacturer's name, city, state, and the following statement: "Miami-Dade County Product Control Approved", or as specifically stated in the specific conditions of this Acceptance.
- 3 Renewals of Acceptance will not be considered if:
 - a) There has been a change in the South Florida Building Code affecting the evaluation of this product and the product is not in compliance with the code changes;
 - b) The product is no longer the same product (identical) as the one originally approved;
 - c) If the Acceptance holder has not complied with all the requirements of this acceptance, including the correct installation of the product;
 - d) The engineer who originally prepared, signed and sealed the required documentation initially submitted, is no longer practicing the engineering profession.
- 4 Any revision or change in the materials, use, and/or manufacture of the product or process shall automatically be cause for termination of this Acceptance, unless prior written approval has been requested (through the filing of a revision application with appropriate fee) and granted by this office.
- 5 Any of the following shall also be grounds for removal of this Acceptance:
 - a) Unsatisfactory performance of this product or process;
 - b) Misuse of this Acceptance as an endorsement of any product, for sales, advertising or any other purposes.
- 6 The Notice of Acceptance 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 Notice of Acceptance is displayed, then it shall be done in its entirety.
- 7 A copy of this Acceptance as well as approved drawings and other documents, where it applies, shall be provided to the user by the manufacturer or its distributors and shall be available for inspection at the job site at all times. The copies need not be resealed by the engineer.
- 8 Failure to comply with any section of this Acceptance shall be cause for termination and removal of Acceptance.
- 9 This Acceptance contains pages 1 through 24.

END OF THIS ACCEPTANCE



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