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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 Recover 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.: 01-0524.09
EXPIRES: 07/19/2006

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

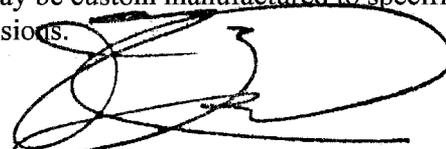
APPROVED: 07/19/2001

ROOFING ASSEMBLY APPROVAL

Category: Roofing Approval Date: **July 19, 2001**
Sub-Category: Built-up Roofing Expiration Date: **July 19, 2006**
Deck Type: Recover
Maximum Design Pressure See Specific deck type
Fire Classification: See General Limitation #1

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.



Frank Zuloaga, RRC
 Roofing Product Control Examiner

<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.



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<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).

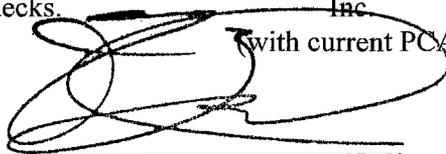


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Roofing Product Control Examiner

<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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Roofing Product Control Examiner

<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 sheathing 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)

<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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Roofing Product Control Examiner

<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)



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<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. # 3001629	FM Approval Report	09.10.98
	J.I. # OZ8A9.AM	FM Approval Report	09.10.98
	J.I. # 3D4A4.AM		09.28.98
	J.I. # 3000949	FM Approval Report	06.05.98
	J.I. # 3001482		08.11.98
	FMRC 1999	Current Insulation Fastening Requirements	01.01.99
Exterior Research & Design, Inc.	# 10390A.10.97-1	Wind Uplift	10.97
	# 4361-02.04-1	Wind Uplift	04.97
	# 10390A.12.97-1	Wind Uplift	12.97
	FMRC 1999	Current Insulation Fastening Requirements	01.01.99
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 & Consulting of South Florida, Inc.	IRT 99001.1.20.99	Uplift Resistance	1.20.99
	IRT 99002.1.20.99		
	IRT 99003.1.20.99		



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APPROVED ASSEMBLIES

Membrane Type:: BUR

Deck Type 7I: Recover

Deck Description: Concrete/lightweight concrete/cementitious wood fiber/wood/steel

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

All General and System limitations apply.

<u>Insulation Base Layer</u>	<u>Fastener Type</u>	<u>Fastening Detail No.</u> (RAS 117)	<u>Fasteners Per Board</u>	<u>Fastener Density</u>
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One or more layers of the following insulations:

Approved Type(s): **Multi-Max, E'NRG'Y 2, AC Foam-II, Fesco Foam**

Minimum: 1" x 4' x 4'	N/A	N/A	N/A	N/A
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Approved Type(s): **Retro-Fit**

Minimum: ½" x 2' x 4'	N/A	N/A	N/A	N/A
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Approved Type(s): **Fesco**

Minimum: ¾" x 2' x 4'	N/A	N/A	N/A	N/A
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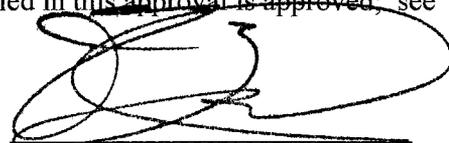
Approved Type(s): **Fiber Glass**

Minimum: ¾" 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 GlasBase, GlasBase Ply, PermaPly No. 28, GlasPly Premier, GlasPly IV or Ventsulation Felt Base Sheet mechanically fastened with any approved fasteners and plate listed herein spaced 9" o.c. at the lap and in two rows staggered 12" in the field of the sheet.

Base Sheet: (Optional) Install one ply of JM GlasBase, GlasBase Plus, GlasPly Premier, GlasPly IV or PermaPly No. 28 directly over the top layer of insulation. 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 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: -45 psf (See General Limitation #9)



Frank Zuloaga, RRC
Roofing Product Control Examiner

Membrane Type:: BUR

Deck Type 7I: Recover, Insulated

Deck Description: Concrete/lightweight concrete/cementitious wood fiber/wood/steel

System Type C: All layers of insulation simultaneously fastened.

All General and System limitations apply.

<u>Insulation Base Layer</u>	<u>Fastener Type</u>	<u>Fastening Detail No.</u> (RAS 117)	<u>Fasteners Per Board</u>	<u>Fastener Density</u>
Approved Type(s): ACFoam-II Minimum: 1.3" x 4' x 4'	N/A	N/A	N/A	N/A
Approved Type(s): E'NRG'Y-2 Minimum: 1.4" x 3' x 4'	N/A	N/A	N/A	N/A
Approved Type(s): Multimax, Fesco Foam Minimum: 1.5" x 4' x 4'	N/A	N/A	N/A	N/A
Approved Type(s): Fesco Minimum: ¾" x 2' x 4'	N/A	N/A	N/A	N/A
Approved Type(s): Fiber Glass Minimum: ¾" x 4' x 4'	N/A	N/A	N/A	N/A
Approved Type(s): Retro-Fit Board Minimum: ½" x 4' x 4'	N/A	N/A	N/A	N/A

Note: Both layers shall be simultaneously attached; see top layer below for fasteners and density. Insulation panels listed are minimum sizes and dimensions.

<u>Insulation Top Layer</u>	<u>Fastener Type</u>	<u>Fastening Detail No.</u> (RAS 117)	<u>Fasteners Per Board</u>	<u>Fastener Density</u>
Approved types: E'NRG'Y Minimum: 1.3" x 4' x 4'	UltraFast S/P UltraGrip S/P	[3]	8	1:2 ft ²
Approved types: Fes-Core Minimum: 2" x 4' x 4'	UltraFast S/P UltraGrip S/P	[3]	8	1:2 ft ²
Approved Type(s): Fesco Minimum: ¾" x 2' x 4'	UltraFast S/P UltraGrip S/P	[3]	4	1:2 ft ²



<u>Insulation Top Layer</u>	<u>Fastener Type</u>	<u>Fastening Detail No.</u> (RAS 117)	<u>Fasteners Per Board</u>	<u>Fastener Density</u>
Approved types: Fiber Glass				
Minimum: 1 ⁵ / ₁₆ " x 4' x 4'	UltraFast S/P UltraGrip S/P	[3]	8	1:2 ft ²
Approved types: Retro-Fit				
Minimum: 1/2" x 4' x 4'	UltraFast S/P UltraGrip S/P	[3]	8	1:2 ft ²

Note: All layers of insulation shall be mechanically attached using the fastener density listed above. The insulation panels listed are minimum sizes and dimensions; if larger panels are used, the number of fasteners shall be increased maintaining the same fastener density. Insulation fasteners shall be tested for withdrawal resistance in compliance with Testing Application Standard TAS 105 to confirm compliance with the wind load requirements. Please refer to Roofing Application Standard RAS 117 for insulation attachment.

Base Sheet: (Optional) Install one ply of JM Dynabase, GlasBase, GlasBase Plus or PermaPly No. 28 directly over the top layer of insulation. 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 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: -45 psf (See General Limitation #9)



Frank Zuloaga, RRC
Roofing Product Control Examiner

Membrane Type:: BUR

Deck Type 7I: Recover

Deck Description: Concrete/lightweight concrete/cementitious wood fiber/wood/steel

System Type D(1): Anchor sheet adhered with approved asphalt; all layers of insulation adhered with approved asphalt.

All General and System limitations apply.

<u>Insulation Base Layer</u>	<u>Fastener Type</u>	<u>Fastening Detail No.</u> (RAS 117)	<u>Fasteners Per Board</u>	<u>Fastener Density</u>
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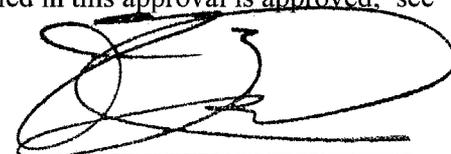
One or more layers of the following insulations:

Approved Type(s): Multi-Max, E'NRG'Y 2, AC Foam-II Minimum: 1" 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): Retro-Fit Minimum: 1/2" x 2' 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): Fiber Glass Minimum: 3/4" x 4' x 4'	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: One ply of one of Ventsulation Felt Base Sheet, GlasBase, GlasBase Plus or PermaPly No. 28 in a spot mopping of approved asphalt, 12" diameter circles, 24" o.c. at a rate of 12 lbs./sq..

Base Sheet: (Optional) Install one ply of JM GlasBase, GlasBase Plus, GlasPly Premier, GlasPly IV or PermaPly No. 28 directly over the top layer of insulation. 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 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: -45 psf (See General Limitation #9)



Membrane Type:: BUR

Deck Type 7I: Recover

Deck Description: Concrete/lightweight concrete/cementitious wood fiber/wood/steel

System Type D(2): All layers of insulation adhered with approved asphalt.

All General and System limitations apply.

<u>Insulation Base Layer</u>	<u>Fastener Type</u>	<u>Fastening Detail No.</u> (RAS 117)	<u>Fasteners Per Board</u>	<u>Fastener Density</u>
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One or more layers of the following insulations:

Approved Type(s): **Multi-Max, E'NRG'Y 2, ACfoam-II, Fesco Foam**

Minimum: 1" x 4' x 4'	N/A	N/A	N/A	N/A
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Approved Type(s): **Retro-Fit**

Minimum: ½" x 2' x 4'	N/A	N/A	N/A	N/A
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Approved Type(s): **Fesco**

Minimum: ¾" x 2' x 4'	N/A	N/A	N/A	N/A
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Approved Type(s): **Fiber Glass**

Minimum: ¾" 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.

Base Sheet: (Optional) Install one ply of JM GlasBase, GlasBase Plus, GlasPly Premier, GlasPly IV or PermaPly No. 28 directly over the top layer of insulation. 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 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: -45 psf (See General Limitation #9)



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Membrane Type:: BUR

Deck Type 7: Recover

Deck Description: Concrete/lightweight concrete/cementitious wood fiber/wood/steel

System Type A: Base sheet mechanically fastened.

All General and System limitations apply.

Base Sheet: One ply of one of Ventsulation Felt Base Sheet, GlasBase, GlasBase Plus, PermaPly No. 28, GlasPly Premier, GlasPly IV or PermaPly R mechanically fastened with any approved fasteners and plate listed herein spaced 9" o.c. at the lap and in two rows staggered 12" in the field 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: -45 psf (See General Limitation #9)



Membrane Type: BUR

Deck Type 7: Recover

Deck Description: Concrete/lightweight concrete/cementitious wood fiber/wood/steel

System Type D: Base sheet adhered with approved asphalt.

All General and System limitations apply.

Base Sheet: One ply of one of Ventsulation Felt Base Sheet, GlasBase, GlasBase Plus or PermaPly No. 28 in a spot mopping of approved asphalt, 12" diameter circles, 24" o.c. at a rate of 12 lbs./sq..

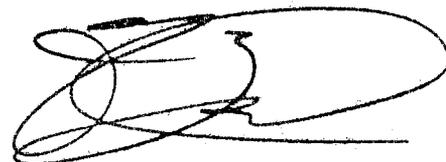
Ply Sheet: Two or more plies of JM GlasPly IV or GlasPly Premier adhered in a full mopping of hot asphalt applied within the EVT range and at a rate of 20-40 lbs./sq.

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 TopGard A or B emulsion with 2 gallons 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: -45 psf (See General Limitation #9)



RECOVER SYSTEM LIMITATIONS:

1. All System Limitations and General Limitations shall apply. See specific deck type Notice of Acceptance for deck type System Limitations.

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 20.

END OF THIS ACCEPTANCE



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