



MIAMI-DADE COUNTY, FLORIDA
METRO-DADE FLAGLER BUILDING

BUILDING CODE COMPLIANCE OFFICE (BCCO)
PRODUCT CONTROL DIVISION

140 WEST FLAGLER STREET, SUITE 1603
MIAMI, FLORIDA 33130-1563
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www.buildingcodeonline.com

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 Florida Building Code, including the High Velocity Hurricane Zone.

DESCRIPTION: Johns Manville Self-Adhering Modified Roof Systems Over Concrete Decks

LABELING: Each unit shall bear a permanent label with the manufacturer's name or logo, city, state and following statement: "Miami-Dade County Product Control Approved", unless otherwise noted herein.

RENEWAL of this NOA shall be considered after a renewal application has been filed and there has been no change in the applicable building code negatively affecting the performance of this product.

TERMINATION of this NOA will occur after the expiration date or if there has been a revision or change in the materials, use, and/or manufacture of the product or process. Misuse of this NOA as an endorsement of any product, for sales, advertising or any other purposes shall automatically terminate this NOA. Failure to comply with any section of this NOA shall be cause for termination and removal of NOA.

ADVERTISEMENT: The NOA number preceded by the words Miami-Dade County, Florida, and followed by the expiration date may be displayed in advertising literature. If any portion of the NOA is displayed, then it shall be done in its entirety.

INSPECTION: A copy of this entire NOA shall be provided to the user by the manufacturer or its distributors and shall be available for inspection at the job site at the request of the Building Official.

This renews NOA No. 04-0914.03 and consists of pages 1 through 11.

The submitted documentation was reviewed by Jorge L. Acebo.



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ROOFING ASSEMBLY APPROVAL

Category: Roofing
Sub-Category: SBS Modified Bitumen

Deck Type: Concrete
Maximum Design Pressure -75 psf
Fire Classification: 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>
DynaGrip Cap FR	32'-10" x 39-3/8"; roll weight: 100 lbs	ASTM D 6163	A SBS modified bitumen coated, fiber glass reinforced, self-adhering cap sheet, with added fire retardant.
DynaGrip Base	65'-7" x 39-3/8"; roll weight: 94 lbs	ASTM D 6163	A SBS modified bitumen coated, fiber glass reinforced, self-adhering base sheet.
JMCleanBond Base	65'-7" x 39-3/8"; roll weight: 80 lbs	ASTM D6163	A SBS modified bitumen coated, fiber glass reinforced, self-adhering base sheet, with added fire retardant.
JMCleanBond Cap	32'-10" x 39-3/8"; roll weight: 100 lbs	ASTM D 6163	A SBS modified bitumen coated, fiber glass reinforced, self-adhering cap sheet, with added fire retardant.
DeckPro	227'x 40"; roll weight: 50 lbs		A foil faced nailable, polyester mat reinforced base sheet.
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	Fiberglas roof insulation.
DuraBoard	various	ASTM C 728	A high density perlite roof insulation board for use in heat welded, modified bitumen systems.
Tapered DuraBoard	various	ASTM C 1289	Rigid polyisocyanurate roof insulation with DuraBoard facing bonded to one side for use in conventional built-up and other roofing.
DuraFoam	various	ASTM C 1289	Rigid polyisocyanurate roof insulation with DuraBoard facing bonded to one side for use in conventional built-up and other roofing.
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 ENRGY 2, ENRGY 3 or Tapered ENRGY 2, ENRGY 3	various	ASTM 1289	Polyisocyanurate insulation for use with single-ply, BUR and modified bitumen roof covers .
JM ENRGY 2, ENRGY 3 Plus	various	ASTM 1289	Polyisocyanurate insulation laminated to 1/2" wood fiber for use with single-ply, BUR and modified bitumen roof covers.



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<u>Product</u>	<u>Dimensions</u>	<u>Test Specification</u>	<u>Product Description</u>
JM ENRGY 3 Foil Faced	Various	ASTM 1289	Polyisocyanurate insulation with foil facer, for use with single-ply, BUR and modified bitumen roof covers.
JM ENRGY 2, ENRGY 3 Composite or Tapered Composite	various	ASTM 1289	Polyisocyanurate insulation laminated to ½" perlite for use with single-ply, BUR and modified bitumen 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.
Urethane Insulation Adhesive	N/A	proprietary	A one part, cold application adhesive.

APPROVED INSULATION:

TABLE 2

<u>Product</u>	<u>Dimensions</u>	<u>Test Specification</u>	<u>Product Description</u>	<u>Manufacturer (with current NOA)</u>
Pyrox	various	TAS 110	Polyisocyanurate foam insulation	Apache Products Co.
ACFoam II	various	TAS 110	Polyisocyanurate foam insulation	Atlas Energy Products
Asphalt Primer		ASTM D 41	Asphalt Primer	Generic
EPS	various	TAS 110	Extruded polystyrene insulation	Generic
High Density Wood Fiberboard	various	TAS 110	Wood fiber insulation board	Generic
Type X Gypsum	various	TAS 110	Fire resistant rated gypsum	Generic
Dens-Deck	4' x 8'	TAS 110	Gypsum board	Georgia-Pacific
Sturdi-Top	various	TAS 110	Wood fiberboard	Georgia-Pacific
Multi-Max	various	TAS 110	Polyisocyanurate foam insulation	Rmax, Inc.
Structodeck	various	TAS 110	High density wood fiber	Masonite



APPROVED FASTENERS:

TABLE 3

<u>Fastener Number</u>	<u>Product Name</u>	<u>Product Description</u>	<u>Dimensions</u>	<u>Manufacturer (With Current NOA)</u>
1.	UltraFast (#14 Only)	Insulation fastener for concrete decks.		Johns Manville
2.	JM CD-10	Insulation fastener for concrete decks.		Johns Manville
3.	JM Standard Metal Plate	Galvalume AZ55 steel plate	3" round	Johns Manville
4.	JM Plastic Plate	Polypropylene round plate	3.25" round	Johns Manville
5.	UltraFast Galvalume Metal Plate	Galvalume AZ55 steel plate	3" square	Johns Manville
6.	UltraFast Plastic Plate	Polypropylene round plate	3" round	Johns Manville
7.	CD-10	Insulation fastener for concrete decks.		Olympic Mfg. Group, Inc.
8.	Olympic Fastener #14	Insulation fastener		Olympic Mfg. Group, Inc.
9.	Olympic Fastener ASAP	Pre-assembled Insulation fastener and plate		Olympic Mfg. Group, Inc.
10.	Olympic Standard	Round galvalume AZ55 steel plate.	3" round	Olympic Mfg. Group, Inc.
11.	Olympic G-2	Round galvalume AZ55 steel plate.	3.5" round	Olympic Mfg. Group, Inc.
12.	Olympic Polypropylene	Polypropylene plastic plate	3" round	Olympic Mfg. Group, Inc.

EVIDENCE SUBMITTED:

<u>Test Agency/Identifier</u>	<u>Name</u>	<u>Report</u>	<u>Date</u>
Factory Mutual Research Corporation	3017543	FM Class 4470	03.05.04
	3020586	FM Class 4470	11.29.04
Exterior Research & Design, LLC.	#00255.06.04-R2	Physical Properties	08.19.04



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APPROVED ASSEMBLIES

Membrane Type: SBS
Deck Type 3I: Concrete Decks, Insulated
Deck Description: 2500 psi structural concrete or concrete plank
System Type A(1): One or more layers of insulation adhered with approved adhesive.

All General and System Limitations apply.

Insulation Base Layer: One or more layers of min. 1.5" thick ENRGY 3 or ENRGY3 Foil Faced applied in 0.75" ribbons of JM Urethane Adhesive applied 12" o.c. and walked-in. Adhesive beads in subsequent insulation layers are applied perpendicular to those applied in preceding layers.

Insulation Top Layer: None

Base Sheet: DynaGrip Base or JMCleanBond Base, self-adhered.

Ply Sheet: (Optional) One ply of DynaGrip Base or JMCleanBond Base, self-adhered.

Membrane: DynaGrip Cap FR or JMCleanBond Cap, self-adhered.

Surfacing: (Optional) Install one of the following:

1. 1 $\frac{3}{4}$ -2 gal./sq. TopGard A or B emulsion or 2 gal./sq. aluminum coating.
2. Flood coat and gravel/slag with an application rate of 60 lbs./sq. and 400 lbs./sq., respectively.

Maximum Design Pressure: -75 psf (See General Limitation #9.)



Membrane Type: SBS
Deck Type 3I: Concrete Decks, Insulated
Deck Description: 2500 psi structural concrete or concrete plank
System Type C(1): All layers of insulation simultaneously mechanically fastened

All General and System Limitations apply.

Base Insulation Layer (Optional)	Insulation Fasteners (Table 3)	Fastener Density/ft ²
ENRGY3 Foil Faced Minimum 2" thick	N/A	N/A

Note: Both layers of insulation shall be simultaneously mechanically fastened; see top layer below for fasteners and density.

Top Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft ²
ENRGY 3 Foil Faced Minimum 2" thick	1, 2, 7, 8 or 9	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. Please refer to Roofing Application Standard RAS 117 for insulation attachment.

Base Sheet: DynaGrip Base or JMCleanBond Base, self-adhered.
Ply Sheet: None
Membrane: DynaGrip Cap FR or JMCleanBond Cap, self-adhered.
Surfacing: (Optional) Install one of the following:

1. 1¼ -2 gal./sq. TopGard A or B emulsion or 2 gal./sq. aluminum coating.
2. Flood coat and gravel/slag with an application rate of 60 lbs./sq. and 400 lbs./sq., respectively.

Maximum Design Pressure: -45 psf (See General Limitation #9.)



Membrane Type: SBS
Deck Type 3I: Concrete Decks, Insulated
Deck Description: 2500 psi structural concrete or concrete plank
System Type C(3): All layers of insulation simultaneously mechanically fastened

All General and System Limitations apply.

Base Insulation Layer (Optional)	Insulation Fasteners (Table 3)	Fastener Density/ft²
ENRGY3, FescoFoam (perlite side down) Minimum 1.5" thick	N/A	N/A

Note: Both layers of insulation shall be simultaneously mechanically fastened; see top layer below for fasteners and density.

Top Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft²
ENRGY 3, FescoFoam (perlite side down) Minimum 1.5" thick	1, 2, 7, 8 or 9	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. Please refer to Roofing Application Standard RAS 117 for insulation attachment.

Base Sheet: DynaGrip Base or JMCleanBond Base, self-adhered.
Ply Sheet: (Optional) One ply DyanGrip Base or JMCleanBond Base, self-adhered (with FescoFoam)
Membrane: DynaGrip Cap FR or JMCleanBond Cap, self-adhered.
Surfacing: (Optional) Install one of the following:

1. 1¾ -2 gal./sq. TopGard A or B emulsion or 2 gal./sq. aluminum coating.
2. Flood coat and gravel/slag with an application rate of 60 lbs./sq. and 400 lbs./sq., respectively.

Maximum Design Pressure: -45 psf (See General Limitation #9.)



Membrane Type: SBS
Deck Type 3I: Concrete Decks, Insulated
Deck Description: 2500 psi structural concrete or concrete plank
System Type D(1) All layers of insulation and base sheet simultaneously mechanically fastened with base sheet.

All General and System Limitations apply.

One or more layers of any of the following insulations:

Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft ²
ENRGY 3, ENRGY 3 Foil Faced, JM ISO-3, ValuTherm, PSI 25 Minimum 1.5" thick	N/A	N/A

Note: Top layer shall have preliminary attachment, prior to the installation of the base/anchor sheet, at a minimum application rate of two fasteners per board for insulation boards having no dimension greater than 4 ft., and four fasteners for any insulation board having no dimension greater than 8 ft. All layers of insulation and base sheet shall be simultaneously fastened. See base/anchor sheet below for fasteners and density.

Base Sheet: DeckPro base sheet, secured as directed below.
Fastening: Fasten base sheet with UltraFast round or UltraFast square metal plates and approved fasteners, 18" o.c. in the 4" lap and 18" o.c. in one center row.
Ply Sheet: DynaGrip Base or JMCleanBond Base, self-adhered.
Membrane: DynaGrip Cap FR or JMCleanBond Cap, self-adhered.
Surfacing: (Optional) Install one of the following:
 1. 1 3/4 -2 gal./sq. TopGard A or B emulsion or 2 gal./sq. aluminum coating.
 2. Flood coat and gravel/slag with an application rate of 60 lbs./sq. and 400 lbs./sq., respectively.

Maximum Design Pressure: -45 psf (See General Limitation #9.)



Membrane Type: SBS
Deck Type 3I: Concrete Decks, Insulated
Deck Description: 2500 psi structural concrete or concrete plank
System Type D(2) All layers of insulation and base sheet simultaneously mechanically fastened with base sheet.

All General and System Limitations apply.

One or more layers of any of the following insulations:

Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft ²
ENRGY 3, ENRGY 3 Foil Faced, JM ISO-3, ValuTherm, PSI 25 Minimum 1.5" thick	N/A	N/A

Note: Top layer shall have preliminary attachment, prior to the installation of the base/anchor sheet, at a minimum application rate of two fasteners per board for insulation boards having no dimension greater than 4 ft., and four fasteners for any insulation board having no dimension greater than 8 ft. All layers of insulation and base sheet shall be simultaneously fastened. See base/anchor sheet below for fasteners and density.

Base Sheet: DeckPro base sheet, secured as directed below.
Fastening: Fasten base sheet with UltraFast round or UltraFast square metal plates and approved fasteners, 18" o.c. in the 4" lap and staggered 18" o.c. in two rows in the field.
Ply Sheet: DynaGrip Base or JMCleanBond Base, self-adhered.
Membrane: DynaGrip Cap FR or JMCleanBond Cap, self-adhered.
Surfacing: (Optional) Install one of the following:
 1. 1¼ -2 gal./sq. TopGard A or B emulsion or 2 gal./sq. aluminum coating.
 2. Flood coat and gravel/slag with an application rate of 60 lbs./sq. and 400 lbs./sq., respectively.

Maximum Design Pressure: -60 psf (See General Limitation #7.)



Membrane Type: SBS
Deck Type 3: Concrete Decks, Non-Insulated
Deck Description: 2500 psi structural concrete or concrete plank
System Type F(1) Base sheet adhered to primed concrete

All General and System Limitations apply.

Primer: Deck primed with ASTM D41 primer with an application rate of 1 gal/sq.
Base Sheet: DynaGrip Base or JMCleanBond Base, self-adhered.
Ply Sheet: (Optional) DynaGrip Base or JM CleanBond Base, self-adhered.
Membrane: DynaGrip Cap FR or JMCleanBond Cap, self-adhered.
Surfacing: (Optional) Install one of the following:
1. 1¾ -2 gal./sq. TopGard A or B emulsion or 2 gal./sq. aluminum coating.
2. Flood coat and gravel/slag with an application rate of 60 lbs./sq. and 400 lbs./sq., respectively.

Maximum Design Pressure: -45 psf (See General Limitation #9.)



CONCRETE DECK SYSTEM LIMITATIONS:

1. If mechanical attachment to the structural deck through the lightweight insulating concrete is proposed, a field withdrawal resistance testing shall be performed to determine equivalent or enhanced fastener patterns and density. All testing and fastening design shall be in compliance with Testing Application Standard TAS 105 and Roofing Application Standard RAS 117, calculations shall be signed and sealed by a Florida Registered Engineer, Architect, or Registered Roof Consultant.

GENERAL LIMITATIONS:

1. Fire classification is not part of this acceptance; refer to a current Approved Roofing Materials Directory for fire ratings of this product.
2. Insulation may be installed in multiple layers. The first layer shall be attached in compliance with Product Control Approval guidelines. All other layers shall be adhered in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs./sq., or mechanically attached using the fastening pattern of the top layer
3. All standard panel sizes are acceptable for mechanical attachment. When applied in approved asphalt, panel size shall be 4' x 4' maximum.
4. An overlay and/or recovery board insulation panel is required on all applications over closed cell foam insulations when the base sheet is fully mopped. If no recovery board is used the base sheet shall be applied using spot mopping with approved asphalt, 12" diameter circles, 24" o.c.; or strip mopped 8" ribbons in three rows, one at each 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 Professional Engineer, Registered Architect, or Registered Roof Consultant may be submitted. Said revised fastener spacing shall utilize the withdrawal resistance value taken from Testing Application Standards TAS 105 and calculations in compliance with Roofing Application Standard RAS 117.
7. Perimeter and corner areas shall comply with the enhanced uplift pressure requirements of these areas. Fastener densities shall be increased for both insulation and base sheet as calculated in compliance with Roofing Application Standard RAS 117. Calculations prepared, signed and sealed by a Florida registered Professional Engineer, Registered Architect, or Registered Roof Consultant **(When this limitation is specifically referred within this NOA, General Limitation #9 will not be applicable.)**
8. All attachment and sizing of perimeter nailers, metal profile, and/or flashing termination designs shall conform with Roofing Application Standard RAS 111 and applicable wind load requirements.
9. The maximum designed pressure limitation listed shall be applicable to all roof pressure zones (i.e. field, perimeters, and corners). Neither rational analysis, nor extrapolation shall be permitted for enhanced fastening at enhanced pressure zones (i.e. perimeters, extended corners and corners). **(When this limitation is specifically referred within this NOA, General Limitation #7 will not be applicable.)**
10. All products listed herein shall have a quality assurance audit in accordance with the Florida Building Code and Rule 9B-72 of the Florida Administrative Code.

END OF THIS ACCEPTANCE



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