MIAMI-DADE

BUILDING CODE COMPLIANCE OFFICE (BCCO)
PRODUCT CONTROL DIVISION

MIAMI-DADE COUNTY, FLORIDA
METRO-DADE FLAGLER BUILDING
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MIAMI, FLORIDA 33130-1563
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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 and the High Velocity Hurricane Zone of the Florida Building Code.

DESCRIPTION: SRT TPO Single Ply Roof Systems over Recover Deck

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 new NOA consists of pages 1 through 9.
The submitted documentation was reviewed by Jorge L. Acebo.

PRODUCT CONTROL ACCEPTED

ROOFING SYSTEM APPROVAL

Category:	Roofing
Sub-Category:	Single Ply
Material:	TPO
Deck Type:	Recover
Maximum Design Pressure	See Specific Deck Type
Fire Classification:	See General Limitation #1

TABLE 1
TRADE NAMES OF PRODUCTS MANUFACTURED OR LABELED BY APPLICANT:

Product Name	Dimensions	Test Specifications	Product Description
JM TPO	48", 75", 96", 120" or 148" wide x 100' long x 45 or 60 mils thick	TAS 131	Polyester reinforced Thermoplastic Olefin single ply membrane.
JM TPO Membrane Adhesive (Solvent Based)	5 gallon pails	Proprietary	Solvent based, contact adhesive for bonding of roof membrane to substrate.
E'NRG'Y 2 Plus	Various	TAS 110	Isocyanurate insulation with wood fiberboard facer

TABLE 2
APPROVED INSULATIONS:

Product	Product Description	Manufacturer (With current NOA)
AC Foam II	Isocyanurate insulation	Atlas Roofing Corp.
AC Foam composite	Isocyanurate insulation with perlite facer	Atlas Roofing Corp.
Multi-Max FA	Isocyanurate insulation	R-Max, Inc
Thermaroof composite	Isocyanurate insulation with perlite facer	R-Max, Inc
High Density Fiberboard	Wood fiberboard insulation	The Celotex Corp.
Dens-Deck	Silicon treated gypsum	G-P Gypsum

TABLE 3
APPROVED FASTENERS:

Product	Product Description	Manufacturer (With current NOA)
1. Construction Fasteners	Insulation and membrane fasteners	Construction Fasteners
2. Buildex Fasteners	Insulation and membrane fasteners	ITW Buildex Corp.
3. Olympic Fasteners	Insulation and membrane fasteners	Olympic Manufacturing
4. Tru-Fast Fasteners	Insulation and membrane fasteners	Tru-Fast corporation
5. GenFlex Fasteners	Insulation and membrane fasteners	Gen-Flex Corporation

EVIDENCE SUBMITTED:

Test Agency	Test Identifier	Description	Date
Factory Mutual Research	3009797	Wind Uplift, TAS 114 (FMRC 4470)	02/04/02
	3007119	Wind Uplift, TAS 114 (FMRC 4470)	01/02/02
	3005794	Wind Uplift, TAS 114 (FMRC 4470)	12/13/01
	3002357	Wind Uplift, TAS 114 (FMRC 4470)	05/16/00
	3005415	Wind Uplift, TAS 114 (FMRC 4470)	02/08/00
	3002775	Wind Uplift, TAS 114 (FMRC 4470)	09/16/99
	3000919	Wind Uplift, TAS 114 (FMRC 4470)	04/07/99
	3003690	Wind Uplift, TAS 114 (FMRC 4470)	03/29/99
	3B9A2.AM	Wind Uplift, TAS 114 (FMRC 4470)	01/25/99
	4B1A9.AM	Wind Uplift, TAS 114 (FMRC 4470)	09/09/98
	1D9A7.AM	Wind Uplift, TAS 114 (FMRC 4470)	07/31/98
	1D9A0.AM	Wind Uplift, TAS 114 (FMRC 4470)	07/30/98
	1D0A3.AM	Wind Uplift, TAS 114 (FMRC 4470)	09/24/97
	1B0A9.AM	Wind Uplift, TAS 114 (FMRC 4470)	05/09/97
Exterior Research & Design, LLC.	8054.02.02-1	Physical Properties TAS 131	02/22/02
Underwriters Laboratories, Inc.	01NK14490	Fire Classification	06/01/01
	96NK22037	TAS 114, (UL 790)	03/10/97
	01NK25823	Wind Uplift, TAS 114, (UL 1897)	07/02/01

APPROVED ASSEMBLIES:

Membrane Type: Single Ply, Thermoplastic, TPO

Deck Type 7I: Recover

Deck Description: Steel/Concrete/Lightweight Concrete/Cementitious Wood Fiber/Gypsum

System Type A: One or more layers of insulation adhered to existing roof surface with approved asphalt or adhesive

All General and System Limitations apply.

Insulation Option #1: Optional base layer(s) of maximum 4 x 4 ft (1.2 x 1.2 m) ACFoam II adhered to the existing roof surface or to each other with GenFlex Insulation Adhesive applied in approximate 0.75 in. (19 mm) wide ribbons spaced 12 in (305 mm). One layer of maximum 4 x 4 ft (1.2 x 1.2 m) E'NRG'Y-2 Plus adhered to existing roof surface or to the base insulation layer with GenFlex Insulation Adhesive Insulation layer with GenFlex Insulation Adhesive applied in approximate 0.75 in (19 mm) wide ribbons spaced 12 in (305 mm). Membrane applied as noted below.
Maximum Design Pressure: -45 psf

Insulation Option #2: One or more layers of maximum 4 x 4 ft (1.2 x 1.2 m) ACFoam II adhered to the existing roof surface or to each other with GenFlex Insulation Adhesive applied approximate 0.75 in (19 mm) wide ribbons spaced 12 in (305 mm). Membrane applied as noted below.
Maximum Design Pressure: -75 psf

Insulation Option #3: Existing roof surface shall be primed with ASTM D41 asphalt primer and allowed to dry. One or more layers of maximum 4 x 4 ft (1.2 x 1.2m) ACFoam II adhered to the existing roof surface or to each other with hot asphalt applied within the EVT range and at a rate of 20-40 lbs/100 ft^2. Membrane applied as noted below. **Maximum Design Pressure: -112.5 psf**

Membrane: JM TPO adhered to insulation using JM TPO Membrane Adhesive (Solvent Based) applied at 30 ft^2/gal (0.7 m^2/L) to both the substrate and the bottom side of the roof cover for a combined rate of 60 ft^2/gal (1.5 m^2/L).

Maximum Design Pressure: **See insulation options above** (See General Limitation #9)

Membrane Type: Single Ply, Thermoplastic, TPO

Deck Type 7I Recover

Deck Description Steel/Concrete

System Type C (1): Membrane fully adhered over mechanically fastened insulation.

All General and System Limitations apply.

Insulation for Base Layer (Optional)	Fastener Density ft^2	Fastener Type
ACFoam II (flat or tapered)		
Minimum: 1.3" thick	N/A	N/A
ACFoam Composite (flat or tapered), Multi-Max FA, Thermaroof Composite		
Minimum: 1.5" thick	N/A	N/A
High Density Fiberboard		
Minimum: ½" thick	N/A	N/A

Insulation Top Layer	Fastener Density ft^2	Fastener Type
ACFoam II		
Minimum: 1.5" thick	1:2	See approved fasteners in table 3
Minimum: 2.0" thick	1:4	See approved fasteners in table 3
Dens-Deck		
Minimum: ¼" thick	1:1.8	See approved fasteners in table 3

Membrane: JM TPO adhered to insulation using JM TPO Membrane Adhesive (Solvent Based) applied at 30 ft^2/gal (0.7 m^2/L) to both the substrate and the bottom side of the roof cover for a combined rate of 60 ft^2/gal (1.5 m^2/L)

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

Membrane Type: Single Ply, Thermoplastic, TPO

Deck Type 7I Recover

Deck Description Steel/Concrete/Lightweight Concrete/ Cementitious Wood Fiber/Gypsum

System Type D (1): Membrane attached over preliminary fastened insulation

All General and System Limitations apply.

Insulation for Base or Top Layer	Fastener Density ft^2	Fastener Type
ACFoam II (flat or tapered) Minimum: 1.3" thick	N/A	N/A
ACFoam Composite (flat or tapered), Multi-Max FA, Thermaroof Composite Minimum: 1.5" thick	N/A	N/A
High Density Fiberboard Minimum: ½" thick	N/A	N/A

Note: All insulation shall have preliminary attachment prior to installation of the roofing membrane at a minimum application of two fasteners per board for insulation boards having no dimension greater than 4 ft, and four fasteners for any insulation having no dimension greater than 8 ft.

Membrane: JM TPO attached to deck as follows:

Fastening #1: **Minimum Grade 33 Steel Deck Only:** GenFlex RM Plates and GenFlex #14 screws or GenFlex RM II Discs and Olympic #14 Heavy Duty Screws, spaced at max 6 in o.c. within the minimum 4.5 in (114 mm) wide laps, which are spaced at max 70.5 in (1791 mm) o.c. and sealed with a minimum 1.5 in (38 mm) heat weld. **Maximum Design: -45 psf.**

Fastening #2: **Minimum Grade 80 Steel Deck only:** SFS Stadler Extra Load Fastener screws spaced at max 12 in (305 mm) o.c. through GenFlex Anchor Bars, which are placed within the minimum 4.5 in (114 mm) wide laps, which are spaced at max 70 in (1778 mm) o.c. and sealed with a min 1.5 in wide heat weld placed on both sides of the anchor bar.
Maximum Design Pressure: -45 psf.

Fastening #3: **Minimum Grade 80 Steel Deck only:** GenFlex XHD Barbed Seam Plates and GenFlex #15 XHD or Buildex #15 SPM screws or Olympic XHD 2-3/8" in barbed plates and Olympics XHD screws spaced at 12 in. (305 mm) o.c. within the minimum 4.5 in (114 mm) wide laps, which are spaced at 70 in. (1778 mm) o.c. and sealed with a minimum 1.5 in (38 mm) heat weld.
Maximum Design Pressure: - 45psf

Fastening #4: **Minimum Grade 80 Steel Deck Only:** GenFast #15 (WH) screws and GenFast (WH) Barbed Plates or GenFlex #15 XHD screws and GenFlex 2-$^{3}/_{8}$" barbed seam plates or Olympic XHD screws and XHD plates spaced at maximum 12 in. (352 mm) o.c. within the minimum 6 in (150 mm) wide laps, which are spaced at maximum 90 in (2285 mm) o.c. and sealed with a minimum 1.75 in (45 mm) heat weld placed on the outside edge of the lap. **Maximum Design Pressure: -45 psf**

Fastening #5: **Minimum Grade 33 Steel Deck Only:** GenFast #15 (WH) screws and GenFast (WH) Barbed Plates or GenFlex #15 XHD screws and GenFlex 2-$^{3}/_{8}$" barbed seam plates or Olympic XHD screws and XHD plates spaced at maximum 6 in. (150 mm) o.c. within the minimum 6 in (150 mm) wide laps, which are spaced at maximum 114 in. (2895 mm) o.c. and sealed with a minimum 1.75 in (45 mm) heat weld placed on the outside edge of the lap. **Maximum Design Pressure: -45 psf**

Fastening #6: **Minimum Grade 80 Steel Deck Only:** GenFast #15 (WH) screws and GenFast (WH) Barbed Plates or Olympic XHD screws and XHD plates spaced at 12 in. (305 mm) o.c. within the minimum 5 in (127 mm) wide laps, which are spaced at 70 in (1778 mm) o.c. and sealed with a minimum 2 in (51 mm) wide heat weld placed on the outside edge of the lap.
Maximum Design Pressure: -45 psf

Fastening #7: **Minimum Grade 33 Steel Deck Only:** GenFast #15 (WH) screws and GenFlex Polymer Batten Strip. Screws are spaced at maximum 12 in (305 mm) o.c. within the minimum 4.5 in (114 mm) wide laps, which are spaced at maximum 140.5 in (3,568 mm) o.c. and sealed with a minimum 1.5 in (40 mm) wide heat weld placed on the outside edge of the batten strip and a minimum 1.0 in (25 mm) wide heat weld placed on the inside edge of the batten strip. **Maximum Design Pressure: -45 psf**

Fastening #8: **Minimum Grade 80 Steel Deck Only:** GenFlex #15 XHD screws spaced max 6 in. (152 mm) o.c. through GenFlex Bar Anchors. The bars and fasteners are placed within the min 4.5 in. (114 mm) wide laps, which are spaced at max 70.25 in (1784 mm) o.c. and sealed with a min. 0.75 in (19 mm) wide heat weld on the inside of the lap and a min 1 in. (25 mm) wide heat weld on the outside of the lap. **Maximum Design Pressure: -75 psf**

Fastening #9: **Minimum Grade 80 Steel Deck Only:** GenFlex #15 XHD screws spaced max 12 in. (305 mm) o.c. through GenFlex Bar Anchor. The bars and fasteners are placed within the min 4.5 in. (114 mm) wide laps, which are spaced at max 70.25 in (1784 mm) o.c. and sealed with a min. 0.75 in (19 mm) wide heat weld on the inside of the lap and a min 1 in. (25 mm) wide heat weld on the outside of the lap. **Maximum Design Pressure: -52.5 psf.**

Fastening #10: **Minimum Grade 80 Steel Deck Only:** GenFlex #15 XHD screws spaced max 6 in. (152 mm) o.c. through GenFlex Bar Anchors. The bars and fasteners are placed within the min. 4.5 in. (114 mm) wide laps, which are spaced at max 142.5 in. (3620 mm) o.c. and sealed with a min.1 in. (25 mm) wide heat weld on the inside of the lap and a min 1 in. (25 mm) wide heat weld on the outside of the lap. **Maximum Design Pressure: -52.5 psf.**

Fastening #11: **Minimum Grade 80 Steel Deck Only**: GenFast #15 (WH) screws and GenFlex Polymer Batten Strip. Screws are spaced at maximum 6 in (152 mm) o.c. within the minimum 5 in (127 mm) wide laps, which are spaced at maximum 144 in (3658 mm) o.c. and sealed with a minimum 1.5 in (40 mm) wide heat weld placed on the outside edge of the batten strip.
Maximum Design Pressure: -52.5 psf.

Fastening #12: **Min. 2,500 psi Concrete Deck Only:** GenFast #15 (WH) screws and GenFlex Polymer Batten Strip. Screws are spaced at maximum 12 in (305 mm) o.c. within the minimum 4.5 in (114 mm) wide laps, which are spaced at maximum 144 in (3658 mm) o.c. and sealed with a minimum 1.25 in (32 mm) wide heat weld placed on each side of the batten strip.
Maximum Design Pressure: -45 psf

Fastening #13: **Min. 2,500 psi Concrete Deck Only.** GenFast #15 (WH) screws and GenFlex Polymer Batten Strip. Screws are spaced at maximum 6 in (152 mm) o.c. within the minimum 5 in (127 mm) wide laps, which are spaced at maximum 144 in (3,658 mm) o.c. and sealed with a minimum 1.5 in (40 mm) wide heat weld placed on the outside edge of the batten strip.
Maximum Design Pressure: -60 psf

Fastening #14: Approved Lightweight concrete Deck cast over Steel or Concrete Only: Fasteners installed through lightweight concrete to steel deck. GenFlex TPO membrane secured with GenFlex #15 Roofgrip (WH) fasteners spaced max 6" o.c. through the GenFlex Polymer Batten strip. The batten strip and fasteners are placed within the min. 4.5" wide laps are spaced at max 143.5" o.c. and sealed with a min 0.75" wide heat weld on the inside of the lap and a min. 1" wide heat weld on the outside of the lap. **Maximum Design Pressure: -90 psf**

Fastening #15: Cementitious wood Fiber or Poured Gypsum Deck Only: N.T.B Magnum Fasteners with 2 in (51 mm) head spaced at max 6 in (1152 mm) o.c. within the minimum 4.5 in (114 mm) wide laps, which are spaced at max 57 in (1448 mm) o.c. and sealed with a minimum 1.5 in (38 mm) heat weld. Fasteners shall have minimum 2 in (51 mm) embedment.
Maximum Design Pressure: -45 psf.

Maximum Design Pressure: **See Fastening Options for Specific Deck Type**

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 side lap and one down the center of the sheet allowing a continuous area of ventilation. Encircling of the strips is not acceptable. A 6" break shall be placed every 12' in each ribbon to allow cross ventilation. Asphalt application of either system shall be at a minimum rate of 12 lbs./sq. **Note: Spot attached systems shall be limited to a maximum design pressure of -45 psf.**
5. Fastener spacing for insulation attachment is based on a Minimum Characteristic Force (F') value of 275 lbf., as tested in compliance with Testing Application Standard TAS 105. If the fastener value, as field-tested, are below 275 lbf. Insulation attachment shall not be acceptable.
6. Fastener spacing for mechanical attachment of anchor/base sheet or membrane attachment is based on a minimum fastener resistance value in conjunction with the maximum design value listed within a specific system. Should the fastener resistance be less than that required, as determined by the Building Official, a revised fastener spacing, prepared, signed and sealed by a Florida registered 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 to Roofing Application Standard RAS 111 and applicable wind load requirements.
9. The maximum designed pressure limitation listed shall be applicable to all roof pressure zones (i.e. field, perimeters, and corners). Neither rational analysis, nor extrapolation shall be permitted for enhanced fastening at enhanced pressure zones (i.e. perimeters, extended corners and corners). **(When this limitation is specifically referred within this NOA, General Limitation #7 will not be applicable.)**

END OF THIS ACCEPTANCE