



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

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

NOTICE OF ACCEPTANCE (NOA)

**Johns Manville Corporation
717 17th Street
Denver, CO 80202**

SCOPE:

This NOA is being issued under the applicable rules and regulations governing the use of construction materials. The documentation submitted has been reviewed by Miami-Dade County Product Control Division and accepted by the Board of Rules and Appeals (BORA) to be used in Miami Dade County and other areas where allowed by the Authority Having Jurisdiction (AHJ).

This NOA shall not be valid after the expiration date stated below. The Miami-Dade County Product Control Division (In Miami Dade County) and/or the AHJ (in areas other than Miami Dade County) reserve the right to have this product or material tested for quality assurance purposes. If this product or material fails to perform in the accepted manner, the manufacturer will incur the expense of such testing and the AHJ may immediately revoke, modify, or suspend the use of such product or material within their jurisdiction. BORA reserves the right to revoke this acceptance, if it is determined by Miami-Dade County Product Control Division that this product or material fails to meet the requirements of the applicable building code.

This product is approved as described herein, and has been designed to comply with the High Velocity Hurricane Zone of the Florida Building Code.

DESCRIPTION: Johns Manville SRT TPO Single Ply Roof Systems over Steel Decks

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

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

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

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

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

This consists of pages 1 through 10.

The submitted documentation was reviewed by Frank Zuloaga, RRC



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Expiration Date: 04/29/08
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ROOFING SYSTEM APPROVAL

Category: Roofing
Sub-Category: Single Ply
Material: TPO
Deck Type: Steel
Maximum Design Pressure -68 psf
Fire Classification: See General Limitation #1

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

<u>Product Name</u>	<u>Dimensions</u>	<u>Test Specifications</u>	<u>Product Description</u>
SRT	various	TAS 131	Reinforced white or colored TPO membrane.
SRT GSD	various	TAS 131	Reinforced white or colored FR TPO membrane.
SRT Bonding Adhesive	various	TAS 110	Solvent-based bonding adhesive.

APPROVED INSULATIONS:

TABLE 2

<u>Product Name</u>	<u>Product Description</u>	<u>Manufacturer (With Current NOA)</u>
Millox	Isocyanurate Insulation with wood fiberboard facer	Apache Products Co.
Pyrox, White Line	Isocyanurate Insulation	Apache Products Co.
ACFoam Composite	Isocyanurate Insulation with perlite facer	Atlas Roofing Corp.
ACFoam I, II	Isocyanurate Insulation	Atlas Roofing Corp.
Polyisocyanurate HP-N	Polyisocyanurate roof insulation.	Carlisle Syntec, Inc.
Sure-Seal HP Recovery Board	High Density Wood Fiberboard.	Carlisle Syntec, Inc.
Sure-Seal EPS/Fiberboard	High Density Wood Fiberboard bonded to EPS.	Carlisle Syntec, Inc.
Styrofoam	Extruded polystyrene insulation	Dow
Dens Deck	Silicon treated gypsum	G-P Products
Sturdi-Top	Wood fiber insulation board.	G-P Products
ENRGY 2, ENERGY 3, PSI-25	Isocyanurate Insulation	Johns Manville
Fesco Foam	Isocyanurate Insulation with perlite facer	Johns Manville



APPROVED INSULATIONS:

TABLE 2

Product Name	Product Description	Manufacturer (With Current NOA)
Retro-Fit	A high-density perlite roof insulation.	Johns Manville
Wood Fiberboard	Regular wood fiber insulation	Generic
High Density Wood Fiberboard	High Density Wood Fiber insulation board.	Generic
Perlite Insulation Board	Perlite Insulation	Generic
Type X Gypsum	Gypsum Wallboard	Generic
XPS	Extruded polystyrene	Generic
Fiber Base	Asphalt coated wood fiber insulation	Temple Inland Forest Products Corp.

APPROVED FASTENERS:

TABLE 3

Fastener Number	Product Name	Product Description	Dimensions	Manufacturer (With Current NOA)
1.	Sure-Seal HP, HP-X, Fasteners	Insulation and membrane fastener	Various	Carlisle Syntec, Inc.
2.	Sure-Seal Seam Fastening Plates	Metal plates used for membrane securement with Sure-Seal fasteners.	2" dia	Carlisle Syntec, Inc.
3.	Sure-Seal Polymer Seam Plates	Plastic plates used for membrane securement with Sure-Seal fasteners.	2" dia	Carlisle Syntec, Inc.
4.	Dekfast Fasteners	Insulation and membrane fastener	Various	Construction Fasteners, Inc.
5.	Dekfast Hex Plate	Insulation and membrane fastener	Various	Construction Fasteners, Inc.
6.	#12 & #14 Roofgrip	Insulation and membrane fastener	Various	ITW Buildex
7.	Metal Plate	Galvalume AZ50 stress plate	3" square	ITW Buildex
8.	Plastic Plate	Polyethylene stress plate	3.2" round	ITW Buildex
9.	UltraFast	Insulation fastener for wood and steel.		Johns Manville
10.	UltraFast ASAP	Pre-assembled Insulation fastener and plate		Johns Manville



APPROVED FASTENERS:

TABLE 3

Fastener Number	Product Name	Product Description	Dimensions	Manufacturer (With Current NOA)
11.	High Load Fasteners	Membrane fastener for wood and steel.		Johns Manville
12.	High Load Metal Plates	Galvalume AZ55 steel plate	2-3/8" round	Johns Manville
13.	APB Metal Plates	Galvalume AZ55 steel plate	2" round	Johns Manville
14.	UltraFast Metal Plate	Galvalume AZ55 steel plate	3" square	Johns Manville
15.	UltraFast Plastic Plate	High Density Polyolefin round plate	3" round	Johns Manville
16.	Olympic Fasteners	Insulation and membrane fastener	Various	Olympic Mfg. Group
17.	Olympic Stainless Fasteners	Stainless steel insulation and membrane fastener	Various	Olympic Mfg. Group
18.	Olympic Standard	Galvalume AZ55 stress plate	3" round	Olympic Mfg. Group
19.	Olympic Plastic Plastic	Plastic plates for fasteners.	3" round	Olympic Mfg. Group
20.	Rawl Fasteners	Insulation fastener for steel and wood decks	Various	Powers Fasteners Inc.
21.	Rawl Insulation Plate	3" round Galvalume AZ55 stress plate	3" round	Powers Fasteners Inc.
22.	Insul-Fixx Fastener	Insulation fastener for steel and wood decks	Various	SFS Stadler, Inc.
23.	Insul-Fixx S	3" round Galvalume AZ55 stress plate	3" round	SFS Stadler, Inc.
24.	Insul-Fixx P	3" round polyethylene stress plate	3" round	SFS Stadler, Inc.
25.	Tru-Fast Fasteners	Insulation and membrane fastener	Various	The Tru-Fast Corp.
26.	Tru-Fast Ultra Stainless Fasteners	Stainless steel insulation and membrane fastener	Various	The Tru-Fast Corp.
27.	Tru-Fast MP-3	3.23" round Galvalume AZ50 steel plate	3.23" round	The Tru-Fast Corp.
28.	Tru-Fast Plastic Plate	Polyethylene stress plate	3" round	The Tru-Fast Corp.

EVIDENCE SUBMITTED:

<u>Test Agency</u>	<u>Test Identifier</u>	<u>Description</u>	<u>Date</u>
Architectural Testing Inc.	ATI-37050.01	Wind Uplift Classification	3/13/00
Architectural Testing Inc.	ATI-37490.01	ASTM D 2137	7/7/00
Factory Mutual Research Corp.	3003393	Class 4470	3/30/99



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<u>Test Agency</u>	<u>Test Identifier</u>	<u>Description</u>	<u>Date</u>
Factory Mutual Research Corp.	3003393 (Letter Report)	Wind Uplift Classification	3/26/99
Factory Mutual Research Corp.	3001522	Wind Uplift Classification	3/26/99
Factory Mutual Research Corp.	3001522 (Letter Report)	Wind Uplift Classification	11/3/98
Factory Mutual Research Corp.	3Z9A1.AM	Wind Uplift Classification	10/15/97
Factory Mutual Research Corp.	Approval Guide Excerpt	Wind Uplift Classification Listings	5/00
Celotex Corporation Testing Services	520257	Membrane Physical Property Testing	4/19/00
SGS U.S Testing Company Incorporated	131248-R2	Ozone Resistance	1/6/00



APPROVED ASSEMBLIES

Membrane Type: Single Ply, Thermoplastic, TPO, Reinforced

Deck Type 2I: Steel, Insulated, New Construction

Deck Description: 18-22 ga. steel

System Type C: All layers of insulation simultaneously attached; membrane fully adhered.

All General and System Limitations apply.

Base Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft ²
One of the following covered with the boards listed in Top Layer or Base or Top Layer.		
Extruded Polystyrene, Energy-Lok, ACFoam-I, Minimum 1" thick	N/A	N/A
Perlite Minimum ¾" thick	N/A	N/A

Note: All layers shall be simultaneously fastened; see top layer below for fasteners and density. 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. Single and multiple layers of insulation can be attached to base layer with Carlisle Syntec FAST Adhesive.

Base or Top Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft ²
ENRGY-2, ENRGY-3, PSI-25 Minimum 1.4" thick	1, 4, 6, 9, 16, 17, 20, 22, 25 or 26	1:2 ft ²
Minimum 2" thick	1, 4, 6, 9, 16, 17, 20, 22, 25 or 26	1:4 ft ²
HP Recovery Minimum 1" thick	1, 4, 6, 9, 16, 17, 20, 22, 25 or 26	1:2 ft ²
High Density Fiberboard Minimum ¾" thick	4, 6, 16, 17, 20, 25 or 26	1:2.67 ft ²
Fesco Foam Minimum 1.5" thick	1, 4, 6, 9, 16, 17, 20, 22, 25 or 26	1:3 ft ²
Polyisocyanurate HP-N Minimum 1.4" thick	1, 4, 6, 9, 16, 17, 20, 22, 25 or 26	1:2 ft ²
Minimum 2" thick	1, 4, 6, 9, 16, 17, 20, 22, 25 or 26	1:4 ft ²
Structodeck Minimum ½" thick	4, 16, 17 or 20	1:8 ft ²



Wood Fiber		
Minimum 1" thick	1, 4, 6, 9, 16, 17, 20, 22, 25 or 26	1:2 ft ²
Fiber Base, Retro-Fit		
Minimum ½" thick	1	1:2 ft ²
Top Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft²
Required over the insulations listed in Base Layer or optional over any of the insulations listed as Base or Top Layer:		
HP Recovery (for use over all insulation. types) Fiber Base (for use over polyisocyanurate, gypsum or perlite)		
Minimum ½" thick	1	1:2 ft ²

Note: 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.

Vapor Retarders: (Optional) Any UL or FMRC approved vapor retarder applied to the roof deck or over a base layer of insulation.

Barrier: None.

Membrane: SRT or SRT GSD, Reinforced, 45 or 60 mil membrane fully adhered to the insulation using SRT Bonding Adhesive applied to the substrate at a rate of 1 gal/60 ft².

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



Membrane Type: Single Ply, Thermoplastic, TPO, Reinforced

Deck Type 2I: Steel, Insulated, New Construction

Deck Description: Minimum 22 gage ASTM A 446 Grade E Steel deck fastened to steel support at a maximum span of 6 feet o.c. Steel deck shall be fastened with minimum ITW Buildex Traxx/4 at a maximum spacing of 6 inches o.c. Side laps shall be fastened with ITW Buildex Traxx/1 at a maximum spacing of 30 inches o.c.

System Type D: Membrane mechanically attached over preliminarily fastened insulation.

All General and System Limitations apply.

Base Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft ²
One of the following covered with the boards listed in Top Layer or Base or Top Layer.		
Extruded Polystyrene, Energy-Lok, ACFoam-II Minimum 1" thick	N/A	N/A
Perlite Minimum ¾" thick	N/A	N/A
Base or Top Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft ²
ENRGY-2, ENRGY-3, PSI-25 Minimum 1.4" thick	N/A	N/A
Fesco Foam, ACFoam II Minimum 1.5" thick	N/A	N/A
Retro-Fit Board, Fiber Base, Structodeck, Wood Fiber, HP Recovery Minimum ½" thick	N/A	N/A
High Density Fiberboard Minimum ¾" thick	N/A	N/A
Top Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft ²
Required over the insulations listed in Base Layer or optional over any of the insulations listed as Base or Top Layer:		
HP Recovery (for use over all insulation. types) Fiber Base (for use over polyisocyanurate, gypsum or perlite) Minimum ½" thick	N/A	N/A

Note: All layers of insulation and membrane shall be simultaneously attached. See base sheet below for fasteners and density. Refer to Roofing Application Standard RAS 117 for insulation attachment requirements. Insulation shall have preliminary attachment, prior to the installation of the roofing membrane. At an 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. Single and multiple layers of insulation can be attached to the deck with FAST Adhesive.

Vapor Retarders: (Optional) Any UL or FMRC approved vapor retarder applied to the roof deck or over a base layer of insulation.



- Barrier: None.
- Membrane: SRT or SRT GSD, Reinforced, secured through the preliminarily attached insulation as specified below.
- Fastening #1: High Load Fasteners with High Load Plates 6" o.c. through the SRT Membrane in the lap in rows spaced 7'-7" o.c. **Maximum Design Pressure -68 psf. (See General Limitation #7)**
- Fastening #2: High Load Fasteners with High Load Plates 6" o.c. through the SRT Membrane in the lap in rows spaced 9'-7" o.c. **Maximum Design Pressure -60 psf. (See General Limitation #7)**
- Fastening #3: High Load Fasteners with High Load Plates 9" o.c. through the SRT Membrane in the lap in rows spaced 9'-6" o.c. **Maximum Design Pressure -52.5 psf. (See General Limitation #7)**
- Fastening #4: High Load Fasteners with High Load Plates 6" o.c. through the SRT GSD Membrane in the lap in rows spaced 9'-7" o.c. **Maximum Design Pressure -52.5 psf. (See General Limitation #7)**
- Fastening #5: High Load Fasteners with High Load Plates 9" o.c. through the SRT GSD Membrane in the lap in rows spaced 9'-7" o.c. **Maximum Design Pressure -45 psf. (See General Limitation #7)**
- Fastening #6: High Load Fasteners with High Load Plates 12" o.c. through the SRT Membrane in the lap in rows spaced 9'-7" o.c. **Maximum Design Pressure -45 psf. (See General Limitation #7)**

Maximum Design Pressure: See Fastening Options Above.



STEEL 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 fastener patterns and density. All testing and fastening design shall be in compliance with Testing Application Standard TAS 105 and Roofing Application Standard RAS 137, calculations shall be signed and sealed by a Florida registered Professional Engineer, Registered Architect, or Registered Roof Consultant.
2. For steel deck application where specific deck construction is not referenced: The deck shall be a minimum 22 gage attached with 5/8" puddle welds with weld washers at every flute with maximum deck spans of 5 ft. o.c.

GENERAL LIMITATIONS:

1. Fire classification is not part of this acceptance, refer to a current Approved Roofing Materials Directory for fire ratings of this product.
2. Insulation may be installed in multiple layers. The first layer shall be attached in compliance with Product Control Approval guidelines. All other layers shall be adhered in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs./sq., or mechanically attached using the fastening pattern of the top layer
3. All standard panel sizes are acceptable for mechanical attachment. When applied in approved asphalt, panel size shall be 4' x 4' maximum.
4. An overlay and/or recovery board insulation panel is required on all applications over closed cell foam insulations when the base sheet is fully mopped. If no recovery board is used the base sheet shall be applied using spot mopping with approved asphalt, 12" diameter circles, 24" o.c.; or strip mopped 8" ribbons in three rows, one at each sidelap and one down the center of the sheet allowing a continuous area of ventilation. Encircling of the strips is not acceptable. A 6" break shall be placed every 12' in each ribbon to allow cross ventilation. Asphalt application of either system shall be at a minimum rate of 12 lbs./sq. **Note: Spot attached systems shall be limited to a maximum design pressure of -45 psf.**
5. Fastener spacing for insulation attachment is based on a Minimum Characteristic Force (F') value of 275 lbf., as tested in compliance with Testing Application Standard TAS 105. If the fastener value, as field-tested, are below 275 lbf. insulation attachment shall not be acceptable.
6. Fastener spacing for mechanical attachment of anchor/base sheet or membrane attachment is based on a minimum fastener resistance value in conjunction with the maximum design value listed within a specific system. Should the fastener resistance be less than that required, as determined by the Building Official, a revised fastener spacing, prepared, signed and sealed by a Florida Registered Engineer, Architect, or Registered Roof Consultant may be submitted. Said revised fastener spacing shall utilize the withdrawal resistance value taken from Testing Application Standards TAS 105 and calculations in compliance with Roofing Application Standard RAS 117.
7. Perimeter and corner areas shall comply with the enhanced uplift pressure requirements of these areas. Fastener densities shall be increased for both insulation and base sheet as calculated in compliance with Roofing Application Standard RAS 117. **(When this limitation is specifically referred within this NOA, General Limitation #9 will not be applicable.)**
8. All attachment and sizing of perimeter nailers, metal profile, and/or flashing termination designs shall conform with Roofing Application Standard RAS 111 and applicable wind load requirements.
9. The maximum designed pressure limitation listed shall be applicable to all roof pressure zones (i.e. field, perimeters, and corners). Neither rational analysis, nor extrapolation shall be permitted for enhanced fastening at enhanced pressure zones (i.e. perimeters, extended corners and corners). **(When this limitation is specifically referred within this NOA, General Limitation #7 will not be applicable.)**

END OF THIS ACCEPTANCE



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