



**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 Recover 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 11.

The submitted documentation was reviewed by Frank Zuloaga, RRC



**NOA No.: 03-0404.05
Expiration Date: 04/29/08
Approval Date: 04/29/03
Page 1 of 11**

ROOFING SYSTEM APPROVAL

Category: Roofing
Sub-Category: Single Ply
Material: TPO
Deck Type: Recover
Maximum Design Pressure -67.5 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 Fasteners	Insulation and membrane fastener	Various	Carlisle Syntec, Inc.
2.	Carlisle HP Lightweight	Insulation fastener for cementitious and gypsum decks	Various	Carlisle Syntec, Inc.
3.	Carlisle HP Lightweight	Metal plates used for membrane securement with Carlisle HP fasteners.	3" dia	Carlisle Syntec, Inc.
4.	Sure-Seal Seam Fastening Plates	Metal plates used for membrane securement with Sure-Seal fasteners.	2" dia	Carlisle Syntec, Inc.
5.	Sure-Seal HP Locking Seam Plates	Metal plates with plastic inserts used for membrane securement with fasteners.	2" dia	Carlisle Syntec, Inc.
6.	Sure-Seal Polymer Seam Plates	Plastic plates used for membrane securement with fasteners.	2" dia	Carlisle Syntec, Inc.
7.	Dekfast Fasteners	Insulation and membrane fastener	Various	Construction Fasteners, Inc.
8.	Dekfast Hex Plate	Insulation and membrane fastener	Various	Construction Fasteners, Inc.
9.	#12 & #14 Roofgrip	Insulation and membrane fastener	Various	ITW Buildex



APPROVED FASTENERS:

TABLE 3

Fastener Number	Product Name	Product Description	Dimensions	Manufacturer (With Current NOA)
10.	Metal Plate	Galvalume AZ50 stress plate	3" square	ITW Buildex
11.	Metal Plate	Galvalume AZ50 stress plate	3" round	ITW Buildex
12.	Plastic Plate	Polyethylene stress plate	3.2" round	ITW Buildex
13.	Olympic Fasteners	Insulation and membrane fastener	Various	Olympic Mfg. Group
14.	Olympic Stainless Fasteners	Stainless steel insulation and membrane fastener	Various	Olympic Mfg. Group
15.	Lite-Deck Fasteners	Insulation fastener for cementitious and gypsum decks	Various	Olympic Mfg. Group
16.	NTB Magnum	Insulation fastener for cementitious and gypsum decks	Various	Olympic Mfg. Group
17.	GTL Fastener	Insulation fastener for cementitious and gypsum decks with a 3" round head plate.	Various	Olympic Mfg. Group
18.	Strap Toggle	Insulation fastener for steel, wood and gypsum decks.	Various	Olympic Mfg. Group
19.	Iron-Lok Toggle	Insulation fastener for steel, wood and gypsum decks.	Various	Olympic Mfg. Group
20.	Lite-Deck Plate	3" round Galvalume AZ55 stress plate	3" round	Olympic Mfg. Group
21.	NTB Plate	3" round Galvalume AZ55 stress plate	3" round	Olympic Mfg. Group
22.	NTB Metal Barbed Stress Plate	2" round Galvalume AZ55 stress plate	2" round	Olympic Mfg. Group
23.	NTB Plastic Plate	Plastic plates for NTB 2" head fasteners.	3" round	Olympic Mfg. Group
24.	Olympic Standard	3" round Galvalume AZ55 stress plate	3" round	Olympic Mfg. Group
25.	Olympic G-2	3.5" round Galvalume AZ55 stress plate	3.5" round	Olympic Mfg. Group
26.	Olympic	Plastic plates for fasteners.	3" round	Olympic Mfg. Group
27.	Rawl Fasteners	Insulation fastener for steel and wood decks	Various	Powers Fasteners Inc.
28.	Powerlite	Insulation fastener for cementitious and gypsum decks	Various	Powers Fasteners Inc.



APPROVED FASTENERS:

TABLE 3

Fastener Number	Product Name	Product Description	Dimensions	Manufacturer (With Current NOA)
29.	Powerlite	3" round Galvalume AZ55 stress plate	3" round	Powers Fasteners Inc.
30.	Rawl Insulation Plate	3" round Galvalume AZ55 stress plate	3" round	Powers Fasteners Inc.
31.	Insul-Fixx Fastener	Insulation fastener for steel and wood decks	Various	SFS Stadler, Inc.
32.	HD Insul-Fixx Fastener	Insulation fastener for use in steel and concrete decks	Various	SFS Stadler, Inc.
33.	Insul-Fixx S	3" round Galvalume AZ55 stress plate	3" round	SFS Stadler, Inc.
34.	Insul-Fixx PG	3" round polyethylene stress plate	3" round	SFS Stadler, Inc.
35.	Tru-Fast Fasteners	Insulation and membrane fastener	Various	The Tru-Fast Corp.
36.	Tru-Fast Ultra Stainless Fasteners	Stainless steel insulation and membrane fastener	Various	The Tru-Fast Corp.
37.	Tru-Fast MP-3	3.23" round Galvalume AZ50 steel plate	3.23" round	The Tru-Fast Corp.
38.	Tru-Fast Plastic Plate	3" round 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	Membrane Brittleness Testing	7/7/00
Factory Mutual Research Corp.	303393	Wind Uplift and Fire Classification	3/30/99
Factory Mutual Research Corp.	303393 (Letter Report)	Wind Uplift Classification	3/26/99
Factory Mutual Research Corp.	3001522	Wind Uplift and Fire 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 and Fire Classification	10/15/97
Factory Mutual Research Corp.	Letter	Wind Uplift and Fire Classifications	5/2/00
Celotex Corporation Testing Services	520257	Membrane Physical Property Testing	4/19/00
SGS U.S. Testing Company Incorporated	131248-R2	Membrane Ozone Resistance Testing	1/6/00



APPROVED ASSEMBLIES

- Membrane Type:** Single Ply, Thermoplastic, TPO, Reinforced
- Deck Type 7I:** Recover
- Deck Description:** Concrete/gypsum/cementitious wood fiber/wood/steel
- System Type A:** All layers of insulation adhered with approved asphalt or FAST Adhesive; membrane fully adhered.

All General and System Limitations apply.

Base Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft²
Perlite Minimum 3/4" thick	N/A	N/A

One or more layers of the following as a Base or Top layer or over the Base Layer listed above:

Base or Top Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft²
ENRGY-2, ENRGY-3, PSI-25, AC FOAM II, Fesco Foam Minimum 1.5" thick	N/A	N/A
Retro-Fit, HP Recovery, Structodeck Minimum 1/2" thick	N/A	N/A
High Density Fiberboard Minimum 3/4" thick	N/A	N/A

Note: Existing roof shall be primed with ASTM D 41 asphalt primer and allowed to dry prior to application of base sheet. All insulation shall be adhered to the deck in full mopping of approved 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 used as a top layer shall be placed with the polyisocyanurate side facing down.

- Vapor Retarder:** (Optional) Vapor retarder may be mopped to deck or base layer of insulation.
- Barrier:** None.
- Membrane:** SRT or SRT GSD, Reinforced, 45 or 60 mil membrane fully adhered to the insulation using Sure-Weld Bonding Adhesive applied at a rate of 1 gal/60 ft.
- Maximum Design Pressure:** -45 psf (See General Limitation #9)



Membrane Type: Single Ply, Thermoplastic, TPO, Reinforced

Deck Type 7I: Recover

Deck Description: Concrete/lightweight concrete/cementitious wood fiber/wood/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/ft²
One of the following covered with the boards listed in Top Layer or Base or Top Layer.		
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/ft²
ENRGY-2, ENRGY-3, PSI-25		
Minimum 1.5" thick	See Table 3	1:2 ft ²
Minimum 2" thick	See Table 3	1:4 ft ²
HP Recovery		
Minimum ½" thick	See Table 3	1:2 ft ²
High Density Fiberboard		
Minimum ¾" thick	See Table 3	1:2.67 ft ²
Fesco Foam		
Minimum 1.5" thick	See Table 3	1:2 ft ²
Sturdi Top		
Minimum ½" thick	See Table 3	1:8 ft ²
Wood Fiber		
Minimum 1" thick	See Table 3	1:2 ft ²
Fiber Base, Retro-Fit		
Minimum ½" thick	See Table 3	1:2.9 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)		
Minimum ½" thick	See Table 3	1:2 ft ²

Fiber Base (for use over polyisocyanurate, gypsum or perlite)



Minimum ½” thick

See Table 3

1:2.9 ft²

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 Retarder: (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 Sure-Weld Bonding Adhesive applied at a rate of 1 gal/60 ft.

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



Membrane Type: Single Ply, Thermoplastic, TPO, Reinforced

Deck Type 7I: Recover

Deck Description: Concrete/gypsum/cementitious wood fiber/wood/steel

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

All General and System Limitations apply.

Base Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft²
One of the following covered with the boards listed in Top Layer or Base or Top Layer.		
Perlite		
Minimum ¾" thick	N/A	N/A
Base or Top Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft²
ENRGY-2, ENRGY-3, PSI-25, Fesco Foam, AC Foam 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/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	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 -67.5 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.



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.)**

END OF THIS ACCEPTANCE



NOA No.: 03-0404.05
Expiration Date: 04/29/08
Approval Date: 04/29/03
Page 11 of 11