



**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)

**Carlisle Syntec, Inc.
1285 Ritner Highway
Carlisle, PA 17013**

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: Carlisle Single Ply EPDM 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 consists of pages 1 through 16.

The submitted documentation was reviewed by Frank Zuloaga, RRC



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ROOFING SYSTEM APPROVAL

Category: Roofing
Sub-Category: Single Ply
Material: EPDM
Deck Type: Concrete
Maximum Design Pressure -585 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>
Brite-Ply EP-95 Splicing Cement		PA 110	Splicing Adhesive for Brite-Ply membranes.
Brite-Ply EPDM	Various	ASTM D 4637	Non-reinforced white on black EPDM membrane.
Brite-Ply FleeceBACK EPDM	Various	ASTM D4637	Non-Reinforced white-on black fleece backed EPDM membrane
Brite-Ply Lap Sealant		PA 110	Lap Sealant for Brite-Ply membranes.
Brite-Ply Reinforced	Various	ASTM D 4637	Reinforced white on black EPDM membrane.
CCW 702 Primer	Various	PA 110	Solvent-Based Primer
CCW 702LT Primer	Various	PA 110	Low-Temperature Solvent-Based Primer
CCW 714 Primer	Various	PA 110	Water-Based Primer
CCW 725 Vapor Barrier	Various	PA 110	40 mil Vapor Barrier
Fast 100, Fast 100-P & Fast 102 Adhesive	Various	PA 110	Spray Polyurethane Adhesive
Sure Seal FR-Plus EPDM	Various	ASTM D 4637	Non-reinforced, fire retardant EPDM membrane.
Sure Seal EP-95 Splicing Cement		PA 110	Splicing adhesive for Sure-Seal membranes.
Sure-Seal 90-8-30A Bonding Adhesive		PA 110	Standard bonding adhesive.
Sure-Seal FleeceBACK EPDM	Various	ASTM D4637	Non-Reinforced fire retardant fleece backed EPDM membrane
Sure-Seal FR EPDM	Various	ASTM D 4637	Non-reinforced, fire retardant EPDM membrane.



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<u>Product Name</u>	<u>Dimensions</u>	<u>Test Specifications</u>	<u>Product Description</u>
Sure-Seal Reinforced FR EPDM	Various	ASTM D 4637	Reinforced, fire retardant EPDM membrane.
Sure-Seal Lap Sealant		PA 110	Lap Sealant for Sure-Seal membranes
Sure-Seal Reinforced EPDM	Various	ASTM D 4637	Reinforced EPDM membrane.
Sure-Seal B-500 Bonding Adhesive		PA 110	Water-based bonding adhesive.
Sure-Seal Standard EPDM	Various	ASTM D 4637	Non-reinforced EPDM membrane.

APPROVED INSULATIONS:

TABLE 2

<u>Product Name</u>	<u>Product Description</u>	<u>Manufacturer (With Current NOA)</u>
Polyisocyanurate HP, HP-N and HP-W	Polyisocyanurate roof insulation.	Carlisle SynTec, Inc.
Carlisle Foamular Durapink Insulation	Extruded Polystyrene for white or black mechanically fastened roof systems.	Carlisle SynTec, Inc.
Carlisle Foamular Durapink-FA Insulation	Extruded Polystyrene for white or black adhered system.	Carlisle SynTec, Inc.
Carlisle Foamular ½" Board	Extruded Polystyrene recovery board.	Carlisle SynTec, Inc.
Carlisle Foamular 150, 250, 400, 404, 600	Extruded Polystyrene insulation	Carlisle SynTec, Inc.
Sure Seal EPS Insulation	Extruded Polystyrene.	Carlisle SynTec, Inc.
Sure-Seal EPS/Fiberboard	High Density Wood Fiberboard bonded to EPS.	Carlisle SynTec, Inc.
Sure-Seal HP Recovery Board	High Density Wood Fiberboard.	Carlisle SynTec, Inc.
PYROX, White Line	Polyisocyanurate foam insulation	Apache Products Co.
ACFoam I, II & Composite	Polyisocyanurate foam insulation	Atlas Energy Products
Ultra/M-II	Polyisocyanurate foam insulation	Homasote Co.
Wood Fiber	Wood fiber insulation board	generic
High Density Wood Fiberboard	Wood fiber insulation board	generic
Perlite Insulation	Perlite insulation board	generic
ISO 95+ GL, 95+ GW	Polyisocyanurate foam insulation	Firestone
Styrofoam	Extruded polystyrene insulation	Dow



APPROVED INSULATIONS:

TABLE 2

Product Name	Product Description	Manufacturer (With Current NOA)
ENRG'Y-2 & ENRG'Y-2 PLUS, PSI-25, UltraGard Gold	Polyisocyanurate foam insulation	Johns Manville
Structodeck	High Density Wood Fiber insulation board.	Masonite
Multi-Max & FA	Polyisocyanurate roof insulation	RMax, Inc.

APPROVED FASTENERS:

TABLE 3

Fastener Number	Product Name	Product Description	Dimensions	Manufacturer (With Current NOA)
1.	Sure-Seal HP Fasteners	Threaded fasteners used for insulation and membrane securement in steel, wood and concrete decks.		Carlisle SynTec, Inc.
2.	Sure-Seal HP Concrete Spikes	Driven fasteners used for insulation and membrane securement in concrete decks.		Carlisle SynTec, Inc.
3.	Sure-Seal Insulation Plates	Metal plates used for insulation securement.	2 7/8" 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 Polymer Seam Plates	Plastic plates used for membrane securement with Sure-Seal fasteners	2" dia	Carlisle SynTec, Inc.
6.	Sure-Seal HP Locking Seam Plates	Metal plates with plastic inserts used for membrane securement with Sure-Seal fasteners.	2" dia	Carlisle SynTec, Inc.
7.	Dekfast Fasteners #14 & #15	Insulation fastener for wood, steel and concrete decks		Construction Fasteners Inc.
8.	Dekfast Hex Plate	Galvalume hex stress plate.	2 7/8" x 3 1/4"	Construction Fasteners Inc.
9.	#14 & #15 Roofgrip Fasteners	Insulation fastener for wood, steel and concrete decks.		ITW Buildex Corp.



APPROVED FASTENERS:

TABLE 3

Fastener Number	Product Name	Product Description	Dimensions	Manufacturer (With Current NOA)
10.	Metal Plate	Galvalume stress plate.	3" round 3" square	ITW Buildex Corp.
11.	Olympic Fastener #12 & #14	Insulation fastener		Olympic Manufacturing Group, Inc.
12.	Olympic G-2	3.5" round galvalume AZ55 steel plate	3.5" round	Olympic Manufacturing Group, Inc.
13.	Olympic Standard	3" round galvalume AZ50 steel plate	3" round	Olympic Manufacturing Group, Inc.
14.	Rawl Drive	Insulation fastener for concrete decks		Powers Fasteners, Inc.
15.	Rawl Spike	Insulation fastener for concrete decks		Powers Fasteners, Inc.
16.	Rawl	3" round galvalume AZ55 steel plate	3" round	Powers Fasteners, Inc.
17.	#14 HD Insul-Fixx Fastener	Insulation fastener for wood, steel and concrete decks		SFS Stadler, Inc.
18.	Insul-Fixx S Plate	3" round galvalume AZ50 steel plate	3" round	SFS Stadler, Inc.
19.	Insul-Fixx P Plate	3" round polyethylene stress plate	3" round	SFS Stadler, Inc.
20.	Isofast Plate	Square or oblong galvalume steel plates for use with Isofast fasteners		SFS Stadler, Inc.
21.	Tru-Fast HD	Insulation fastener for wood, steel and concrete decks		The Tru-Fast Corp.
22.	Tru-Fast CF Fasteners	Insulation fastener for concrete decks		The Tru-Fast Corp.
23.	Tru-Fast Ultra	Stainless Steel fastener for use in steel, wood and concrete decks		The Tru-Fast Corp.
24.	Tru-Fast Plates	3" round galvalume AZ55 steel plate	3" round	The Tru-Fast Corp.
25.	Tru-Fast Plates	Polyethylene plastic plate	3" round	The Tru-Fast Corp.



APPROVED FASTENERS:

TABLE 3

Fastener Number	Product Name	Product Description	Dimensions	Manufacturer (With Current NOA)
26.	Tru-Fast Plates	3.23" round galvalume AZ50 steel plate	3.23" 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-17214	Wind Uplift Classification	03/20/96
Architectural Testing Inc.	ATI-17601-01	Wind Uplift Classification	06/29/96
Architectural Testing Inc.	ATI-17601-02	Wind Uplift Classification	07/30/96
Architectural Testing Inc.	ATI-18535	Wind Uplift Classification	10/14/96
Factory Mutual Research Corporation	J.I.1B7A5.AM	Wind Uplift and Fire Classification	02/23/98
Factory Mutual Research Corporation	1998 Approval Guide	Wind Uplift and Fire Classifications	01/01/98
Factory Mutual Research Corporation	J.I. 2Z3A9.AM	Wind Uplift and Fire Classification	07/30/97
Factory Mutual Research Corporation	J.I. 4B2A1.AM	Wind Uplift Classification	06/11/97
Factory Mutual Research Corporation	J.I.3B8Q4.AM	Wind Uplift Classification	06/04/97
Factory Mutual Research Corporation	J.I. 0B4A7.AM	Wind Uplift Classification	05/29/97
Factory Mutual Research Corporation	J.I. 2B2A1.AM	Wind Uplift Classification	05/29/97
Factory Mutual Research Corporation	J.I. 2Z2A8.AM	Seam Test	05/16/97
Factory Mutual Research Corporation	J.I. 3B5A1.AM	Wind Uplift and Fire Classification	04/28/97
Factory Mutual Research Corporation	J.I.1Z2A7.AM	Fire Classification	03/20/96
Factory Mutual Research Corporation	Letter	Product Equivalent	05/05/95
Factory Mutual Research Corporation	J.I. 3Y7Q2.AM	Corrosion Test	03/14/95
Factory Mutual Research Corporation	J.I. 1Y2A1.AM	Seam Test	02/23/95
Factory Mutual Research Corporation	J.I. 2X7A4.AM	Wind Uplift Classification	02/09/95
Factory Mutual Research Corporation	J.I. 2D6A6.AM	Wind Uplift Classification	10/7/98
Factory Mutual Research Corporation	Letter	Wind Uplift Classification	09/15/98
Factory Mutual Research Corporation	JI 409A6.AM	Approval Report	08/03/98



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<u>Test Agency</u>	<u>Test Identifier</u>	<u>Description</u>	<u>Date</u>
Underwriters Laboratories, Inc.	96NK21757	Fire Classification	09/06/96
Underwriters Laboratories, Inc.	96NK10924	Fire Classification	10/31/96
Underwriters Laboratories, Inc.	96NK28871	Fire Classification	11/06/96
Underwriters Laboratories, Inc.	96NK33323	Fire Classification	10/24/97
Underwriters Laboratories, Inc.	1998 Roofing Materials & Systems Directory Letter	R8103 Fire Classification	01/01/98
Underwriters Laboratories, Inc.	Letter	Fire Classification	08/06/98
Underwriters Laboratories, Inc.	Letter	Fire Classification	09/09/98



APPROVED ASSEMBLIES

- Membrane Type:** Single Ply, Thermoset, EPDM, Reinforced, Nonreinforced, Fleece Backed
- Deck Type 3I:** Concrete Decks, Insulated, New Construction
- Deck Description:** 2500 psi structural concrete.
- System Type A(1):** One or more 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
One of the following covered with the boards listed in Base or Top Layer.		
Perlite		
Minimum ¾" thick	N/A	N/A
Base or Top Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft²
One or more layers of the following as a Base or Top Layer or over the Base Layer listed above:		
PYROX, AP, Polyisocyanurate HP, ISO 95+ HF, Rhoflex HF, Multi-Max FA		
Minimum 1.2" thick	N/A	N/A
UltraGard Gold		
Minimum 1.3" thick	N/A	N/A
E'NRG'Y-2, PSI-25		
Minimum 1.4" thick	N/A	N/A
ACFoam II, ACFoam Composite, Rhoflex Composite, Fesco Foam, Polyisocyanurate HP-W		
Minimum 1.5" thick	N/A	N/A
HP Recovery, Structodeck		
Minimum ½" thick	N/A	N/A
High Density Fiberboard		
Minimum ¾" thick	N/A	N/A

Note: 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 can be adhered to the deck with FAST Adhesive at minimum rate 1.2 gal/sq.

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

Barrier: None.



Membrane: Sure-Seal, FR, FR-PLUS, Reinforced, Reinforced FR, Brite-Ply or Brite-Ply Reinforced, 45 or 60 mil membrane fully adhered to the insulation using 90-8-30A applied to the substrate at a rate of 1 gal/60 ft², or B-500 applied to the substrate at 1 gal/sq.
Or
Sure-Seal or Brite-Ply Fleeceback 100 or 115 mil membrane fully adhered to the insulation using FAST adhesive applied to the substrate at a rate of 1 gal/sq.

Surfacing: (Optional) A two-part surfacing consisting of EM-8 Hypalon applied to clean membrane surfacing after a two week cure at the rate of 1 gal./150 ft.² and silica sand applied into the wet coating at a rate of 35 lb./sq.

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



Membrane Type: Single Ply, Thermoset, EPDM, Reinforced, Nonreinforced, Fleece Backed
Deck Type 3I: Concrete Decks, Insulated, New Construction
Deck Description: 2500 psi structural concrete.
System Type A(2): One or more 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
Polyisocyanurate HP, HP-N, HP-W, Pyrox ENRG'Y-2, AC Foam II Minimum 2" thick	N/A	N/A
Top Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft²
Polyisocyanurate HP, HP-N, HP-W, Pyrox ENRG'Y-2, AC Foam II Minimum 2" thick	N/A	N/A
HP Recovery Minimum 1/2" thick	N/A	N/A

Note: 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 can be adhered to the deck with FAST Adhesive at minimum rate 1.2 gal/sq.

Vapor Retarder: None.
Barrier: None.
Membrane: Sure-Seal FR and Brite-Ply FleeceBACK 100 or 115 mil membrane fully adhered to the insulation using FAST Adhesive applied to the substrate at a rate of 1 gal./sq.
 Or
 Sure-Seal and Brite-Ply Reinforced or Non-Reinforced, 45 or 60 mil membrane fully adhered to the insulation using 90-8-30A applied to the substrate at a rate of 1 gal/60 ft².
 Or
 Sure-Seal FleeceBack AFX membrane adhered to the insulation in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-25 lbs./sq.
Surfacing: (Optional) A two-part surfacing consisting of EM-8 Hypalon applied to clean membrane surfacing after a two week cure at the rate of 1 gal./150 ft.² and silica sand applied into the wet coating at a rate of 35 lb./sq.
Maximum Design Pressure: -232 psf (See General Limitation #9)
 -248 psf (For FleeceBack only) (See General Limitation #9)



Membrane Type: Single Ply, Thermoset, EPDM, Reinforced, Nonreinforced, Fleece Backed

Deck Type 3I: Concrete Decks, Insulated, New Construction

Deck Description: 2500 psi structural concrete.

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.		
Extruded Polystyrene, Energy-Lok, ACFoam-I Minimum 1" thick	N/A	N/A
Perlite Minimum ¾" thick	N/A	N/A

Note: All insulation layers shall be simultaneously fastened; see Top Layer or Base or Top Layer below for fasteners and density.

Base or Top Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft²
ACFoam II, Polyisocyanurate HP-W, ACFoam Composite, Rhoflex Composite, Fesco Foam Minimum 1.5" thick	1, 2, 14 or 15	1:2 ft. ²
ACFoam II Minimum 2" thick	1, 2, 7, 9, 11, 14, 15, 17 or 21	1:2 ft. ²
HP Recovery Minimum ½" thick	1, 2, 14 or 15	1:2 ft. ²
High Density Fiberboard Minimum ¾" thick	7, 11 or 21	1:2.67 ft. ²
E'NRG'Y-2, PSI-25, WHITELINE, PYROX, AP Minimum 1.4" thick	1, 2, 7, 9, 11, 14, 15, 17 or 21	1:2 ft. ²
E'NRG'Y-2, PSI-25 Minimum 2" thick	1, 2, 7, 9, 11, 14, 15, 17 or 21	1:2 ft. ²
ISO 95+ HF, Rhoflex HF Minimum 2" thick	7 or 17	1:2 ft. ²
Polyisocyanurate HP -W Minimum 2" thick	1, 2, 14 or 15	1:4 ft. ²
Polyisocyanurate HP Minimum 1.4" thick	1, 2, 7, 9, 11, 14, 15, 17 or 21	1:2 ft. ²
Sturdi Top Minimum ½" thick	7 or 11	1:8 ft. ²



Ultra/M-II Iso/glas Minimum ½” thick	2, 7, 9, 11, 14, 15, 17 or 21	1:2 ft.²
Wood Fiber Minimum 1” thick	1, 2, 14 or 15	1:2 ft.²
Fiber Base Minimum 1” thick	1 or 11	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 insul. types) Minimum ½” thick	1, 2, 14 or 15	1:2 ft.²
Fiber Base (for use over polyisocyanurate, gypsum or perlite) Minimum ½” thick	1 or 11	1:2.9 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. Top layer of insulation may be adhered with FAST Adhesive at minimum rate 1.2 gal/sq. Please refer to Roofing Application Standard RAS 117 for insulation attachment.

- Vapor Retarder: (Optional) Any UL of FMRC approved vapor Retarder applied to the roof deck or over a base layer of insulation.
- Barrier: None.
- Membrane: Sure-Seal, FR, FR-PLUS, Reinforced, Reinforced FR, Brite-Ply or Brite-Ply Reinforced, 45 or 60 mil membrane fully adhered to the insulation using 90-8-30A applied to the substrate at a rate of 1 gal/60 ft², or B-500 applied to the substrate at 1 gal/sq.
Or
Sure-Seal FR, Brite-Ply FleeceBack 100 or 115 mil membrane fully adhered to the insulation using FAST Adhesive applied to the substrate at a rate of 1 gal/sq.
Or
Sure-Seal FleeceBack AFX membrane fully adhered to the insulation in full moppings of approved asphalt within the EVT range and at a rate of 20-25 lbs/sq.
- Surfacing: (Optional) A two-part surfacing consisting of EM-8 Hypalon applied to clean membrane surfacing after a two week cure at the rate of 1 gal./150 ft.² and silica sand applied into the wet coating at a rate of 35 lb./sq.
- Maximum Design Pressure: -45 psf. (See General Limitation #9)



Membrane Type: Single Ply, Thermoset, EPDM, Reinforced
Deck Type 3I: Concrete Decks, Insulated, New Construction
Deck Description: 2500 psi structural concrete.
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.		
Extruded Polystyrene, Energy-Lok, ACFoam-I 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/ft²
ACFoam II, Polyisocyanurate HP-W, ACFoam Composite, Rhoflex Composite, Fesco Foam Minimum 1.5" thick	N/A	N/A
E'NRG'Y, ISO 95+GL, GW, Rhoflex GL, GW Minimum 1.4" thick	N/A	N/A
UltraGard Gold, Isolite E Minimum 1.3" thick	N/A	N/A
HP Recovery, Structodeck Minimum ½" thick	N/A	N/A
High Density Fiberboard Minimum ¾" thick	N/A	N/A
WHITELINE, PYROX, AP, Polyisocyanurate HP, ISO 95+ HF, Rhoflex HF, Multi-Max FA, Ultra/M-II Iso/glas Minimum 1.2" thick	N/A	N/A
Wood Fiber, Fiber Base Minimum ½" 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 :		
Fiber Base (use over polyisocyanurate, Gypsum or perlite), HP Recovery (use over all other insul. types) Minimum ½" thick	N/A	N/A

Note: All insulations 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 at minimum rate 1.2 gal/sq.



Vapor Retarder:	(Optional) Any UL of FMRC approved vapor Retarder applied to the roof deck or over a base layer of insulation.
Barrier:	None.
Membrane:	Sure-Seal, Reinforced, FR Reinforced, or Brite-Ply Reinforced secured through the preliminary attached insulation as specified below.
Fastening #1:	Sure-Seal HP Concrete Spikes with metal plates 6" o.c. through the reinforced membrane in the lap or throughout a 6" strip 6'6" o.c., and the lap sealed, or the membrane fully adhered to the 6" strip with EP-Lap Cement. Maximum Design Pressure –45 psf. (See General Limitation #9)
Fastening #2:	Sure-Seal HP Concrete Spikes with metal or poly plates 6" o.c. through the reinforced membrane in the lap or through a 6" strip 6'6" o.c., and the lap sealed, or the membrane fully adhered to the 6" strip with EP-95 Lap Cement. Maximum Design Pressure –52.5 psf. (See General Limitation #7)
Fastening #3:	Sure-Seal HP Concrete Spikes with metal or poly plates 6" o.c. through the reinforced membrane in the lap or through a 6" strip 9'6" o.c., and the lap sealed, or the membrane fully adhered to the 6" strip with EP-95 Lap Cement. Maximum Design Pressure –52.5 psf. (See General Limitation #7)
Surfacing:	(Optional) A two-part surfacing consisting of EM-8 Hypalon applied to clean membrane surfacing after a two week cure at the rate of 1 gal./150 ft. ² and silica sand applied into the wet coating at a rate of 35 lb./sq.
Maximum Design Pressure:	See Fastening Above



Membrane Type: Single Ply, Thermoset, EPDM, Reinforced, Nonreinforced, Fleece Backed

Deck Type 3: Concrete Decks, Non-insulated, New Construction

Deck Description: 2500 psi structural concrete.

System Type F(1): Membrane fully adhered.

All General and System Limitations apply.

Vapor Retarder: None.

Barrier: None.

Membrane: Sure-Seal, FR, FR-PLUS, Reinforced, Reinforced FR, Brite-Ply Reinforced, 45 or 60 mil membrane fully adhered to concrete deck using 90-8-30 applied to the substrate at a rate of 1 gal/60ft.², or B-500 applied to the substrate at 1 gal/sq.

Surfacing: (Optional) A two-part surfacing consisting of EM-8 Hypalon applied to clean membrane surfacing after a two week cure at the rate of 1 gal./150 ft.² and silica sand applied into the wet coating at a rate of 35 lb./sq.

Maximum Design Pressure: -240 pfs. (See General Limitation #9)

Membrane Type: Single Ply, Thermoset, EPDM, Reinforced, Nonreinforced, Fleece Backed

Deck Type 3: Concrete Decks, Non-insulated, New Construction

Deck Description: 2500 psi structural concrete.

System Type F(2): Membrane fully adhered with asphalt or Fast Adhesive.

All General and System Limitations apply.

Vapor Retarder: None.

Barrier: None.

Membrane: Sure-Seal FR and Brite-Ply FleeceBACK 100 or 115 mil membrane fully adhered to the deck using FAST Adhesive applied to the substrate at a rate of 1 gal./sq.
Or
Sure-Seal FleeceBack AFX membrane adhered to the deck in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-25 lbs./sq.

Surfacing: (Optional) A two-part surfacing consisting of EM-8 Hypalon applied to clean membrane surfacing after a two week cure at the rate of 1 gal./150 ft.² and silica sand applied into the wet coating at a rate of 35 lb./sq.

Maximum Design Pressure: -585 pfs. (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 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 Professional Engineer, Registered 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 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.: 02-0627.03
Expiration Date: 06/28/06
Approval Date: 07/31/02
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