MIAMI-DADE

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 Florida Building Code, including the High Velocity Hurricane Zone.

DESCRIPTION: Carlisle Single Ply EPDM Roof Systems over Cementitious Wood Fiber 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 NOA revises NOA # 01-0504.04 and consists of pages 1 through 11.
The submitted documentation was reviewed by Frank Zuloaga, RRC

ROOFING SYSTEM APPROVAL

Category:	Roofing
Sub-Category:	Single Ply
Material:	EPDM
Deck Type:	Cementitious Wood Fiber
Maximum Design Pressure	-120 psf
Fire Classification:	See General Limitation #1

TRADE NAMES OF PRODUCTS MANUFACTURED OR LABELED BY APPLICANT:

TABLE 1

Product Name	Dimensions	Test Specifications	Product Description
Sure-Seal EPDM	various	ASTM D 4637	Non-reinforced EPDM membrane.
Sure-Seal FR EPDM Sure Seal FR-Plus EPDM	various	ASTM D 4637	Non-reinforced, fire retardant EPDM membrane.
Sure-Seal Reinforced EPDM Sure-Seal Sure-Tough	various	ASTM D 4637	Reinforced EPDM membrane.
Sure-Seal Reinforced FR EPDM	various	ASTM D 4637	Reinforced, fire retardant EPDM membrane.
Sure-Seal Fleece BACK Sure Seal Fleece BACK AFX	various	ASTM D 4637	EPDM membrane with fleece backing..
Sure-White EPDM	various	ASTM D 4637	Non-reinforced white on black EPDM membrane.
Sure-White Fleece BACK EPDM	Various	ASTM D4637	Non-reinforced white on black fleece backed EPDM membrane.
RUSS	various	ASTM D 4637	Reinforced securement strip.
CCW 702 Primer	various	TAS 110	Solvent-Based Primer
CCW 702LT Primer	various	TAS 110	Low-Temperature Solvent-Based Primer
CCW 714 Primer	various	TAS 110	Water-Based Primer
CCW 725 Vapor Barrier	various	TAS 110	Vapor Barrier
FAST 100 Adhesive FAST 100-LV Adhesive FAST 100-P Adhesive FAST 102 Adhesive	various	TAS 110	Spray Polyurethane Adhesive
Sure-White Lap Sealant Sure-Seal Lap Sealant		TAS 110	Lap Sealant for Sure-White/Sure-Seal membranes.
Sure-White Splicing Cement Sure Seal EP-95 Splicing Cement		TAS 110	Splicing Adhesive for EPDM membranes.
SecureTape		TAS 110	Tape Adhesive for EPDM membranes.
Sure-Seal 90-8-30A Bonding Adhesive		TAS 110	Solvent-based bonding adhesive.

Product Name	Dimensions	Test Specifications	Product Description
Sure-Seal B-500 Bonding Adhesive		TAS 110	Water-based bonding adhesive.

APPROVED INSULATIONS:

TABLE 2

Product Name	Product Description	Manufacturer (With Current NOA)
ACFoam Composite	Isocyanurate Insulation with perlite facer	Atlas Roofing Corp.
ACFoam II, III	Isocyanurate Insulation	Atlas Roofing Corp.
Polyisocyanurate HP, HP-N, HP-H, HP-W	Polyisocyanurate roof insulation.	Carlisle Syntec, Inc.
Sure-Seal HP Recovery Board	High Density Wood Fiberboard.	Carlisle Syntec, Inc.
EPS/Fiberboard	High Density Wood Fiberboard bonded to EPS.	Carlisle Syntec, Inc.
EPS Insulation	Expanded Polystyrene.	Carlisle Syntec, Inc.
Hytherm, Hytherm AP	Isocyanurate Insulation	Dow Chemical
Styrofoam	Extruded Polystyrene.	Dow Chemical
ISO 95+ GL, 95+ GW	Polyisocyanurate foam insulation	Firestone
Dens Deck, Dens Deck Prime	Silicon treated gypsum	G-P Products
Sturdi-Top	Wood fiber insulation board.	G-P Products
High Density Wood Fiberboard	High Density Wood Fiber insulation board.	Generic
Perlite Insulation Board	Perlite Insulation	Generic
Type X Gypsum, Gypsum	Gypsum Wallboard	Generic
EPS or XPS Insulation	Expanded or Extruded Polystyrene.	Generic
Ultra/M-II	Isocyanurate Insulation	Homasote Co.
H-Shield	Isocyanurate Insulation	Hunter Panel
ENRGY 2, ENERGY 3, PSI-25	Isocyanurate Insulation	Johns Manville
Foamular, Thermapink, Durapink	Extruded Polystyrene.	Owens Corning
Strataguard	Gypsum Wallboard	Owens Corning
Green Guard	Extruded Polystyrene insulation	Pactiv
Multi-Max, FA	Polyisocyanurate foam insulation	Rmax, Inc.
Fiber Base	Asphalt coated wood fiber insulation	Temple Inland Forest Products Corp.
Structodeck	High Density Wood Fiber insulation board.	Wood Fiber Industries

APPROVED FASTENERS:

TABLE 3

Fastener Number	Product Name	Product Description	Dimensions	Manufacturer (With Current NOA)
1.	Sure-Seal HP Lightweight	Fastener for cementitious and gypsum decks	Various	Carlisle SynTec, Inc.
2.	Sure-Seal HP Lightweight Plate	Metal plates used for membrane securement.	3" dia	Carlisle SynTec, Inc.
3.	Sure-Seal Seam Fastening Plates	Metal plates with plastic inserts used for membrane securement.	2" dia	Carlisle SynTec, Inc.
4.	Sure-Seal Polymer Seam Plates	Plastic plates used for membrane securement.	2" dia	Carlisle SynTec, Inc.
5.	Lite-Deck Fasteners	Fastener for cementitious and gypsum decks	Various	Olympic Mfg. Group
6.	NTB Magnum	Fastener for cementitious and gypsum decks	Various	Olympic Mfg. Group
7.	GTL Fastener	Fastener for cementitious and gypsum decks with a 3" round head plate.	Various	Olympic Mfg. Group
8.	Lite-Deck Plate	Round Galvalume AZ55 stress plate	3" round	Olympic Mfg. Group
9.	NTB Plate	Round Galvalume AZ55 stress plate	3" round	Olympic Mfg. Group
10.	NTB Metal Barbed Stress Plate	Round Galvalume AZ55 stress plate	2" round	Olympic Mfg. Group
11.	NTB Plastic Plate	Plastic plates for NTB 2" head fasteners.	3" round	Olympic Mfg. Group
12.	Powerlite	Insulation fastener for cementitious and gypsum decks	Various	Powers Fasteners Inc.
13.	Powerlite	Round Galvalume AZ55 stress plate	3" round	Powers Fasteners Inc.

EVIDENCE SUBMITTED:

Test Agency	Test Identifier	Description	Date
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 Corp.	J.I.1B7A5.AM	Wind Uplift and Fire Classification	02/23/98
Factory Mutual Research Corp.	1998 Approval Guide Building Materials	Wind Uplift and Fire Classifications	01/01/98

Test Agency	Test Identifier	Description	Date
Factory Mutual Research Corp.	J.I. 2Z3A9.AM	Wind Uplift and Fire Classification	07/30/97
Factory Mutual Research Corp.	J.I. 4B2A1.AM	Wind Uplift Classification	06/11/97
Factory Mutual Research Corp.	J.I.3B8Q4.AM	Wind Uplift Classification	06/04/97
Factory Mutual Research Corp.	J.I. 0B4A7.AM	Wind Uplift Classification	05/29/97
Factory Mutual Research Corp.	J.I. 2B2A1.AM	Wind Uplift Classification	05/29/97
Factory Mutual Research Corp.	J.I. 2Z2A8.AM	Seam Test	05/16/97
Factory Mutual Research Corp.	J.I. 3B5A1.AM	Wind Uplift and Fire Classification	04/28/97
Factory Mutual Research Corp.	Letter	Wind Uplift Classification	09/15/98
Factory Mutual Research Corp.	J.I. 2D6A6.AM	Wind Uplift Classification	10/07/98
Factory Mutual Research Corp.	3003337	Class 4470	06/11/99
Factory Mutual Research Corp.	3016162	Class 4470	11/25/03
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.	Letter	Fire Classification	08/06/98
Underwriters Laboratories, Inc.	Letter	Fire Classification	09/09/98
Underwriters Laboratories, Inc.	02NK46936	UL 790	12/15/03

APPROVED ASSEMBLIES

Membrane Type: Single Ply, Thermoplastic, EPDM, Reinforced, Non-Reinforced, FleeceBack

Deck Type 5I: Cementitious Wood Fiber, Insulated

Deck Description: Minimum 2" thick Tectum Panel secured to ¼" thick supports at a maximum spacing of 3ft o.c. secured with two #14 Dekfast fasteners and 2" diameter metal plates per panel per support.

System Type A: One or more layers of insulation adhered with Fast Adhesive. Membrane fully adhered.

All General and System Limitations apply.

Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft^2
Extruded or Expanded Polystyrene, ENRGY-2, ENRGY-3, PSI-25, ACFoam II, ACFoam III, H-Shield, Hytherm AP, Polyisocyanurate HP, HP-H, HP-N, HP-W		
Minimum 1" thick	**N/A**	**N/A**
HP Recovery		
Minimum ½" thick	**N/A**	**N/A**
Dens Deck, Dens Deck Prime, Strataguard		
Minimum ¼" thick	**N/A**	**N/A**

Note: All insulation shall be adhered to the deck in full mopping of FAST Adhesive at a rate of 1 gal./100 ft^2. Please refer to Roofing Application Standard RAS 117 for insulation attachment.

Vapor Retarder: None.

Barrier: None.

Membrane: Sure-Seal or Sure-White 45 to 90 mil membranes fully adhered to the insulation using 90-8-30A applied to the substrate at a rate of 1 gal/60 ft.^{2}, or B-500 applied to the substrate at 1 gal./sq.
Or
Sure-Seal or Sure-White FleeceBACK 100 or 115 mil membrane fully adhered to the insulation using any FAST Adhesive applied to the substrate at a rate of 1 gal./sq.
Or
Sure-Seal FleeceBACK AFX or AFX Plus membrane fully adhered to the insulation in full moppings of asphalt at rate of 20-40 lbs/sq.

Surfacing: (Optional) A two-part surfacing consisting of EM-8 Hypalon applied at the rate of 1 gal./150 ft^2 and silica sand applied into the wet coating at a rate of 35 lbs./sq. or two coats of Sure-Seal Acrylic Coating at a rate 1.5 gal/sq. per coat.

Maximum Design Pressure: -120 psf. (See General Limitation #9)

Membrane Type: Single Ply, Thermoset, EPDM, Reinforced, Nonreinforced, FleeceBacked

Deck Type 5I: Cementitious Wood Fiber, Insulated

Deck Description: Cementitious wood fiber

System Type C: All layers of insulation simultaneously fastened; 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 or Expanded Polystyrene **Minimum 1" thick**	**N/A**	**N/A**
Perlite **Minimum ¾" thick**	**N/A**	**N/A**

Note: All insulation layers shall be simultaneously fastened; see Base or Top Layer below for fasteners and density. Single and multiple of base insulation layers can be attached with FAST Adhesive.

Base or Top Insulation Layer	**Insulation Fasteners (Table 3)**	**Fastener Density/ft^2**
Ultra/M-II Iso/glas **Minimum 1.2" thick**	**1, 5, 6, 7 or 12**	**1:2 ft^2**
ENRGY-2, ENRGY-3, PSI-25, Hythem AP, H-Shield, Polyisocyanurate HP, HP-H, HP-N **Minimum 1.4" thick**	**1, 5, 6, 7 or 12**	**1:2 ft^2**
AC Foam II, AC Foam III, ACFoam Composite, Rhoflex Composite, Fesco Foam, Polyisocyanurate HP-W **Minimum 1.5" thick**	**1, 5, 6, 7 or 12**	**1:2 ft.^{2}**
Sturdi Top, HP Recovery, Fiber Base **Minimum ½" thick**	**1, 5, 6, 7 or 12**	**1:2ft^2**
High Density Fiberboard **Minimum ¾" thick**	**1, 5, 6, 7 or 12**	**1:2 ft^2**
Dens Deck, Dens Deck Prime, Strataguard **Minimum ¼" thick**	**1, 5, 6, 7 or 12**	**1:2 ft^2**

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**	**1, 5, 6, 7 or 12**	**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:	Sure-Seal or Sure-White 45 to 90 mil membranes fully adhered to the insulation using 90-8-30A applied to the substrate at a rate of 1 gal/60 ft.^{2}, or B-500 applied to the substrate at 1 gal./sq. Or Sure-Seal or Sure-White 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 and AFX Plus membrane fully adhered to the insulation in full moppings of asphalt at rate of 20-40 lbs/sq.
Surfacing:	(Optional) A two-part surfacing consisting of EM-8 Hypalon applied at the rate of 1 gal./150 ft^2 and silica sand applied into the wet coating at a rate of 35 lbs./sq. or two coats of Sure-Seal Acrylic Coating at a rate 1.5 gal/sq. per coat.
Maximum Design Pressure:	-45 psf (See General Limitation #9)

Membrane Type: Single Ply, Thermoset, EPDM, Reinforced

Deck Type 5I: Cementitious Wood Fiber, Insulated

Deck Description: Cementitious wood fiber

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/ft^2**
One of the following covered with the boards listed in Top Layer or Base or Top Layer.		
Extruded or Expanded Polystyrene, Energy-Lok, ACFoam-II, AC Foam III, 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**
ISO 95+ HF, Rhoflex HF, Multi-Max FA, Ultra/M-II Iso/glas, UltraGard Gold, Isolite E, ENRGY-2, ENRGY-3, PSI-25, Hytherm AP, H-Shield, Polyisocyanurate HP, HP-H, HP-N, ISO 95+GL, GW, Rhoflex GL, GW, AC Foam II, AC Foam III, ACFoam Composite, Rhoflex Composite, Fesco Foam, Polyisocyanurate HP-W Minimum 1" thick	**N/A**	**N/A**
HP Recovery, Fiber Base, Structodeck, Wood Fiber, High Density Fiberboard Minimum ½" thick	**N/A**	**N/A**
Dens Deck, Dens Deck Prime, Strataguard Minimum ¼" 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 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 may be attached 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:	Sure-Seal Reinforced or FR Reinforced secured through the preliminary attached insulation as specified below. .
Fastening:	Sure-Seal HP fasteners and Plates 6" o.c. through the reinforced membrane in the lap or through a RUSS strip spaced 6'6" o.c., and the lap sealed, or the membrane fully adhered to the RUSS strip with EP-95 Lap Cement or SecurTape.
Surfacing:	(Optional) A two-part surfacing consisting of EM-8 Hypalon applied at the rate of 1 gal./150 ft^2 and silica sand applied into the wet coating at a rate of 35 lbs./sq. or two coats of Sure-Seal Acrylic Coating at a rate 1.5 gal/sq. per coat.
Maximum Design Pressure:	-45 psf (See General Limitation #9)

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.)**
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