



**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)

**Custom Seal Roofing Systems Inc.
708 Graham Dr.
Fremont OH 43420**

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: Custom Seal Roofing System PVC 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 NOA renews NOA # 00-0918.02 and consists of pages 1 through 13.
The submitted documentation was reviewed by Frank Zuloaga, RRC



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ROOFING ASSEMBLY APPROVAL

Category: Roofing
Sub-Category: 07530 Single Ply (PVC)

Deck Type: Wood
Maximum Design Pressure -45 psf
Fire Classification: See General Limitation #1

TRADE NAMES OF PRODUCTS MANUFACTURED OR LABELED BY APPLICANT

<u>Product</u>	<u>Dimensions</u>	<u>Test Specification</u>	<u>Product Description</u>
Custom Seal membrane	.048" or .060" thick, 6' x 100'	PA 110	PVC roofing membrane.
Custom Seal-C membrane	.048" or .060" thick, 6' x 100'	PA 110	PVC roofing membrane with a vinyl/acrylic coating on the top surface.
Custom Seal Foam/Atlas	Various	PA 110	Polyisocyanurate insulation (flat or tapered)
Generic	Various	PA 110	Polyisocyanurate / high density wood fiber composite insulation.
Custom Seal Foam/Atlas	Various	PA 110	Polyisocyanurate insulation
Custom Seal Steel	2" round x 0.030"	PA 114 PA 117	Steel stress plate for membrane attachment.
Custom Seal Plastic	2" round	PA 117	Polypropylene stress plate for membrane attachment.
Custom Seal Seam Disc	2" round x 0.030"	PA 114 PA 117	Steel stress plate for membrane attachment.
Custom Seal Bar Anchor	1" x 10 ft x 0.46"	PA 114	Steel bar for membrane attachment.
Custom Seal #15 XHD Fastener	Various	PA 114 PA 117	Fastener for membrane attachment to steel and concrete decks.
Custom Seal XHD Barbed Seam Plate	2- ³ / ₈ " round x 0.038"	PA 114 PA 117	Steel stress plate for membrane attachment.
Custom Seal RM Waterbased Adhesive	5 gallon	Proprietary	Water based membrane adhesive



<u>Product</u>	<u>Dimensions</u>	<u>Test Specification</u>	<u>Product Description</u>
Custom Seal RM Bonding Adhesive	5 gallon	Proprietary	Solvent based membrane adhesive.

TRADE NAMES OF PRODUCTS MANUFACTURED BY OTHERS:

<u>Product</u>	<u>Dimensions</u>	<u>Test Specification</u>	<u>Product Description</u>	<u>Manufacturer</u>
Millox	various	PA 110	Polyisocyanurate foam insulation	Apache Products Co. (with current NOA)
Pyrox	various	PA 110	Polyisocyanurate foam insulation	Apache Products Co. (with current NOA)
ACFoam II	various	PA 110	Polyisocyanurate foam insulation	Atlas (with current NOA)
Thermax Hy-Tec	various	PA 110	Polyisocyanurate foam insulation	Celotex Corp. (with current NOA)
Hy-Therm AP	various	PA 110	Polyisocyanurate foam insulation	Celotex Corp. (with current NOA)
Energy-Lok	various	PA 110	Polyisocyanurate foam insulation	Celotex Corp. (with current NOA)
ISO 95+ GL	various	PA 110	Polyisocyanurate foam insulation	Firestone (with current NOA)
Ultra/C-I	various	PA 110	Polyisocyanurate foam insulation	Homasote Co. (with current NOA)
E'NERG'Y PSI-25	various	PA 110	Polyisocyanurate foam insulation	Johns Manville (with current NOA)
E'NRG'Y-2	various	PA 110	Polyisocyanurate foam insulation	Johns Manville (with current NOA)
UltraGard Gold	various	PA 110	Polyisocyanurate foam insulation	Johns Manville (with current NOA)
Multi Max FA	Various	PA 110	Polyisocyanurate foam insulation	R-Max (with current NOA)
Celotherm	various	PA 110	perlite insulation	Celotex Corp. (with current NOA)



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ConPerl	various	PA 110	perlite insulation	Conglas (with current NOA)
GAFTEMP Permalite	various	PA 110	perlite insulation	GAF Materials Corp. (with current NOA)
Fesco Board	various	PA 110	perlite insulation	Johns Manville (with current NOA)
Esgard	various	PA 110	wood fiberboard insulation	BPCO, Inc. (with current NOA)
Celotex Fiberboard	various	PA 110	wood fiberboard insulation	Celotex Corp. (with current NOA)
GAFTEMP Fiberboard	various	PA 110	wood fiberboard insulation	GAF Materials Corp. (with current NOA)
Huebert Fiberboard	various	PA 110	wood fiberboard insulation	Huebert, Inc. (with current NOA)
KopR Wood Fiber	various	PA 110	wood fiberboard insulation	Koppers Industries (with current NOA)
Type X Gypsum	various	PA 110	gypsum board	Generic
Olympic Heavy Duty (HD)	Various	PA 114	Membrane fastener for wood, steel or concrete decks	ITW Buildex (with current NOA)
Olympic Standard	3" round	PA 114	3" round galvalume AZ55 steel plate	Olympic (with current NOA)
Olympic Polypropylene	3.25" round	PA 114	Polypropylene stress plate	Olympic (with current NOA)
SFS Extra Load Fastener HD	Various	PA 114	Membrane fastener for steel or concrete decks	SFS Stadler (with current NOA)
SFS Extra Load Plate LR6	2.37" round	PA 114	Galvalume AZ55 stress plate	SFS Stadler (with current NOA)



EVIDENCE SUBMITTED:

<u>Test Agency/Identifier</u>	<u>Name</u>	<u>Report</u>	<u>Date</u>
Factory Mutual Research Corporation	J.I. 1T7A5.AM	Wind Uplift	01/18/93
	J.I. 2X1A5.AM	Wind Uplift	11/31/93
	J.I. 2X9A3.AM	Wind Uplift	03/04/94
	J.I. 3B1A1.AM	Wind Uplift	07/21/97
	J.I. 3Z7A0.AM	Wind Uplift	03/05/97
	J.I. 3B4A0.AM	Wind Uplift	01/31/97
	J.I. 0Z9A6.AM	Wind Uplift	06/05/95
	J.I. 2Z9A4.AM	Wind Uplift	11/14/95
	J.I. 0D7A5.AM	Wind Uplift	09/24/97
South Florida Test Service	GFRS-1-X-118	Physical Properties	05/07/92
Underwriters Laboratories, Inc.	UL Roofing Materials and Systems Directory	Fire Classification File No. R9334	Published Annually



APPROVED SYSTEMS:

Deck Type 3I: Concrete Decks, Insulated

Deck Description: 2500 psi structural concrete.

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

All General and System Limitations apply.

<u>Insulation Base Layer (Optional)</u>	<u>Fastener Type</u>	<u>Fastening Detail No.</u>	<u>Fasteners Per Board</u>	<u>Fastener Density</u>
Approved Type(s): Multi-Max FA, Ultra/M-II AEF, Custom Seal Iso 1, Custom Seal Iso HC1				
Minimum: 1.4" x 4' x 4'	N/A	N/A	N/A	N/A
Approved Type(s): Custom Seal Iso 3, ACFoam II, Hy-Therm AP				
Minimum: 1.5" x 4' x 4'	N/A	N/A	N/A	N/A
Approved Type(s): E'NRG'Y-2				
Minimum: 1.4" x 3' x 4'	N/A	N/A	N/A	N/A

Note: All layers shall be simultaneously fastened; see top layer below for fasteners and density.

<u>Insulation Top Layer</u>	<u>Fastener Type</u>	<u>Fastening Detail No.</u>	<u>Fasteners Per Board</u>	<u>Fastener Density</u>
Approved Type(s): Ultra/M-II AEF, Custom Seal Iso 1, Custom Seal Iso HC1				
Minimum: 1.4" x 4' x 4'	CF #14, #15 Dekfast	[3]	8	1:2 ft ²
Minimum: 1.4" x 4' x 4'	Bldx #14, #15 Roofgrip	[3]	8	1:2 ft ²
Minimum: 1.4" x 4' x 4'	SFS Insulfixx #14	[3]	8	1:2 ft ²
Minimum: 1.4" x 4' x 4'	SFS #14 System ES-1	[3]	8	1:2 ft ²
Approved Type(s): Custom Seal Iso 3, ACFoam II, Hy-Therm AP				
Minimum: 1.5" x 4' x 4'	CF #14, #15 Dekfast	[3]	8	1:2 ft ²
Minimum: 1.5" x 4' x 4'	Bldx #14, #15 Roofgrip	[3]	8	1:2 ft ²
Minimum: 1.5" x 4' x 4'	Olympic HD	[3]	8	1:2 ft ²
Minimum: 1.5" x 4' x 4'	SFS Insulfixx #14	[3]	8	1:2 ft ²
Minimum: 1.5" x 4' x 4'	SFS #14 System ES-1	[3]	8	1:2 ft ²
Minimum: 1.5" x 4' x 4'	TruFast HD, DL, CF	[3]	8	1:2 ft ²
Minimum: 1.5" x 4' x 4'	TruFast CF Tap-Grip	[3]	8	1:2 ft ²
Approved Type(s): E'NRG'Y-2				
Minimum: 1.4" x 3' x 4'	Bldx #14, #15 Roofgrip	[2]	6	1:2 ft ²
Minimum: 1.4" x 3' x 4'	SFS Insulfixx #14	[2]	6	1:2 ft ²
Minimum: 1.4" x 3' x 4'	SFS #14 System ES-1	[2]	6	1:2 ft ²



Approved Type(s): **Celotex High Density Wood Fiberboard**

Minimum:	½" x 4' x 4'	CF #14, #15 Dekfast	[3]	8	1:2 ft ²
Minimum:	½" x 4' x 4'	Olympic HD	[3]	8	1:2 ft ²

Note: All layers of insulation shall be mechanically attached using the fastener density listed above. The 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. (See Roofing Application Standard RAS 117 for fastening details.)

Vapor Retarder: (Optional) Any UL or FMRC approved vapor retarder installed on the roof deck or over the base layer of insulation.

Barrier: None.

Membrane: Custom Seal or Custom Seal-C membrane 45 or 60 mil membrane adhered to the insulation substrate with Custom Seal RM Waterbased Adhesive or Custom Seal RM Bonding Adhesive applied to each surface at a rate of 1 gal./65 ft². Seams shall be welded per the manufacturer's specifications.

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

Maximum Fire Classification: See General Limitation #1.



Deck Type 3I: Concrete Decks, Insulated

Deck Description: 2500 psi structural concrete.

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

All General and System Limitations apply.

<u>Insulation Base or Top Layer</u>	<u>Fastener Type</u>	<u>Fastening Detail No.</u>	<u>Fasteners Per Board</u>	<u>Fastener Density</u>
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One or more layers of the following insulations:

Approved Type(s): ACFoam II, Hy-Tec, E'NRG'Y-2, PSI-25, Custom Seal Iso 1, Custom Seal Iso HC, UltraGard, Hy-Therm AP, ISO 95+ GL, Pyrox, Millox, MultiMax FA, Ultra/M-II AEF				
Minimum: 1.3" x 4' x 4'	N/A	N/A	N/A	N/A

Approved Type(s): Celotherm, ConPerl, GAFTEMP Permalite, Fesco Board				
Minimum: ¾" x 2' x 4'	N/A	N/A	N/A	N/A

Approved Type(s): Esgard, Celotex Fiberboard, GAFTEMP Fiberboard, Huebert Fiberboard				
Minimum: 1" x 4' x 4'	N/A	N/A	N/A	N/A

Approved Type(s): Armor Board High Density, BP High Strength, FM-90 Traffic Top/High Density, Roof Insulation Board, High Density Fiberboard, Fiber Base HD1/HD6				
Minimum: ½" x 4' x 4'	N/A	N/A	N/A	N/A

Note: Top insulation layer shall have preliminary attachment at a density of two Approved insulation fasteners per board for insulation boards having any one dimension no greater than 4 ft. and a minimum of four Approved insulation fasteners per board for insulation boards having any one dimension greater than 4 ft. Composite insulation panels shall be placed with the polyisocyanurate side down.

Vapor Retarder: (Optional) Any UL or FMRC approved vapor retarder may be installed on the deck or over the base layer of insulation.

Barrier: (Optional) ½" type X gypsum or ¼" Dens Deck

Membrane: Custom Seal or Custom Seal-C membrane fastened through preliminary attached insulation at side laps following one of the fastening methods specified below.

Fastening #1: Fasten using Olympic HD fasteners with Custom Seal II RM Seam Discs (Steel or Plastic) or Rawl Lap Plates spaced 12" o.c. within 4.5" laps spaced 48" o.c. Laps are sealed with a 2" heat weld.

Fastening #2: Fasten using Olympic HD, #14 Roofgrip, #14, #15 Dekfast, #12 Insulfixx, #14 Insulfixx or TruFast HD fasteners with Custom Seal RM Seam Discs, Dekfast 2 in. Metal Plates or Custom Seal Bar Anchors spaced 6" o.c. within 4.5" laps spaced 70.5" o.c. Laps are sealed with a 2" heat weld.



Fastening #3: Fasten using SFS Extra Load Fasteners HD spaced 12" o.c. through Custom Seal Bar Anchors within 4" laps spaced 72" o.c. Laps are sealed with a 1" heat weld on each side of the Bar Anchor.

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

Maximum Fire Classification: See General Limitation #1.



Deck Type 3I: Concrete Decks, Insulated

Deck Description: 2500 psi structural concrete.

System Type D(2): Membrane mechanically attached over preliminary fastened insulation.

All General and System Limitations apply.

<u>Insulation Base or Top Layer</u>	<u>Fastener Type</u>	<u>Fastening Detail No.</u>	<u>Fasteners Per Board</u>	<u>Fastener Density</u>
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One or more layers of the following insulations:

Approved Type(s): AC Foam II, Hy-Tec, E'NRG'Y-2, PSI-25, Custom Seal Iso 1, Custom Seal Iso HC, UltraGard, Hy-Therm AP, ISO 95+ GL, Pyrox, Millox, MultiMax FA, Ultra/M-II AEF				
Minimum: 1.3" x 4' x 4'	N/A	N/A	N/A	N/A

Note: Top insulation layer shall have preliminary attachment at a density of two Approved insulation fasteners per board for insulation boards having any one dimension no greater than 4 ft. and a minimum of four Approved insulation fasteners per board for insulation boards having any one dimension greater than 4 ft. Composite insulation panels shall be placed with the polyisocyanurate side down.

Vapor Retarder: (Optional) Any UL or FMRC approved vapor retarder may be installed on the deck or over the base layer of insulation.

Barrier: (Optional) 1/2" type X gypsum or 1/4" Dens Deck

Membrane: Custom Seal or Custom Seal-C membrane fastened through preliminary attached insulation at sidelaps following one of the fastening methods specified below.

Fastening #1: Fasten using SFS #14 Insulfixx fasteners spaced 6" o.c. through Custom Seal Bar Anchors within 4.5" laps spaced 70.5" o.c. Laps are sealed with a 1.5" heat weld on each side of the Bar Anchor.

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

Maximum Fire Classification: See General Limitation #1.



Deck Type 3: Concrete Decks, Non-insulated,

Deck Description: 2500 psi structural concrete.

System Type E: Membrane mechanically attached to deck.

All General and System Limitations apply.

Barrier: (Optional) ½" type X gypsum or ¼" Dens Deck

Membrane: Custom Seal or Custom Seal-C membrane fastened through preliminary attached insulation at sidelaps following one of the fastening methods specified below.

Fastening #1: Fasten using Olympic HD fasteners with Custom Seal II RM Seam Discs (Steel or Plastic) or Rawl Lap Plates spaced 12" o.c. within 4.5" laps spaced 48" o.c. Laps are sealed with a 2" heat weld.

Fastening #2: Fasten using Olympic HD, #14 Roofgrip, #14, #15 Dekfast, #12 Insulfixx, #14 Insulfixx or TruFast HD fasteners with Custom Seal RM Seam Discs, Dekfast 2 in. Metal Plates or Custom Seal Bar Anchors spaced 6" o.c. within 4.5" laps spaced 70.5" o.c. Laps are sealed with a 2" heat weld.

Fastening #3: Fasten using SFS Extra Load Fasteners HD spaced 12" o.c. through Custom Seal Bar Anchors within 4" laps spaced 72" o.c. Laps are sealed with a 1" heat weld on each side of the Bar Anchor.

Fastening #4: Fasten using SFS #14 Insulfixx fasteners spaced 6" o.c. through Custom Seal Bar Anchors within 4.5" laps spaced 70.5" o.c. Laps are sealed with a 1.5" heat weld on each side of the Bar Anchor.

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

Maximum Fire Classification: See General Limitation #1.



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.



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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 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 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



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