



MIAMI-DADE COUNTY
PRODUCT CONTROL SECTION
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DEPARTMENT OF REGULATORY AND ECONOMIC RESOURCES (RER)
 BOARD AND CODE ADMINISTRATION DIVISION
NOTICE OF ACCEPTANCE (NOA)

Celcore Incorporated
3148 US HWY 70 Street
Black Mountain, NC 28711

SCOPE:

This NOA is being issued under the applicable rules and regulations governing the use of construction materials. The documentation submitted has been reviewed and accepted by Miami-Dade County RER - Product Control Section 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 Section (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. RER reserves the right to revoke this acceptance, if it is determined by Miami-Dade County Product Control Section 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 of the Florida Building Code.

DESCRIPTION: Celcore Lightweight Insulating Concrete.

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 and revises NOA No. 13-0307.02 and consists of pages 1 through 12.
 The submitted documentation was reviewed by Jorge L. Acebo.



NOA No.: 18-0717.05
 Expiration Date: 10/19/23
 Approval Date: 10/11/18
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ROOFING COMPONENT APPROVAL

Category:	Roofing
Sub-Category:	Lightweight Insulating Concrete
Materials:	Cellular
Maximum Design Pressure:	-465.0 psf.

TRADE NAMES OF PRODUCTS MANUFACTURED OR LABELED BY APPLICANT:

<u>Product</u>	<u>Dimensions</u>	<u>Test Specifications</u>	<u>Product Description</u>
Celcore Foam Concentrate	Various	Proprietary ASTM C869	Foaming agents used in making preformed foam for use in lightweight cellular insulating concrete.
Celcore MF Concentrate	Various	Proprietary ASTM C869	Foaming agents used in making preformed foam for use in lightweight insulating cellular concrete.
Celcore PVA Curing Compound	Various	Proprietary	Emulsion curing compound.
Celcore HS Rheology Modifying Admixture	Various	Proprietary	Rheology modifying admixture for use in Celcore MF cellular lightweight insulating concrete.
Celcore S-1 Deck Preparation Compound	Various	Proprietary	Structural deck preparation compound.
Celcore SBS Sanded Bonding Surface	Various	Proprietary	Thin section surfacing compound used for insulating concrete deck surface repairs and bonding surface enhancement.

TRADE NAMES OF PRODUCTS MANUFACTURED BY OTHERS:

<u>Product</u>	<u>Dimensions</u>	<u>Test Specifications</u>	<u>Product Description</u>	<u>Manufacturer</u>
Expanded Polystyrene (EPS Holey Board)	Min. 1" x 2' x 4' 1.0 pcf density (nominal)	ASTM C578 Type I	Expanded polystyrene with a minimum of 8 2/4" keying holes (approx. 3.7% of surface area) to provide monolithic bonding of topping to board slurry.	Generic (with current NOA)
Portland Cement	Various	ASTM C150	Portland Cement.	Generic
CR Base Sheet Fastener (1.7")	1.75" Standard	TAS 114	Steel base sheet fastener for lightweight insulating concrete with integral plate.	OMG, Inc.



TRADE NAMES OF PRODUCTS MANUFACTURED BY OTHERS: (CONTINUED)

<u>Product</u>	<u>Dimensions</u>	<u>Test Specifications</u>	<u>Product Description</u>	<u>Manufacturer</u>
OlyLok Locking Impact Nail	1.8" Standard	TAS 114	Steel base sheet fastener for lightweight insulating concrete with integral plate.	OMG, Inc.
Polymer Batten Strip	¾"-1" wide; 250' coils	TAS 117	Polymer fastening strip designed with 0.2" diameter holes spaced 3" o.c. for use with #14 and #15 fasteners.	OMG, Inc.
3 in. Round Metal Plate	3" Round	TAS 114	Round galvalume steel stress plate for use with OMG fasteners.	OMG, Inc.
#15 Roofgrip	Various	TAS 114	Phillips head, modified buttress thread, drill point, carbon steel fastener for use in steel, wood or concrete decks.	OMG, Inc.
Trufast FM-90 Base Sheet Fastener	1.7" Standard	TAS 114	Steel base sheet fastener for lightweight insulating concrete with 2.7" integral plate.	Altenloh, Brinck & Co. U.S., Inc.
Trufast Twin Loc-Nail Assembled Fastener	1.8" Standard	TAS 114	Steel base sheet fastener for lightweight insulating concrete with integral plate.	Altenloh, Brinck & Co. U.S., Inc.
Trufast VERSA-FAST Fastener and Metal Plate	2.25" Standard	TAS 114	Steel fastener/plate with various steel fastener/plate orientation option.	Altenloh, Brinck & Co. U.S., Inc.
Trufast Twin Loc Coiled Batten Bar	1.8" Standard	TAS 114	Steel fastener and coil steel batten bar for lightweight insulating concrete.	Altenloh, Brinck & Co. U.S., Inc.
Drill-Tec Base Sheet Fastener E (1.7 in.)	1.75" Standard	TAS 114	Steel base sheet fastener for lightweight insulating concrete with integral plate.	GAF
SOPREMA 1.7 in. Base Sheet Fastener	1.7" Standard	TAS 114	Steel base sheet fastener for lightweight insulating concrete with integral plate.	SOPREMA, Inc.



TRADE NAMES OF PRODUCTS MANUFACTURED BY OTHERS: (CONTINUED)

<u>Product</u>	<u>Dimensions</u>	<u>Test Specifications</u>	<u>Product Description</u>	<u>Manufacturer</u>
Tremco FM-90 Base Sheet Fastener	1.7" Standard	TAS 114	Steel base sheet fastener for lightweight insulating concrete with 2.7" integral plate.	Tremco, Inc.

MANUFACTURING LOCATIONS:

1. Black Mountain, NC

EVIDENCE SUBMITTED:

<u>Test Agency</u>	<u>Test Identifier</u>	<u>Test Name/Report</u>	<u>Date</u>
UL LLC	R11599	ANSI/UL 263	06/10/16
FM Approvals	1Z5A6.AM	4454	10/25/96
	2B8A4.AM	4454	07/02/97
	3002416	4454	02/07/02
	3025185	4454	05/22/07
	3061446	4470	03/22/18
Certified Testing Laboratories	CTLA 105R-C	TAS 114-J / FM 4454	09/24/08
	CTLA 114R-2	TAS 114-J / FM 4454	09/17/09
	CTLA 107R	TAS 114-J / FM 4454	09/23/08
	CTLA 107R-A	TAS 114-J / FM 4454	09/23/08
	CTLA 116R-3	TAS 114-J / FM 4454	11/16/09
Trinity ERD	SC6775.10.15-07-1-R1	TAS 114-D / FM 4474	10/02/15
	CEL-SC12910.11.16	TAS 114-D / FM 4470-B	11/02/16
NEMO etc.	TRM-SC13940.01.18-1B	TAS 114-J / FM 4474-D	01/12/18
	4-AB-18-001.05.18	TAS 117 (A) & (B)	05/08/18
PRI Construction Materials	CELC-004-02-01	TAS 114-J / FM 4470	05/04/15



Deck Type 2I: Steel / Concrete

Deck Description: 18-22 ga. steel
26 ga. Steel
2500-psi structural concrete or concrete plank

System A: Cellular

Cast Density Range: Minimum 36 PCF

Dry Density Range: Minimum 26 PCF

28 Day Compressive Strength Range: 175 - 350 psi

Minimum Characteristic Resistance Force with Approved Fasteners: 2-4 Days: 46 lbf.
15 Days: 77 lbf.
21 Days: 112 lbf.
28 Days: 141 lbf.

Components:

Portland Cement ASTM C150 7- 94 lb. sacks; see table below
Foaming Agent ASTM C869: (40:1 Water/Concentrate) 3.5 lbs./ft³ preformed foam
Water (max chloride level 250 ppm): 5 gal./sack (see range below)

Wet densities and dry densities using the following range of proportioned ingredients:

Table 1						
PSI Range	Wet Density Range	Dry Density Range	Foam	Cement Range	Mixing Water Range	Min. Thickness
160-249	30-40 pcf	22-34.5 pcf	19.70-17.70 (ft ³ /yd.) ³	663-730 lbs.	267-350 lbs.	2"
250-350	36-50 pcf	30-40 pcf	17.70-15.60 (ft ³ /yd.) ³	730-870 lbs.	350-432 lbs.	2"

Application: Materials shall be mixed in a horizontal paddle drum mixer and pumped to the roof at the indicated density, and in compliance with manufacturer specifications. Cast densities shall be checked and recorded as it comes out of the hose, at a minimum interval of one-hour.

Alternately, the slurry coat and insulation panels shall be allowed to cure overnight prior to the application of the top coat. For steel deck applications the slurry coat and insulation boards shall be left undisturbed to cure overnight before the application of the top coat. See Maximum Design Pressure listing herein.



Polystyrene Insulation (EPS Holey Board)

- Minimum 1.0 pcf ASTM C578, Type I
- Nominal Density:
- Minimum 1" x 24" x 48"
- Dimensions:
- Holes for keying: 8 - 2¼" holes per 2' x 4' board (approx. 3.7% of surface area) minimum required to provide monolithic bonding of topping board to slurry. (With current NOA).

Polystyrene insulation panels (EPS holey boards) shall be placed in a minimum 1/8" slurry-coat of insulating concrete, while the material is still in a plastic state. The slurry layer shall be sufficient to fill the structural deck profile with voids. The polystyrene insulation panels shall be placed in a manner causing the boards underside to have full contact with the plastic concrete.

Insulation panels and slurry coat shall be left to cure overnight undisturbed before the installation of the top coat.

The following day a 2" minimum top coat shall be poured and screeded to a smooth finish surface free of ridges and at the proper thickness and slope prior to the installation of the roofing membrane.

After setting of the top coat to support foot traffic, Celcore PVA Curing compound shall be applied at a minimum rate of 300 ft² per gallon (7.2m²/l).

SUBSTRATE REQUIREMENTS:

Note: Refer to Maximum Design Pressures Section of this Notice of Acceptance for specific substrate or substrate treatment requirements.

New Construction:

- Concrete:* Structurally designed in compliance with applicable Building Code.
- Vapor Retarder:* BUR or Modified Bitumen applied to the structural deck. (With current NOA)
- Steel Deck:* Minimum 18-26 gage galvanized G-90 attached to supports in compliance with applicable Building Code. (See Table 2 herein for maximum design pressures, minimum gauge thicknesses and attachments)

Existing Construction:

- Concrete:* Broom cleaned and free of any materials or covering that may impede bonding. Substrate shall be in compliance with applicable Building Code.
- Gravel Surfaced BUR:* Loose gravel shall be removed, and adhesion of existing roof system shall be tested in compliance with TAS 124 to meet the design pressure requirements determined in compliance with applicable Building Code.



Smooth Surface BUR: Adhesion of existing roof system shall be tested in compliance with TAS 124 to meet the design pressure requirements determined in compliance with applicable Building Code.

Existing Construction: (Continued)

Smooth Surface

Modified Bitumen: Adhesion of existing roof system shall be tested in compliance with TAS 124 to meet the design pressure requirements determined in compliance with applicable Building Code.

Granule Surface Cap: Adhesion of existing roof system shall be tested in compliance with TAS 124 to meet the design pressure requirements determined in compliance with applicable Building Code.

Table 2: Maximum Design Pressure Applications

NEW CONSTRUCTION				
Substrate	Substrate Treatment	Min. Compressive Strength	EPS Holey Board	Maximum Design Pressure
Concrete	None	200 psi	min. 1.0" thick min. 1.0 pcf	-262.5 psf
Concrete	None	350 psi	min. 1.0" thick min. 1.0 pcf	-367.5 psf
Concrete	Smooth Surface Modified Bitumen Vapor Retarder	340 psi	min. 1.0" thick min. 1.0 pcf	-410 psf
Minimum 20 ga. Vented steel deck attached with ITW driller screws thru nickel plated washers to steel supports spaced maximum 5' on center	OMG Polymer Batten Strips are placed atop the insulating concrete deck parallel spaced 18" and secured to the steel deck using #15 Roofgrip fasteners spaced 12" on center	330 psi	min. 1.0" thick min. 1.0" pcf	-135 psf
Minimum 22 ga. vented steel deck attached with ITW driller screws thru nickel plated washers to steel supports spaced maximum 5' on center	OMG Polymer Batten Strips are placed atop the insulating concrete deck parallel spaced 18" and secured to the steel deck using #15 Roofgrip fasteners spaced 12" on center	330 psi	min. 1.0" thick min. 1.0" pcf	-97.5 psf



Table 2: Maximum Design Pressure Applications

NEW CONSTRUCTION (Continued)				
Substrate	Substrate Treatment	Min. Compressive Strength	EPS Holey Board	Maximum Design Pressure
18-22 ga. vented steel attached with 5/8" diameter puddle welds at every corrugation to steel supports spaced at maximum 6' on center	Celcore S-1	350 psi	min. 1.0 thick min. 1.0" pcf	-127.5 psf
18-22 ga. vented steel deck secured to 1/4" thick structural supports spaced a maximum of 4' on center with ITW Buildex Traxx/5 at the bottom of each corrugation	None	200 psi	min. 1.0" thick min. 1.0 pcf	-90 psf
18-22 ga. vented steel attached with 1/2" diameter puddle welds at every corrugation to steel supports spaced at maximum 5' on center	None	330 psi	min. 1.0" thick min. 1.0 pcf	-90 psf
18-22 ga. minimum 33 ksi, vented steel attached with 5/8" diameter puddle welds at every corrugation to steel supports spaced at maximum 5' on center	Celcore S-1	430 psi	min. 1.0" thick min. 1.0 pcf	-82.5 psf
18-22 ga. vented steel deck secured to 1/4" thick structural supports spaced a maximum 5' on center with ITW Buildex Traxx/5 at the bottom of each corrugation	None	200 psi	min. 1.0" thick min. 1.0 pcf	-82.5 psf

Table 2: Maximum Design Pressure Applications

NEW CONSTRUCTION (Continued)				
Substrate	Substrate Treatment	Min. Compressive Strength	EPS Holey Board	Maximum Design Pressure
Minimum 20 ga. 3'' deep N steel deck attached with 2-1/2'' diameter puddle welds at each corrugation to steel supports spaced maximum 8' on center	None	260 psi	min. 1.0'' thick min. 1.0 pcf	-75 psf
Minimum 22 ga. steel deck attached with welds and washers on maximum 6' spaced steel supports. 5/8'' thick SECUROCK is mechanically fastened to the steel deck with OMG 3'' Galvalume Steel Plates and OMG Heavy Duty fasteners at a rate of 1.6 ft ² per fasteners	The SECUROCK layer is covered by a torch applied layer of Modified Bitumen	350 psi	min. 1.0'' thick min. 1.0 pcf	-75 psf
18-22 ga. vented steel deck secured to 1/4'' thick structural supports spaced a maximum 6' on center with ITW Buildex Traxx/5 at the bottom of each rib (6'' o.c.)	None	200 psi	min. 1.0'' thick min. 1.0 pcf	-60 psf
18-22 ga. vented steel deck secured to structural steel supports spaced a maximum 5' on center with 1/2'' puddle welds and washers	None	200 psi	min. 1.0'' thick min. 1.0 pcf	-60psf



Table 2: Maximum Design Pressure Applications

NEW CONSTRUCTION (Continued)				
Substrate	Substrate Treatment	Min. Compressive Strength	EPS Holey Board	Maximum Design Pressure
18-22 ga. vented steel deck secured to structural supports spaced a maximum 6' on center with ½" puddle welds at every corrugation (6" o.c.). Deck side laps fastened with ITW Buildex Traxx/1 at mid-span	None	200 psi	min. 1.0" thick min. 1.0 pcf	-60 psf
26 ga. vented steel deck secured to supports spaced a maximum of 5' on center with ½" puddle welds and washers at every other corrugation. Deck side laps fastened with ITW Buildex Traxx/1 at mis-span	None	200 psi	min. 1.0" thick min. 1.0 pcf	-52.5 psf

Note: Maximum Design Pressures noted herein shall be used in conjunction with those maximum design pressures published in the Roof System Assembly Notice of Acceptance for Approved Systems over lightweight concrete decks.



Table 2: Maximum Design Pressure Applications				
RECOVER				
Substrate	Substrate Treatment	Min. Compressive Strength	EPS Holey Board	Maximum Design Pressure
Smooth surface BUR	None	300 psi	None	-262.5 psf
Smooth surface BUR	None	300 psi	min. 1.0" thick min. 1.0 pcf	-262.5 psf
Gravel surface BUR	None	230 psi	min. 1.0" thick min. 1.0 pcf	-465 psf
Smooth surface modified cap sheet	None	300 psi	None	-262.5 psf
Smooth surface modified cap sheet	None	300 psi	min. 1.0" thick min. 1.0 pcf	-262.5 psf
Smooth surface modified cap sheet	None	340 psi	min. 1.0" thick min. 1.0 pcf	-410 psf
Gravel surface BUR	None	300 psi	None	-75 psf
Gravel surface BUR	None	300 psi	min. 1.0" thick min. 1.0 pcf	-75 psf

Note: Maximum Design Pressures noted herein shall be used in conjunction with those maximum design pressures published in the Roof System Assembly Notice of Acceptance for Approved Systems over lightweight insulating concrete decks.



GENERAL LIMITATIONS:

1. Any excess water on the lightweight concrete shall be removed prior to roof installation.
2. Applicator shall maintain a job log and make it available to the Building Official upon request. The job log shall contain cast densities recordings taken at a minimum interval of one-hour.
 - a. Cast densities shall be measured with calibrated scale accurate from 1 to 50 lbs. The scale shall display weight in increments of ¼ lb. and be accurately calibrated to 1/16 lb.
 - b. The measuring bucket shall be of 5 quarts or larger
3. Lightweight insulating concrete installation shall demonstrate its suitability to perform as a satisfactory substrate during "walkability inspection". If the deck or a portion of the deck is determined to be out of compliance, the Building Official may call for further testing (if applicable for the roof system) to confirm fastener spacing or provide data for the roof system manufacturer to calculate a new fastener pattern. Fastener testing (if applicable for the roof system) shall be required. Any areas where fasteners will not hold a minimum 40 lbf after 5 days of cure shall be removed and recast.
4. Fastener spacing for mechanical attachment of anchor/base sheet or membrane attachment is based on a minimum fastener resistance value as calculated in conjunction with the maximum design value listed within specific roof membrane manufacturer's NOA. 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. If continued noncompliance is observed and the roof deck and associated roof system cannot be corrected based on additional testing and attachment calculations, the Building Official may call for the removal of all or portions of the deck.
5. Roofing contractor shall consult with roofing system manufacturer for compatibility with all surface coatings or treatments listed in this NOA.
6. Direct-adhered single ply systems shall be installed in strict compliance with membrane manufacturer's specifications and roof assembly manufacturer NOA.
7. Maximum Design Pressures noted in this NOA shall be used in conjunction with the maximum design pressures published in the Roof Assembly Product Control Notice of Acceptance for Approved Systems over lightweight concrete decks.
8. All coatings or surface preparation materials applied to the lightweight insulating concrete shall be listed as an approved interface material with the roof assembly manufacturer.
9. A slurry coat lightweight insulating concrete shall be applied with insulation boards immediately adhered in the minimum 1/8" slurry coat. Slurry coat and insulation boards shall be left undisturbed to cure overnight before the application of the top coat. If installation is interrupted due to inclement weather or other situations beyond the control of the contractor, the installed insulation board shall be inspected to confirm adhesion to the substrate. Over solid substrates, topping installation shall not be delayed over 24 hours.
10. All products listed herein shall have a quality assurance audit in accordance with the Florida Building Code and Rule 61G20-3 of the Florida Administrative Code.

END OF THIS ACCEPTANCE



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