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)

Concrecel International, Inc.
3325 Prospect Avenue
Riviera Beach, FL 33404

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 of the Florida Building Code.

DESCRIPTION: Concrecel 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 renews NOA #02-0122.08 and consists of pages 1 through 6.
The submitted documentation was reviewed by Alex Tigera.

ROOFING ASSEMBLY APPROVAL

Category: Roofing
Sub-Category Lightweight Insulating Concrete
Materials: Cellular
Maximum Design Pressure -465 psf.

TRADE NAMES OF PRODUCTS MANUFACTURED OR LABELED BY APPLICANT:

Product	Dimensions	Test Specifications	Product Description
Concrecel Foam Concentrate	various	ASTM C 869 ASTM C 796	Foaming agent to produce pre-formed foam for use in lightweight cellular concrete.
Concrecel Bonding Agent	Dosage: various	N/A	Bonding agent is applied to clean and oil free deck using a compressed air sprayer to enhance bonding strength.
Concrecel Curing Compound	Dosage: various 1 Part Compound to 3 Parts Water	N/A	Emulsion mixture solution applied to top surface of lightweight cellular concrete deck to enhance curing and sealing. Rolled or sprayed applied.

TRADE NAMES OF PRODUCTS MANUFACTURED BY OTHERS:

Product	Dimensions	Test Specifications	Product Description	Manufacturer
Portland Cement	Various	ASTM C 150	Portland Cement	Generic
Apache Holey Board	2' x 4' x 1"-12" or 4' x 4' x 1"-12"	ASTM C 578	Expanded polystyrene board with eight 2 ½ " dia. holes per 8 sq. ft. and eight to sixteen holes per 16 sq. ft. Top and bottom surfaces are smooth.	Apache (with current NOA)
CR Base Sheet Fastener and Plate	1.75"	TAS 114 TAS 117	Steel base sheet fastener for lightweight concrete with integral plate	Olympic Mfg. Group (with current NOA)
FM-90 Base Ply Fastener	1.7"	TAS 114 TAS 117	Steel base sheet fastener for lightweight concrete with 2.7" integral plate	ES Products Inc. (with current NOA)
Lightweight Concrete Fastener	1.70"	TAS 114 TAS 117	Steel base sheet fastener for lightweight concrete decks	ITW Buildex, Inc. (with current NOA)

EVIDENCE SUBMITTED:

Test Agency	Test Identifier	Test Name/Report	Date
Factory Mutual Research Corporation	J.I. 1D7A4.AM	Uplift Resistance (FM 4454 - TAS 114)	11/08/98

APPROVED ASSEMBLIES

Deck Type 1: Lightweight Insulating Concrete

System A: Cellular

Cast Density Range: 34 - 55 PCF depending on roof cover type

Dry Density Range: 27 - 51 PCF depending on roof cover type

28 Day Compressive Strength Range: 200 - 350 psi depending on roof cover type

Minimum Characteristic Resistance Force with Approved Fasteners:

Cure Time	MCRF (lbf)
2-4 days	46 lbf
15 Days	77 lbf
21 Days	112 lbf
28 Days	141 lbf

Components:

Portland Cement ASTM C 150:	525-700 lbs./cubic yard
Foaming Agent ASTM C 869:	40:1 Water/Concentrate 3.0 lbs./ft³ pre-formed foam
Water (max chloride level 250 PPM):	190-242 gal./cubic yard
Concrecel Fibers (optional):	see manufacturer's instructions
Other Approved admixtures (optional):	see manufacturer's instructions

Wet and Dry Density Ranges Resulting from Range of Proportioned Ingredients						
			Proportions for a Cubic Yard			
Compressive Strength (psi)	**Cast Density Range (pcf)**	**Dry Density Range (pcf)**	**Foam (ft^3)**	**Cement Range (lbs.)**	**Mixing Water Range (lbs.)**	**Minimum Thickness (inches)**
200-249	32-37	28-34	21.3-20.5	525-600	190-215	2
250-350	37-43	34-39	20.5-19.6	600-700	215-242	2

Deck Type 1: Lightweight Insulating Concrete

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's specifications. Cast densities shall be checked and recorded as it comes out of the hose at a minimum interval of one hour.

Polystyrene Insulation: See Approved polystyrene noted in the Trade Names and Maximum Design Pressures Sections of this Notice of Acceptance.

Rigid insulation panels shall be placed in a minimum ¼" slurry-coat of insulating concrete. No activity shall disturb the slurry coat bond to the underside of the rigid insulation. The following day shall be covered with a minimum 2¼" topcoat cast over the insulation panels.

The insulating concrete topcoat shall be screeded to a smooth finish surface free of ridges and at the proper thickness and slope prior to the installation of the roofing membrane.

For steel deck applications, there shall be no traffic on the roof deck for 24 hours following installation of insulation.

Substrate Requirements:

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

New Construction:

Steel: Minimum 22 ga. galvanized G-90 attached to supports in compliance with applicable Building Code. *(See maximum design pressures for limitations on deck gauge.)*

Concrete: Structurally designed in compliance with applicable Building Code.

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 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.

Maximum Design Pressures:

Substructure	Treatments	Bonding Agent	Min. Compressive Strength	Polystyrene Insulation Board	Curing Compoun d	Maximum Design Pressure
NEW CONSTRUCTION OR REROOF BUR or MODIFIED SYSTEM						
0.030 in. thick Wheeling Corrugating Company BW36-22 GALV 90 Slotted, 0.5% open area, 1.5" deep steel form deck welded to 5' o.c steel purlins at 6" o.c. with 5/8" puddle welds and washers at 6" o.c. Deck side laps fastened with ITW Buildex Traxx/1 screw 12" o.c.	none	Concrecel Bonding Agent at 600 ft^2/gal	300 psi	Min. 1" Apache Holey Board	Concrecel Curing Compound 600 ft^2/gal	82.5 psf
NEW CONSTRUCTION OR REROOF SINGLE PLY						
Min. 22 ga., vented, 1.5" deep galvanized deck welded to 5' o.c steel purlins at 6" o.c. with 5/8" puddle welds and washers at 6" o.c. Deck side laps fastened with ITW Buildex Traxx/1 screw 12" o.c.	none	Concrecel Bonding Agent at 600 ft^2/gal	300 psi	Min. 1" Apache Holey Board	Concrecel Curing Compound 600 ft^2/gal	97.5 psf
Structural concrete slab	none	none	300 psi	Min. 1" Apache Holey Board	Concrecel Curing Compound 600 ft^2/gal	465 psf
RECOVER						
Existing structural concrete deck with existing asphaltic BUR roof cover or vapor retarder.	none	none	300 psi	Min. 1" Apache Holey Board	Concrecel Curing Compound 600 ft^2/gal	375PSF

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.

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 a specific roof membrane manufacturers 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 the Miami-Dade County Notice of Acceptance.

7. Maximum Design Pressures noted in this NOA shall be used in conjunction with those 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 concrete shall be listed as an approved interface material with the roof membrane manufacturer.

9. A slurry coat Concrecel shall be applied with insulation boards immediately adhered in the minimum ¼" slurry coat. Slurry coat and insulation boards shall be left undisturbed to cure overnight before the application of the topcoat.

END OF THIS ACCEPTANCE