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)

Sarnafil, Inc.
100 Dan Road
Canton, MA 02021

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: Sarnafil Single Ply PVC Roof Systems over 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 consists of pages 1 through 9.
The submitted documentation was reviewed by Frank Zuloaga, RRC

ROOFING SYSTEM APPROVAL

Category:	Roofing
Sub-Category:	Single Ply
Material:	PVC
Deck Type:	Light Weight Insulating Concrete
Maximum Design Pressure	**-270 psf**
Fire Classification:	See General Limitation #1

TRADE NAMES OF PRODUCTS MANUFACTURED OR LABELED BY APPLICANT:

TABLE 1

Product	Dimensions	Test Specification	Product Description
G410	Various	ASTM D 4434	Fibergalss reinforced PVC roofing membrane
G410 Felt	Various	ASTM D 4434	Fibergalss reinforced PVC roofing membrane with a non-woven felt backing.
S327	Various	ASTM D 4434	Polyester reinforced PVC roofing membrane
S327 Felt	Various	ASTM D 4434	Fibergalss reinforced PVC roofing membrane with a non-woven felt backing.
G459	Various	ASTM D 4434	Fiberglass reinforced PVC Alloy asphalt compatible flashing membrane.
Sarnabar	1.25” x 15’	PA 114	Galvanized steel or stainless steel membrane fastening bar.
Sarnastop	1” x 10’	PA 114	Aluminum termination bar.
Sarnafelt	82” X 135”		
Sarnadisc	Various	PA 114	Membrane attachment stress plate
Sarnafastener	Various	PA 114	Membrane and insulation fastener
Sarnacord	4mm x 328’	PA 114	Thermoplastic reinforcement cord for use with Sarnabar.
Sarnareglet	2.15” x 10’		Aluminum surface mount reglet (term. bar).
Sarnacol 2170	5 gallons		Solvent based bonding adhesive.
Sarnacol 2121	5 gallons		Water based bonding adhesive.
Sarnafiller	2 gallons		Urethane pitch pocket filler.
Sarnasolv	1 gallon		Membrane cleaner.
Sarnacorner	5”, 6”, 8.5”		Prefabricated inside and outside corner flashing.
Sarnaflash	18” x 40”		Prefabricated expansion joints.
Sarnapad	2’ x 2’		PVC walkway protection pads.
Sarnatred	3.25’ x 32.8’		PVC walkway protection sheet.
Sand Coated Walkways	Various		PVC walkway protection sheet.
Sarnastack	Various		Prefabricated cone flashing.

Product	Dimensions	Test Specification	Product Description
Sarnadrain RAC	Various		Aluminum drain insert.
Sarnamatic equipment			Seam welding equipment
Sarnaclad	Various		Heat weldable PVC laminated to galvanized steel flashing product.
Edge-Tite	Various		Prefabricated metal edge system
Anchor-Tite	Various		Prefabricated metal edge system

EVIDENCE SUBMITTED:

Test Agency	Test Identifier	Description	Date
Factory Mutual Research Corporation	J.I. 0X3A3.AM	Wind Uplift	07/31/94
Factory Mutual Research Corporation	J.I. 0P6A6.AM	Wind Uplift	03/03/94
Factory Mutual Research Corporation	J.I.2X2A5.AM	Wind Uplift	07/31/94
Factory Mutual Research Corporation	J.I. IZ5A6.AM	Wind Uplift	07/18/97
Factory Mutual Research Corporation	J.I. 4B3A2.AM	Wind Uplift	06/19/97
Factory Mutual Research Corporation	J.I. OB9A0.AM	Wind Uplift	10/22/96
Factory Mutual Research Corporation	2B8A4.AM	Wind Uplift	07/02/97

APPROVED ASSEMBLIES:

Deck Type 4: Lightweight Concrete, Non-insulated, New Construction

Deck Description: Celcore Cellular Lightweight Concrete over 18-22 ga Steel Deck

System Type F(1): Membrane adhered.

All General and System Limitations apply.

Deck: 18-22 ga vented steel deck shall be secured to ¼" thick structural supports spaced a maximum spacing as listed below in Table 1 with ITW Buildex Traxx/5 at the bottom of each rib (6" o/c.)

The following assembly is approved to a maximum design pressure as listed below in Table A. No substitutions shall be made. All General and System Limitations apply.

Rigid insulation panels shall be placed in a minimum 1/8" slurry-coat of insulating concrete, while the material is still in a plastic state.

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

The following day a 2" minimum topcoat 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 topcoat to support foot traffic, Celcore PVA compound shall be applied at a minimum rate of 300 ft^2 per gallon (7.2m^2/l).

Membrane: G410, felt back roof membrane shall be adhered with Sarnacol 2121 Adhesive. Applied with a squeegee having ¼ by ¼ notches applied in one coat at rate of 2.25 gallons/100 ft^2. Or, G410, felt back roof membrane shall be adhered with Sarnacol 2170 Adhesive, roller applied at a rate of 0.8 gallons/100ft^2 as primer and allowed to dry. Followed by a second coat of Sarnacol 2170 Adhesive, roller applied at same rate.

Table A	
Max. Design Pressure (See General Limitation #7)	**Max. Structural Support Spacing**
60	6 ft.
75	5 ft.
90	4 ft.

Deck Type 4: Lightweight Concrete, Non-insulated, New Construction

Deck Description: Celcore Lightweight Insulating Concrete over Structural Concrete Deck

System Type F(2): Membrane adhered.

All General and System Limitations shall apply.

Deck: Structural Concrete Deck

The following assembly is approved to a maximum design pressure of -135 psf. No substitutions shall be made. All General and System Limitations apply.

Rigid insulation panels shall be placed in a minimum 1/8" slurry-coat of insulating concrete, while the material is still in a plastic state.

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

The following day a 2" minimum topcoat 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 topcoat to support foot traffic, Celcore PVA compound shall be applied at a minimum rate of 300 ft^2 per gallon (7.2m^2/l).

Membrane: G410, felt back roof membrane shall be adhered with Sarnacol 2121 Adhesive. Applied with a squeegee having ¼ by ¼ notches applied in one coat at rate of 2.25 gallons/100 ft^2.
Or,
G410, felt back roof membrane shall be adhered with Sarnacol 2170 Adhesive, roller applied at a rate of 0.8 gallons/100ft^2 as primer and allowed to dry. Followed by a second coat of Sarnacol 2170 Adhesive, roller applied at same rate.

Maximum Design Pressure: -135 psf (See General Limitation #9)

Deck Type 4: Lightweight Concrete, Non-Insulated, New Construction

Deck Description: Elastizell Cellular Lightweight Insulating Concrete over Structural Concrete Deck

System Type F(3): Membrane Adhered.

All General and System Limitations shall apply.

Deck: Structural Concrete Deck

The following assembly is approved to a maximum design pressure of -270 psf. No substitutions shall be made. All General and System Limitations apply.

A 2" minimum topcoat 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.

Membrane: G410, felt back roof membrane shall be adhered with Sarnacol 2121 Adhesive, applied with a squeegee having ¼" by ¼" notches applied in one coat at rate of 2.25 gallons/100 ft^2.

Maximum Design Pressure: -270 psf (See General Limitations #9)

Deck Type 4: Lightweight Concrete, Insulated, New Construction

Deck Description: Celcore Cellular Lightweight Insulating Concrete over Structural Concrete Deck

System Type G: Membrane adhered.

All General and System Limitations shall apply.

Deck: Structural Concrete Deck

The following assembly is approved to a maximum design pressure of -135 psf. No substitutions shall be made. All General and System Limitations apply.

Rigid insulation panels shall be placed in a minimum 1/8" slurry-coat of insulating concrete, while the material is still in a plastic state.

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

The following day a 2" minimum topcoat 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.

Membrane: G410, felt back roof membrane shall be adhered with Sarnacol 2121 Adhesive, applied with a squeegee having ¼" by ¼" notches applied in one coat at rate of 2.25 gallons/100 ft^2

Maximum Design Pressure: -135 psf (See General Limitation #9)

LIGHTWEIGHT INSULATING CONCRETE 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 Engineer, Architect, or Registered Roof Consultant.
2. For steel deck application where specific deck construction is not referenced: The deck shall be a minimum 22 gage attached with 5/8" puddle welds with weld washers at every flute with maximum deck spans of 5 ft. o.c.
3. For Systems where specific lightweight insulating concrete si referenced consult current lightweight insulating concrete NOA for specific deck construction and limitations. For systems where specific lightweight insulating concrete is not referenced, the minimum design mix shall be a minimum of 300 psi.

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