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)

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 PVC Single Ply Roofing Membrane 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 renews and revises NOA No. 01-0502.03 and consists of pages 1 through 15.
The submitted documentation was reviewed by Jorge L. Acebo.

ROOFING SYSTEM APPROVAL

Category: Roofing
Sub-Category: Single Ply
Material: PVC

Deck Type: Cementitious Wood Fiber
Maximum Design Pressure -52.5 psf

TRADE NAMES OF PRODUCTS MANUFACTURED OR LABELED BY APPLICANT:

TABLE 1

Product	Dimensions	Test Specification	Product Description
G410	Various	ASTM D 4434	Fiberglass reinforced PVC roofing membrane.
G410 Felt	Various	ASTM D 4434	Fiberglass reinforced PVC roofing membrane with a non-woven felt backing.
G410 PS	Various	ASTM D 4434	Fiberglass reinforced PVC roofing membrane with a peel & stick self-adhering backing.
S327	Various	ASTM D 4434	Polyester reinforced PVC roofing membrane.
S327 Felt	Various	ASTM D 4434	Polyester reinforced PVC roofing membrane.
G459	Various	ASTM D 4434	Fiberglass reinforced PVC Alloy asphalt compatible flashing membrane.
Sarna Dens Deck®	4' x 8'	TAS 110	Silicon treated gypsum board
Sarnatape	Various		Air flow barrier tape
Sarnabar	1.25" x 15'	TAS 114	Galvanized or stainless steel membrane fastening bar.
Sarnastop	1" x 10'	TAS 114	Aluminum termination bar.
SarnaAirguard			PVC air/vapor barrier
Sarnavap-10	20' x 100'		Polyethylene air/vapor barrier
Sarnabarrier			Polyester separation sheet.
Sarnafelt	82" x 135"		Asphalt protection or leveling layer.
Sarnafastener	Various		Membrane and insulation fastener.
Sarnadisc	Various		Membrane fastening stress plate.
Sarnaplate	Various		Insulation fastening plate.
Sarnacord	4mm x 328'	TAS 114	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.

Product	Dimensions	Test Specification	Product Description
Sarnaflash	18" x 40"		Prefabricated expansion joints.
Sarnatred	3.25' x 32.8'		PVC walkway protection sheet.
SarnaWalkways	Various		PVC walkway protection sheet.
Sarnastack	Various		Prefabricated cone flashing.
Sarnadrain RAC	Various		Aluminum drain insert.
Sarnamatic			Seam welding equipment.
Sarnatherm	Various	TAS 110	Isocyanurate insulation board.
Sarnatherm Composite	Various	TAS 110	Isocyanurate insulation board with perlite facer.
Sarnatherm Plus		TAS 110	Isocyanurate board with wood fiberboard facer.
Sarnatherm 25 PSI	Various	TAS 110	Polyisocyanurate insulation board.
Sarnaclad	Various		Heat weldable PVC/galvanized steel flashing
Edge-Tite	Various		Prefabricated metal edge system.
Anchor-Tite	Various		Prefabricated metal edge system.

APPROVED INSULATIONS:

Table 2

Product	Product Description	Manufacturer (with current NOA)
ACFoam 25 PSI	Isocyanurate Insulation	Atlas Roofing Corp. (with current NOA)
ACFoam Composite	Isocyanurate Insulation with perlite facer	Atlas Roofing Corp. (with current NOA)
ACFoam II	Isocyanurate Insulation	Atlas Roofing Corp. (with current NOA)
ACFoam III	Isocyanurate Insulation	Atlas Roofing Corp. (with current NOA)
ACFoam Supreme	Isocyanurate Insulation	Atlas Roofing Corp. (with current NOA)
DensDeck, DensDeck Prime, DensDeck DuraGuard	Silicon treated gypsum	G-P Products (with current NOA)
E'NRG'Y 2, ENRGY3	Isocyanurate Insulation	Johns Manville (with current NOA)
E'NRG'Y 2 Composite	Isocyanurate Insulation with perlite facer	Johns Manville (with current NOA)
E'NRG'Y 2 Plus	Isocyanurate Insulation with wood fiberboard facer	Johns Manville (with current NOA)
E'NRG'Y 2 PSI-25	Isocyanurate Insulation	Johns Manville (with current NOA)
E'NRG'Y Gypsum Composite	Isocyanurate Insulation with gypsum board facer.	Johns Manville (with current NOA)
EPS	Expanded polystyrene	Generic
High Density Wood Fiberboard	Wood fiber insulation	Generic

H-Shield	Isocyanurate Insulation	Hunter Panels (with Current NOA)
ISO 95+ GL	Isocyanurate Insulation	Firestone (with current NOA)
Millox	Isocyanurate Insulation with wood fiberboard facer	Apache Products (with current NOA)
Millox 25 PSI	Isocyanurate Insulation with wood fiberboard facer	Apache Products (with current NOA)
Multi-Max FA	Isocyanurate Insulation	Rmax, Inc. (with current NOA)
Multi-Max FA 25 PSI	Isocyanurate Insulation	Rmax, Inc. (with current NOA)
Pyrox	Isocyanurate Insulation	Apache Products (with current NOA)
Pyrox 25 PSI	Isocyanurate Insulation	Apache Products (with current NOA)
Perlite Insulation Board	Perlite Insulation	Generic
Thermaroof	Isocyanurate Insulation	Rmax, Inc. (with current NOA)
Thermaroof Plus	Isocyanurate Insulation	Rmax, Inc. (with current NOA)
Type X Gypsum	Gypsum Wallboard	Generic
Ultra M-II Iso/glas	Isocyanurate Insulation	Homasote Co. (with current NOA)
Whiteline	Isocyanurate Insulation	Apache Products (with current NOA)
XPS	Extruded polystyrene	Generic

APPROVED FASTENERS:

Table 3

PRODUCT NAME	Product Description	Dimensions	Manufacturer (with current NOA)
Olympic NTB-2HWW	Glass-filled nylon auger fastener with a built-in 2""stress plate and locking wire barbs	Various (min.2")	Olympic MFG. Group (with current NOA)
Olympic GTL	Glass reinforced nylon	Various	Olympic MFG. Group (with current NOA)
Olympic Lite-Deck with the 3"plate	Carbon Steel CR-10 Coating (black)	Various (min.2")	Olympic MFG. Group (with current NOA)
OlyBond Insulation Adhesive	Insulation Adhesive		Olympic Mfg. Group (with current NOA)
OlyBond 500, Spot Shot	Insulation Adhesive		Olympic Mfg. Group (with current NOA)
TITESET	Insulation Adhesive		Polyfoam Products (with current NOA)

EVIDENCE SUBMITTED:

Test Agency	Test Identifier	Description	Date
Celotex Technical Center	MTS Job No. 258215	TAS 114	09/09/97
Exterior Research & Design	02767.02.06	TAS 114	02/08/06
Factory Mutual Research Corporation	J.I. 0P6A6.AM	FM 4470	03/03/94
	J.I. 0X3A3.AM	FM 4470	07/31/94
	J.I.2X2A5.AM	FM 4470	07/31/94
	J.I. 0B9A0.AM	FM 4470	10/22/96
	J.I. 1Z5A6.AM	FM 4470	07/18/97
	J.I. 4B3A2.AM	FM 4470	06/19/97
	3016201	FM 4470	01/28/03
Underwriters Laboratories, Inc.	R8992	ASTM E 108	1994

APPROVED ASSEMBLIES:

Membrane Type: Single Ply, Thermoplastic, PVC

Deck Type 5I: Cementitious Wood Fiber, Insulated

Deck Description: Cementitious Wood Fiber

System Type A(1): One or more layers of insulation adhered with approved adhesive

All General and System Limitations apply.

Insulation Base Layer:	Fastener Density	Fastener Type
AC Foam II, Multi-Max FA, H-Shield, ENRGY 3, Sarnatherm		
Minimum: 1.5" thick	N/A	N/A
Insulation Middle Layer:		
(Optional) AC Foam II, Multi-Max FA, H-Shield, ENRGY 3, Sarnatherm		
Tapered	N/A	N/A
Insulation Top Layer:		
(Optional) Knight-Celotex High Density Fiberboard Roof Insulation		
Minimum: 0.5" thick	N/A	N/A
(Optional) DensDeck, DensDeck Prime		
Minimum: 0.25" thick	N/A	N/A

Note: All insulation shall be adhered to the deck in TITE-SET Roofing Adhesive applied in continuous 3-inch ribbons spaced 12" o.c. Refer to Roofing Application Standard RAS 117 for insulation attachment. Insulation listed as base layer only shall be used only as base layers with a second layer of approved top layer insulation installed as the final membrane substrate.

Membrane: Sarnafil G410 Felt or S327 Felt adhered with Sarnacol 2121 adhesive applied at 2.25 gal/sq. to the insulation using a ¼" x ¼" notched squeegee or with Sarnacol 2170 adhesive rolled applied as a primer at a rate 1.0-1.25 gal/sq. to the insulation allowed to dry. Following a second coat roller applied of adhesive at 1.0 gal/sq. The roof cover is immediately placed into the adhesive and the top surface rolled with a weighted roller.

Or

Sarnafil G410 or S327 adhered with Sarnacol 2170 applied at 1.25gal/sq. to the substrate and .5 gal/sq. to the back of the membrane.

Maximum Design Pressure: -52.5 psf (See General Limitation #9)

Membrane Type: Single Ply, Thermoplastic, PVC

Deck Type 5I: Cementitious Wood Fiber, Insulated

Deck Description: Cementitious Wood Fiber

System Type A(2): One or more layers of insulation adhered with approved adhesive

All General and System Limitations apply.

Insulation Base Layer:	**Fastener Density**	**Fastener Type**
(Optional) AC Foam II, Multi-Max FA, H-Shield, ENRGY 3, Sarnatherm		
Minimum: 1.5" thick	N/A	N/A
Insulation Middle Layer:		
(Optional) AC Foam II, Multi-Max FA, H-Shield, ENRGY 3, Sarnatherm		
Tapered	N/A	N/A
Insulation Top Layer:		
Knight-Celotex High Density Fiberboard Roof Insulation		
Minimum: 0.5" thick	N/A	N/A
DensDeck, DensDeck Prime		
Minimum: 0.25" thick	N/A	N/A

Note: All insulation shall be adhered to the deck in TITE-SET Roofing Adhesive applied in continuous 3-inch ribbons spaced 12" o.c. Refer to Roofing Application Standard RAS 117 for insulation attachment. Insulation listed as base layer only shall be used only as base layers with a second layer of approved top layer insulation installed as the final membrane substrate.

Membrane: Sarnafil G410 Felt or S327 Felt adhered with Sarnacol 2121 adhesive applied at 2.25 gal/sq. to the insulation using a ¼" x ¼" notched squeegee or with Sarnacol 2170 adhesive rolled applied as a primer at a rate 1.0-1.25 gal/sq. to the insulation allowed to dry. Following a second coat roller applied of adhesive at 1.0 gal/sq. The roof cover is immediately placed into the adhesive and the top surface rolled with a weighted roller.

Or

Sarnafil G410 or S327 adhered with Sarnacol 2170 applied at 1.25gal/sq. to the substrate and .5 gal/sq. to the back of the membrane.

Maximum Design Pressure: -52.5 psf (See General Limitation #9)

Membrane Type: Single Ply, Thermoplastic, PVC

Deck Type 5I: Cementitious Wood Fiber, Insulated

Deck Description: Cementitious Wood Fiber

System Type A(3): One or more layers of insulation adhered with approved adhesive

All General and System Limitations apply.

Insulation Base Layer:	Fastener Density	Fastener Type
AC Foam II, H-Shield, ENRGY 3, Sarnatherm		
Minimum: 1.5" thick	N/A	N/A
Knight-Celotex High Density Fiberboard, Temple-Inland HD1, HD6		
Minimum: 0.5" thick	N/A	N/A
DensDeck, DensDeck Prime		
Minimum: 0.25" thick	N/A	N/A
Insulation Top Layer:		
(Optional) AC Foam II, H-Shield, ENRGY 3, Sarnatherm		
Minimum 1.5" thick	N/A	N/A
(Optional) Knight-Celotex High Density Fiberboard, Temple-Inland HD1, HD6		
Minimum: 0.5" thick	N/A	N/A
(Optional) DensDeck, DensDeck Prime		
Minimum: 0.25" thick	N/A	N/A

Note: All insulation shall be adhered to the deck in OlyBond 500 or SpotShot adhesive applied in continuous ¾" – 1" wide ribbons spaced 12" o.c. Refer to Roofing Application Standard RAS 117 for insulation attachment.

Membrane: G410, G410 Felt, S327 or S327 Felt adhered with Sarnacol 2121 adhesive applied at 2.25 gal/sq. to the insulation using a ¼" x ¼" notched squeegee.

Maximum Design Pressure: -45.0 psf (See General Limitation #9)

Membrane Type: Single Ply, Thermoplastic, PVC

Deck Type 5I: Cementitious Wood Fiber, Insulated

Deck Description: Cementitious Wood Fiber

System Type A(4): One or more layers of insulation adhered with approved adhesive

All General and System Limitations apply.

Insulation Base Layer:	**Fastener Density**	**Fastener Type**
AC Foam II, H-Shield, ENRGY 2, Sarnatherm Minimum: 1.5" thick	N/A	N/A
High Density Wood Fiber Minimum: 0.5" thick	N/A	N/A
DensDeck, DensDeck Prime Minimum: 0.25" thick	N/A	N/A
Insulation Top Layer:		
High Density Wood Fiber Minimum: 0.5" thick	N/A	N/A
DensDeck, DensDeck Prime Minimum: 0.25" thick	N/A	N/A

Note: All insulation shall be adhered to the deck in full coverage of OlyBond Insulation Adhesive at a rate of 1 gal/sq. Refer to Roofing Application Standard RAS 117 for insulation attachment.

Membrane: G410, G410 Felt, S327 or S327 Felt adhered with Sarnacol 2121 adhesive applied at 2.25 gal/sq. to the insulation using a ¼" x ¼" notched squeegee.

Maximum Design Pressure: -45.0 psf (See General Limitation #9)

Membrane Type: Single Ply, Thermoplastic, PVC

Deck Type 5I: Cementitious Wood Fiber, Insulated

Deck Description: Cementitious Wood Fiber

System Type B(1): Base Layer of insulation mechanically attached, top insulation layer fully adhered with approved asphalt..

All General and System Limitations apply.

One or more of the following insulations:

Insulation Base Layer	Fasteners Densit/ft^2	Fastener Type
AC Foam II, AC Foam Composite (bottom layer only), AC Foam - 25 PSI, Pyrox, Millox, Pyrox-25 PSI, Millox-25 PSI , Whiteline (bottom layer only)		
Minimum: 1.3' Thick or tapered	1:2	Any approved fastener listed in Table 3
Minimum 2" Thick or tapered	1:4	
Sarnatherm, Sarnatherm-25 PSI, Sarnatherm-Composite (bottom layer only), Sarnatherm Plus, E'NRG'Y-2, E'NRG'Y 2 Composite (bottom layer only), E'NRG'Y 2 Plus, PSI-25		
Minimum 1.4" Thick or tapered	1:3	Any approved fastener listed in Table 3
Minimum 2" Thick or tapered	1:4	
DensDeck, DensDeck Prime		
Minimum ¼" Thick	1:1.2	Any approved fastener listed in Table 3
Minimum ½" Thick	1:1.7	
Multi-Max FA, Multi-Max FA - 25 PSI, Thermaroof Composite (bottom layer only)		
Minimum 1.25" Thick or tapered	1:2	Any approved fastener listed in Table 3
Minimum 2" Thick or tapered	1:4	
High Density Wood Fiber (base layer only)		
Minimum: 1" Thick	1:2	Any approved fastener listed in Table 3
Perlite (base layer only)		
Minimum: ¾" Thick	1:2	Any approved fastener listed in Table 3

Note: Base layer shall be mechanically attached with fasteners and density described. Insulation panels listed are minimum sizes and dimensions; if larger panels are used the number of fasteners per board shall be increased maintaining the same fastener density (See Roofing Application Standard RAS 117 for fastening details).

Insulation Top Layer	Fasteners Densit/ft^2	Fastener Type
AC Foam II, AC Foam - 25 PSI, Pyrox, Millox, Pyrox-25 PSI, Millox-25 PSI		
Minimum: 1.3' Thick or tapered	N/A	N/A
Sarnatherm, Sarnatherm-25 PSI, Sarnatherm Plus, E'NRG'Y-2, E'NRG'Y 2 Plus, PSI-25		
Minimum 1.4" Thick or tapered	N/A	N/A
DensDeck, DensDeck Prime		
Minimum ¼" Thick	N/A	N/A
Multi-Max FA, Multi-Max FA - 25 PSI		
Minimum 1.25" Thick or tapered	N/A	N/A

Note: Optional top layer of insulation shall be adhered with approved asphalt within the EVT range and at a rate of 20-40 lbs/100 ft^2. Please refer to Roofing Application Standard RAS 117 for insulation attachment. Composite insulation boards used as a top layer shall be installed with the polyisocyanurate face down.

Vapor Retarder:	(Optional) Any FMRC approved vapor barrier approved for use with hot asphalt may be applied to the deck or perlite base layer.
Barrier:	None
Membrane:	Sarnafil G410 or S327, smooth backed adhered with Sarnacol 2170 applied at 1.25gal/sq. to the substate and .5 gal/sq. to the back of the Membrane, or Sarnocol V949 applied at 1 to 2 gal./sq. to the substrate and .5 gal./sq. to the Membrane, or Sarnocol 2121 applied to the substrate only at 1.5 to 2.5 gal./sq.
Maximum Design Pressure:	-45 psf. (See General Limitation #9)

Membrane Type: Single Ply, Thermoplastic, PVC

Deck Type 1I: Cementitious Wood Fiber, Insulated

Deck Description: Cementitious Wood Fiber

System Type C(1): All layers of insulation simultaneously fastened; membrane fully adhered.

All General and System Limitations apply.

Insulation Base Layer	Fasteners Densit/ft^2	Fastener Type
AC Foam II, ACFoam III, AC Foam - 25 PSI, ACFoam Composite, ACFoam Supreme, Pyrox, Millox, Pyrox-25 PSI, Millox-25 PSI, Whiteline		
Minimum: 1.3" Thick or tapered	N/A	N/A
Sarnatherm, Sarnatherm-25 PSI, Sarnatherm-Composite, E'NRG'Y 2, E'NRG'Y 2 Composite, E'NRG'Y 2 Plus, PSI-25, ISO 95+ GL,		
Minimum: 1.4" Thick or tapered	N/A	N/A
Hy-Therm AP, Hy-Therm SP, Top-R II, Star Ap, Hy-tec		
Minimum: 1.5 " Thick or tapered	N/A	N/A
High Density Wood Fiberboard		
Minimum: 1" Thick or tapered	N/A	N/A
Ultra M-II Iso/glas		
Minimum: 1.2" Thick or tapered	N/A	N/A
Multi-Max FA, Multi-Max FA - 25 PSI, Thermaroof, Thermaroof Plus		
Minimum: 1.25" Thick or tapered	N/A	N/A
DensDeck, DensDeck Prime		
Minimum: ¼" Thick	N/A	N/A
Perlite		
Minimum: ¾" Thick	N/A	N/A

Note: All insulation layers shall be simultaneously fastened; see top layer below for fasteners and density. 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 Roofing Application Standard RAS 117 for insulation attachment.

Insulation Top Layer	Fasteners Densit/ft^2	Fastener Type
AC Foam II, AC Foam - 25 PSI, Pyrox, Millox, Pyrox-25 PSI, Millox-25 PSI,		
Minimum: 1.3" Thick or tapered	1:2	Any approved fastener listed in
Minimum 2" Thick or tapered	1:4	Table 3
Sarnatherm, Sarnatherm-25 PSI, Sarnatherm Plus, E'NRG'Y-2, E'NRG'Y 2 Plus, PSI-25		
Minimum 1.4" Thick or tapered	1:3	Any approved fastener listed in
Minimum 2" Thick or tapered	1:4	Table 3
DensDeck, DensDeck Prime		
Minimum 1/4" Thick	1:1.2	Any approved fastener listed in
Minimum 1/2" Thick	1:1.7	Table 3

Multi-Max FA, Multi-Max FA - 25 PSI

Minimum 1.25" Thick or tapered	1:2	Any approved fastener listed in Table 3
Minimum 2" Thick or tapered	1:4	

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 Retarder:	(Optional) An FMRC approved vapor barrier approved for use with hot asphalt may be applied to the deck or perlite base layer.
Barrier:	None
Membrane:	Sarnafil G410 or S327, smooth backed adhered with Sarnacol 2170 applied at 1.25gal/sq. to the substate and .5 gal/sq. to the back of the Membrane, or Sarnocol V949 applied at 1 to 2 gal./sq. to the substrate and .5 gal./sq. to the Membrane, or Sarnocol 2121 applied to the substrate only at 1.5 to 2.5 gal./sq.
Maximum Design Pressure:	-45 psf. (See General Limitation #9)

Membrane Type: Single Ply, Thermoplastic, PVC

Deck Type 5I: Cementitious Wood Fiber, Insulated

Deck Description: Cementitious Wood Fiber

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

All General and System Limitations apply.

Insulation Layer	Fasteners Densit/ft^2	Fastener Type
AC Foam II, ACFoam III, AC Foam - 25 PSI, ACFoam Composite (bottom layer only), ACFoam Supreme, Pyrox, Millox, Pyrox-25 PSI, Millox-25 PSI, Whiteline		
Minimum: 1.3" Thick or tapered	N/A	N/A
Sarnatherm, Sarnatherm-25 PSI, Sarnatherm-Composite (bottom layer only), E'NRG'Y 2, E'NRG'Y 2 Composite (bottom layer only), E'NRG'Y 2 Plus, PSI-25, ISO 95+ GL		
Minimum: 1.4" Thick or tapered	N/A	N/A
Hy-Therm AP, Hy-Therm SP, Top-R II, Star AP, Hy-Tec		
Minimum: 1.5" Thick or tapered	N/A	N/A
High Density Wood Fiberboard (base layer only)		
Minimum: 1" Thick or tapered	N/A	N/A
Ultra M-II Iso/glas		
Minimum: 1.2" Thick or tapered	N/A	N/A
Multi-Max FA, Multi-Max FA - 25 PSI, Thermaroof, Thermaroof Plus		
Minimum: 1.25" Thick or tapered	N/A	N/A
DensDeck, DensDeck Prime		
Minimum: ¼" Thick	N/A	N/A
Perlite (base layer only)		
Minimum: ¾" Thick	N/A	N/A

Note: All insulations shall have preliminary attachment prior to the installation of the roofing membrane at a minimum 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.

Vapor Retarder: (Optional) Sarnavap vapor barrier applied directly to the deck or over the base insulation layer.

Barrier: (Optional) Minimum 1/4" gypsum or Dens-Deck or Atlas FR10 or FR50.

Membrane: S327 attached to deck as specified below.

Fastening: Approved fasteners with approved discs spaced 6" o.c. within the 5.5" side lap spaced 73" o.c. and sealed with a minimum 1.5" weld or approved fasteners with approved discs spaced 6" o.c. in rows 12' o.c. maximum, or Sarnabars spaced 12' o.c. maximum fastened with Sarnafasteners spaced 6 in. o.c. through the field of the membrane and covered with a 7" minimum width cover strip with 1.5" welds on each side.

Maximum Design Pressure: -52.5 psf. (See General Limitations #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. 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.)**

END OF THIS ACCEPTANCE