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)

Sika 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 Florida Building Code and the High Velocity Hurricane Zone of the Florida Building Code.

DESCRIPTION: Sika Sarnafil PVC Single Ply Roofing over Recover Deck

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 No. 07-0402.02 and consists of pages 1 through 56.
The submitted documentation was reviewed by Jorge L. Acebo.

ROOFING SYSTEM APPROVAL

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

Deck Type: Recover
Maximum Design Pressure See Specific Assemblies

TRADE NAMES OF PRODUCTS MANUFACTURED OR LABELED BY APPLICANT:

TABLE 1

Product	Dimensions	Test Specification	Product Description
Anchor-Tite	Various		Prefabricated metal edge system.
Edge-Tite	Various		Prefabricated metal edge system.
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.
G459	Various	ASTM D 4434	Fiberglass reinforced PVC Alloy asphalt compatible flashing membrane.
S327	Various	ASTM D 4434	Polyester reinforced PVC roofing membrane.
S327 Felt	Various	ASTM D 4434	Polyester reinforced PVC roofing membrane.
Sarna Dens Deck®	4' x 8'	TAS 110	Silicon treated gypsum board
SarnaAirguard			PVC air/vapor barrier
Sarnabar	1.25" x 15'	TAS 114	Galvanized or stainless steel membrane fastening bar.
Sarnabarrier			Polyester separation sheet.
Sarnaclad	Various		Heat weldable PVC laminated to galvanized steel flashing product.
Sarnacol 2121	5 gallons		Water based bonding adhesive.
Sarnacol 2170	5 gallons		Solvent based bonding adhesive.
Sarnacol 2163			Insulation adhesive.
Sarnacol 2164			Insulation adhesive.
Sarnacol LR2001			Two-part, low rise polyurethane adhesive.
Sarnarail Polymer Batten Strip	0.75" x 250'		Polymer batten bar
Sarnafastener-XP	Various		Membrane and insulation fastener.
Sarnafil MAXLoad	Various		Membrane and insulation fastener.
Sarnadisc-XPN	1.5" x 3.75"		Membrane and insulation fastening plate.
Sarnacord	4mm x 328'	TAS 114	Reinforcement cord for use with Sarnabar.

Product	Dimensions	Test Specification	Product Description
Sarnacorner	5", 6", 8.5"		Prefabricated inside and outside corner flashing.
Sarnadrain RAC	Various		Aluminum drain insert.
Sarnafelt	82" x 135"		Asphalt protection or leveling layer.
Sarnafiller	2 gallons		Urethane pitch pocket filler.
Sarnaflash	18" x 40"		Prefabricated expansion joints.
Sarnamatic			Seam welding equipment.
Sarnareglet	2.15" x 10'		Aluminum surface mount reglet (termination bar).
Sarnasolv	1 gallon		Membrane cleaner.
Sarnastack	Various		Prefabricated cone flashing.
Sarnastop	1" x 10'	TAS 114	Aluminum termination bar.
Sarnatape	Various		Air flow barrier tape
Sarnatherm	Various	TAS 110	Isocyanurate insulation board.
Sarnatherm 25 PSI	Various	TAS 110	Polyisocyanurate insulation board.
Sarnatherm Composite	Various	TAS 110	Isocyanurate insulation board with perlite facer.
Sarnatherm Plus	Various	TAS 110	Isocyanurate insulation board with wood fiberboard facer.
Sarnatred	3.25' x 32.8'		PVC walkway protection sheet.
Sarnavap-10	20' x 100'		Polyethylene air/vapor barrier
SarnaWalkways	Various		PVC walkway protection sheet.

APPROVED INSULATIONS:

TABLE 2

Product	Dimensions	Product Description	Manufacturer
EPS	Various	Expanded polystyrene	Generic
XPS	Various	Extruded polystyrene	Generic
High Density Wood Fiberboard	Various	Wood fiber insulation	Generic
Perlite Insulation Board	Various	Perlite Insulation	Generic
Polyethylene	min. 4 mil	Vapor / Air barrier	Generic
Type X Gypsum	Various	Gypsum Wallboard	Generic
DensDeck, DensDeck Prime, DensDeck DuraGuard	Various	Silicon treated gypsum	G-P Products
H-Shield	Various	Isocyanurate Insulation	Hunter Panels
E'NRG'Y 2	Various	Isocyanurate Insulation	Johns Manville
E'NRG'Y 2 Plus	Various	Isocyanurate Insulation with wood fiberboard facer	Johns Manville
E'NRG'Y 2 Composite	Various	Isocyanurate Insulation with perlite facer	Johns Manville
E'NRG'Y 2 PSI-25	Various	Isocyanurate Insulation	Johns Manville
ACFoam II	Various	Isocyanurate Insulation	Atlas Roofing Corp.
ACFoam III	Various	Isocyanurate Insulation	Atlas Roofing Corp.

Product	Dimensions	Product Description	Manufacturer
ACFoam 25 PSI	Various	Isocyanurate Insulation	Atlas Roofing Corp.
ACFoam Composite	Various	Isocyanurate Insulation with perlite facer	Atlas Roofing Corp.
ACFoam Supreme	Various	Isocyanurate Insulation	Atlas Roofing Corp.
Multi-Max FA	Various	Isocyanurate Insulation	Rmax, Inc.
Multi-Max FA 25 PSI	Various	Isocyanurate Insulation	Rmax, Inc.
Thermaroof	Various	Isocyanurate Insulation	Rmax, Inc.
Thermaroof Plus	Various	Isocyanurate Insulation	Rmax, Inc.
Pyrox	Various	Isocyanurate Insulation	Apache Products
Millox	Various	Isocyanurate Insulation with wood fiberboard facer	Apache Products
Pyrox 25 PSI	Various	Isocyanurate Insulation	Apache Products
Millox 25 PSI	Various	Isocyanurate Insulation with wood fiberboard facer	Apache Products
Whiteline	Various	Isocyanurate Insulation	Apache Products
Ultra M-II Iso/glas	Various	Isocyanurate Insulation	Homasote Co.
ISO 95+ GL	Various	Isocyanurate Insulation	Firestone

APPROVED FASTENERS:

TABLE 3

Fastener Number	Product Name	Product Description	Dimensions	Manufacturer (With Current NOA)
1.	Dekfast Fasteners #12, #14 & #15	Insulation fastener for wood, steel and concrete decks		Construction Fasteners Inc.
2.	Omega	Insulation fastener for wood and steel		Construction Fasteners Inc
3.	Dekfast Hex Plate	Galvalume hex stress plate.	2 7/8" x 3 1/4"	Construction Fasteners Inc.
4.	Dekfast Lock Plate	Polypropylene locking plate.	3" x 3 1/4"	Construction Fasteners Inc.
5.	#12, #14 & #15Roofgrip Fasteners	Insulation fastener for wood, steel and concrete.		ITW Buildex Corp.
6.	AccuTrac Hextra	Insulation fastener for wood, steel and concrete		ITW Buildex Corp.
7.	King-Con	Insulation fastener for concrete deck.		ITW Buildex Corp.
8.	Hextra Plus	Pre-assembled Insulation fastener and plate		ITW Buildex Corp.
9.	Metal Plate	Galvalume stress plate.	3" round 3" square	ITW Buildex Corp.
10.	AccuTrac Plate	Galvalume stress plate.	3" square	ITW Buildex Corp.
11.	Gearlok Plastic Plate	Polypropylene round plate	3.2" round	ITW Buildex Corp.
12.	Olympic Fastener #12, #14 & #15	Insulation fastener		Olympic Manufacturing Group, Inc.

APPROVED FASTENERS:

TABLE 3

Fastener Number	Product Name	Product Description	Dimensions	Manufacturer (With Current NOA)
13.	Olympic Fastener ASAP	Pre-assembled Insulation fastener and plate		Olympic Manufacturing Group, Inc.
14.	Olympic Polypropylene	Polypropylene plastic plate	3.25" round	Olympic Manufacturing Group, Inc.
15.	Olympic G-2	3.5" round galvalume AZ55 steel plate	3.5" round	Olympic Manufacturing Group, Inc.
16.	Olympic Standard	3" round galvalume AZ50 steel plate	3" round	Olympic Manufacturing Group, Inc.
17.	Sarnafastener	Insulation fastener for various decks		Sarnafil, Inc.
18.	King-Con	Insulation fastener for concrete decks		Sarnafil, Inc.
19.	Sarnaplate	3" square galvalume AZ50 steel plate	3" square	Sarnafil, Inc.
20.	Sarnadisc	Galvalume steel plate	2" round	Sarnafil, Inc.
21.	Sarnadisc	Galvalume steel plate	1.5" x 3.75" 2" x 3.25" 2" x 3.75"	Sarnafil, Inc.
22.	Sarnadisc-Barbed	Galvalume steel plate	2" round	Sarnafil, Inc.
23.	Insul-Fixx Fastener (#12 & #14)	Insulation fastener for steel, wood and concrete decks		SFS Stadler, Inc.
24.	Isofast Fastener	Insulation fastener for steel decks		SFS Stadler, Inc.
25.	System ES-1	Pre-assembled Insulation fastener and plate		SFS Stadler, Inc.
26.	Insul-Fixx S Plate	3" round galvalume AZ50 steel plate	3" round	SFS Stadler, Inc.
27.	Isofast Plate	Galvalume steel plate	1.5" x 3.2"	SFS Stadler, Inc.
28.	Insul-Fixx P Plate	3" round polyethylene stress plate	3" round	SFS Stadler, Inc.
29.	TPR (The Peel Rivet)	Insulation fastener for steel decks		Subcon Products Corp.
30.	Trinity Lap Plate	3" round galvalume AZ55 steel plate	2" round	Subcon Products Corp.
31.	OlyBond 500 / SpotShot	Insulation adhesive		Olympic Manufacturing Group
32.	OlyBond Insulation Adhesive	Insulation adhesive		Olympic Manufacturing Group
33.	Weather-Tite One Step Foamable Adhesive	Insulation adhesive		Millennium Adhesive Products
34.	Weather-Tite Pourable Foam Insulation Adhesive	Insulation adhesive		Millennium Adhesive Products

APPROVED FASTENERS:

TABLE 3

Fastener Number	Product Name	Product Description	Dimensions	Manufacturer (With Current NOA)
35.	Sarnacol 2163	Insulation adhesive		Sarnafil, Inc.
36.	Sarnacol 2164	Insulation adhesive		Sarnafil, Inc.
37.	Tite-Set	Insulation adhesive		Polyfoam Products
38.	Sarnarail Polymer Batten Strip	Polymer batten bar	0.75" x 250'	Sarnafil, Inc.
39.	Sarnafastener-XP	Membrane and insulation fastener.	Various	Sarnafil, Inc.
40.	Sarnafil MAXLoad	Membrane and insulation fastener.	Various	Sarnafil, Inc.
41.	Sarnadisc-XPN	Membrane and insulation fastener.	1.5" x 3.75"	Sarnafil, Inc.

EVIDENCE SUBMITTED:

Test Agency	Test Identifier	Description	Date
Celotex Technical Center	MTS Job No. 258215	TAS 114	09/09/97
Factory Mutual Research Corporation	J.I. 0X3A3.AM	4470	07/31/94
	J.I. 0P6A6.AM	4470	03/03/94
	J.I.2X2A5.AM	4470	07/31/94
	J.I. 0B9A0.AM	4470	10/22/96
	J.I. 1Z5A6.AM	4470	07/18/97
	J.I. 4B3A2.AM	4470	06/19/97
	J.I. 1B7A5.AM	4470	02/23/98
	3001580	4470	11/16/98
	3003337	4470	06/11/99
	J.I. 3012964	4470	06/11/02
	J.I. 3015643	4470	12/06/02
	J.I. 3016201	4470	01/28/03
	J.I. 3006785	4470	05/06/04
	J.I. 3017292	4470	09/03/04
	J.I. 3024229	4470	11/16/05
Underwriters Laboratories, Inc.	R8992	Fire Classification	1994

APPROVED ASSEMBLIES

Membrane Type: Single Ply, Thermoplastic, PVC

Deck Type 7I: Recover, Insulated

Deck Description: Concrete/lightweight concrete/cementitious wood fiber/wood/steel

System Type A(1): One or more layers of insulation fully adhered with approved asphalt, membrane adhered

All General and System Limitations apply:

Insulation Layer	Fastener Density/ft^2	Fastener Type
AC Foam II, ACFoam III, AC Foam - 25 PSI, ACFoam Composite (bottom layer only), ACFoam Supreme, any of the above tapered		
Minimum 1.3" thick	N/A	N/A
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	N/A	N/A
DensDeck, DensDeck Prime		
Minimum ¼" thick	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
Sarnatherm, Sarnatherm-25 PSI, Sarnatherm-Composite (bottom layer only)		
Minimum 1.4" thick or tapered	N/A	N/A
High Density Wood Fiberboard		
Minimum 1" thick	N/A	N/A
Pyrox, Millox, Pyrox-25 PSI, Millox-25 PSI, Whiteline		
Minimum 1.3" thick or tapered	N/A	N/A
Ultra M-II Iso/glas, Ultra M-II AEF		
Minimum 1.2" thick or tapered	N/A	N/A
ISO 95+ GL		
Minimum 1.4" thick or tapered	N/A	N/A
Perlite (base layer only)		
Minimum ¾" thick	N/A	N/A

Note: Existing roof shall be primed with ASTM D 41 asphalt primer and allowed to dry prior to application of insulation. All insulation shall be adhered to the deck in full mopping of 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. 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. Composite insulation panels used as a top layer shall be placed with the polyisocyanurate side facing down.

Vapor Retarder: (Optional) An FMRC approved vapor retarder approved for use with hot asphalt may be applied to the deck or base insulation layer

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

Membrane: G410, G410 Felt, S327 or S327 Felt adhered with Sarnacol 2170 applied at 1.25 gal./sq. to the substrate and 0.5 gal./sq. to the back of the Membrane, or Sarnacol 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 7I: Recover, Insulated

Deck Description: Concrete

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

All General and System Limitations apply:

One or more layers of the following.

Insulation Layer	Fastener Density/ft^2	Fastener Type
AC Foam II Minimum 1.3" thick or tapered	N/A	N/A
E'NRG'Y 2 Minimum 1.4" thick or tapered	N/A	N/A

Note: Existing roof shall be primed with ASTM D 41 asphalt primer and allowed to dry prior to application of insulation. All insulation shall be adhered to the deck in with Sarnacol LR2001 adhesive and at a rate of 200 ft^2/gal. Please 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. Composite insulation panels used as a top layer shall be placed with the polyisocyanurate side facing down.

Membrane: G410 Felt or S327 Felt membrane, adhered with Sarnacol 2170 applied at rate of 1-1.25 gal./sq. to the substrate and allowed to dry followed by second coat at a rate of 1 gal./sq. Membrane is immediately place on wet adhesive and rolled with a weighted roller. Heat weld the min. 1.5 in. wide seam.

G410 or S327 membrane, adhered with Sarnacol 2170 applied at rate of ¾-2 gal./sq. to the substrate and allowed to dry followed by second coat applied to membrane backing at a rate of ½ gal./sq. Membrane is rolled with a weighted roller. Heat weld the min. 1.5 in. wide seam.

Or

Sarnacol 2121 Adhesive applied at rate of 2-2 ½ gal./sq. to substrate using a notched trowel or squeegee. G410 or S327 membrane in immediately placed on wet adhesive and rolled with a weighted roller. Heat weld the min. 1.5 in. wide seam.

Maximum Design Pressure: -232.5 psf (See General Limitation #9)

Membrane Type: Single Ply, Thermoplastic, PVC

Deck Type 7I: Recover, Insulated

Deck Description: Minimum 2500 psi structural concrete or concrete plank

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

All General and System Limitations apply.

One or more layers of the following.

Insulation Layer	Fastener Density/ft^2	Fastener Type
H-Shield CG Minimum 1.5" thick	N/A	N/A
DensDeck DuraGuard Minimum 0.25" thick	N/A	N/A

Note: All insulation shall be adhered to the deck in full mopping of approved asphalt within the EVT range and at a rate of 25 lbs/sq. or in 0.75" wide beads of Olympic Olybond 500 spaced 12" o.c. lbs/100 ft^2.

Vapor Retarder: (Optional) Any UL or FMRC approved vapor barrier approved for use with hot asphalt may be applied to the deck or perlite base layer.

Membrane: G410 PS is installed with a 3" wide heat welded seam. Membrane is rolled into insulation with a weighted roller.

Maximum Design Pressure: -75.0 psf. (See General Limitation #9)

Membrane Type:	Single Ply, Thermoplastic, PVC
Deck Type 7I:	Recover, Insulated
Deck Description:	Min. 2500 psi structural concrete or concrete plank
System Type A(4):	One or more layers of insulation adhered with approved adhesive, membrane fully adhered

All General and System Limitations apply.

One or more layers of the following insulations:

Base Insulation Layer	Fastener Density/ft^2	Fastener Type
ACFoam II, H-Shield, ENRGY 2, ENRGY 3, ISO 95+GL, Sarnatherm Minimum 1.0" thick	N/A	N/A
DensDeck, DensDeck Prime Minimum 0.25" thick	N/A	N/A

Top Insulation Layer	Fastener Density/ft^2	Fastener Type
DensDeck, DensDeck Prime Minimum 0.25" thick	N/A	N/A

Note: All insulation shall be adhered to the deck in full coating of OlyBond Adhesive Fastener at a rate of 1 gal/sq. Please 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 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.

Maximum Design Pressure = -150.0 psf (See General Limitation #9)

Or

G410, G410 Felt, S327 or S327 Felt adhered with Sarnacol 2170 adhesive. 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 0.5 gal/sq. The roof cover is immediately placed into the adhesive and the top surface rolled with a weighted roller.

Maximum Design Pressure -127.5 psf (See General Limitation #9)

Maximum Design Pressure: See Membrane Options above.

Membrane Type:	Single Ply, Thermoplastic, PVC
Deck Type 7I:	Recover, Insulated
Deck Description:	Steel / concrete / cementitious wood fiber / lightweight concrete / gypsum / wood
System Type A(5):	One or more layers of insulation adhered with approved adhesive, membrane fully adhered.

All General and System Limitations apply.

Insulation Layer	Fastener Density/ft^2	Fastener Type
ACFoam II, ACFoam III, ISO 95+GL, ENRGY2, ENRGY3, Sarnatherm		
Maximum 1" thick	N/A	N/A
DensDeck, DensDeck Prime		
Minimum 5/8" thick	N/A	N/A

Note: Insulation shall be adhered to the deck in full coating of OlyBond Adhesive Fastener at a rate of 1 gal/sq. Please 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

Vapor Retarder:	(Optional) An FMRC approved vapor retarder approved for use with hot asphalt may be applied to the deck or base insulation layer
Barrier:	(Optional) Minimum 1/4" gypsum or Dens-Deck or Atlas FR10 or FR50.
Membrane:	G410, G410 Felt, S327 or S327 Felt adhered with Sarnacol 2170 applied at 1.25 gal./sq. to the substrate and 0.5 gal./sq. to the back of the Membrane, or Sarnacol 2121 applied to the substrate only at 1.5 to 2.5 gal./sq.
Maximum Design Pressures:	-45 psf. (See General Limitation #9)

Membrane Type:	Single Ply, Thermoplastic, PVC
Deck Type 7I:	Recover, Insulated
Deck Description:	Min. 2500 psi structural concrete or concrete plank
System Type A(6):	One or more layers of insulation adhered with approved adhesive, membrane fully adhered

All General and System Limitations apply.

One or more layers of the following insulations:

Base Insulation Layer	**Fastener Density/ft^2**	**Fastener Type**
(Optional) EPS (expanded) Minimum 2.0" thick	N/A	N/A
Top Insulation Layer	**Fastener Density/ft^2**	**Fastener Type**
High Density Wood Fiberboard Minimum 1.0" 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 ¾" – 1" wide beads 12" o.c. of OlyBond 500 or Spot Shot Adhesive Fastener. Please 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:	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. Or G410, G410 Felt, S327 or S327 Felt adhered with Sarnacol 2170 adhesive. 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 0.5 gal/sq. The roof cover is immediately placed into the adhesive and the top surface rolled with a weighted roller.
Maximum Design Pressure:	-120.0 psf (See General Limitation #9)

Membrane Type: Single Ply, Thermoplastic, PVC

Deck Type 7I: Recover, Insulated

Deck Description: Cementitious wood fiber / Gypsum

System Type A(7): One or more layers of insulation adhered with approved adhesive, membrane fully adhered.

All General and System Limitations apply.

Base Insulation Layer	Fastener Density/ft^2	Fastener Type
ACFoam II, H-Shield, ENRGY 2, ENRGY 3, Sarnatherm Minimum 1.0" thick	N/A	N/A
DensDeck, DensDeck Prime Minimum 0.25" thick	N/A	N/A

Top Insulation Layer	Fastener Density/ft^2	Fastener Type
DensDeck, DensDeck Prime Minimum 0.25" thick	N/A	N/A

Note: All insulation shall be adhered to the deck in full coating of OlyBond Adhesive Fastener at a rate of 1 gal/sq. Please 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: G410, G410 Felt, S327 or S327 Felt adhered with Sarnacol 2170 applied at 1.25 gal./sq. to the substrate and 0.5 gal./sq. to the back of the Membrane, or Sarnacol 2121 applied to the substrate only at 1.5 to 2.5 gal./sq.

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

Membrane Type:	Single Ply, Thermoplastic, PVC
Deck Type 7I:	Recover, Insulated
Deck Description:	Min. 2500 psi structural concrete or concrete plank
System Type A(8):	One or more layers of insulation adhered with approved adhesive, membrane fully adhered

All General and System Limitations apply.

One or more layers of the following insulations:

Base Insulation Layer	**Fastener Density/ft^2**	**Fastener Type**
(Optional) ACFoam II, H-Shield, Sarnatherm Minimum 1.5" thick	N/A	N/A

Top Insulation Layer	**Fastener Density/ft^2**	**Fastener Type**
DensDeck, DensDeck Prime Minimum 0.25" thick	N/A	N/A

Note: All insulation shall be adhered to the deck in ¾" – 1" wide beads 12" o.c. of OlyBond 500 or Spot Shot Adhesive Fastener. Please 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 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

G410, G410 Felt, S327 or S327 Felt adhered with Sarnacol 2170 adhesive. 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 0.5 gal/sq. The roof cover is immediately placed into the adhesive and the top surface rolled with a weighted roller.

Maximum Design Pressure: -120.0 psf (See General Limitation #9)

Membrane Type:	Single Ply, Thermoplastic, PVC
Deck Type 7I:	Recover, Insulated
Deck Description:	Min. 2500 psi structural concrete or concrete plank
System Type A(9):	One or more layers of insulation adhered with approved adhesive, membrane fully adhered

All General and System Limitations apply.

One or more layers of the following insulations:

Base Insulation Layer	Fastener Density/ft^2	Fastener Type
ENRGY 3, Sarnatherm Minimum 1.5" thick	N/A	N/A

Top Insulation Layer	Fastener Density/ft^2	Fastener Type
DensDeck, DensDeck Prime Minimum 0.25" thick	N/A	N/A

Note: All insulation shall be adhered to the deck in ¾" – 1" wide beads 12" o.c. of OlyBond 500 or Spot Shot Adhesive Fastener. Please 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 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

G410, G410 Felt, S327 or S327 Felt adhered with Sarnacol 2170 adhesive. 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 0.5 gal/sq. The roof cover is immediately placed into the adhesive and the top surface rolled with a weighted roller.

Maximum Design Pressure: -120.0 psf (See General Limitation #9)

Membrane Type:	Single Ply, Thermoplastic, PVC
Deck Type 7I:	Recover, Insulated
Deck Description:	Min. 2500 psi structural concrete or concrete plank
System Type A(10):	One or more layers of insulation adhered with approved adhesive, membrane fully adhered

All General and System Limitations apply.

One or more layers of the following insulations:

Base Insulation Layer	**Fastener Density/ft^2**	**Fastener Type**
ISO 95+ GL Minimum 1.5" thick	N/A	N/A

Top Insulation Layer	**Fastener Density/ft^2**	**Fastener Type**
High Density Wood Fiberboard Minimum 1.0" thick	N/A	N/A

Note: All insulation shall be adhered to the deck in ¾" – 1" wide beads 12" o.c. of OlyBond 500 or Spot Shot Adhesive Fastener. Please 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:	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:	-120.0 psf (See General Limitation #9) (Recover)

Membrane Type:	Single Ply, Thermoplastic, PVC
Deck Type 7I:	Recover, Insulated
Deck Description:	Min. 2500 psi structural concrete or concrete plank
System Type A(11):	One or more layers of insulation adhered with approved adhesive, membrane fully adhered

All General and System Limitations apply.

One or more layers of the following insulations:

Base Insulation Layer	Fastener Density/ft^2	Fastener Type
Foamular 250 Minimum 1.0" thick	N/A	N/A

Top Insulation Layer	Fastener Density/ft^2	Fastener Type
DensDeck, DensDeck Prime Minimum 0.25" thick	N/A	N/A

Note: All insulation shall be adhered to the deck in ¾" – 1" wide beads 12" o.c. of OlyBond 500 or Spot Shot Adhesive Fastener. Please 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 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

G410, G410 Felt, S327 or S327 Felt adhered with Sarnacol 2170 adhesive. 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 0.5 gal/sq. The roof cover is immediately placed into the adhesive and the top surface rolled with a weighted roller.

Maximum Design Pressure: -120.0 psf (See General Limitation #9)

Membrane Type:	Single Ply, Thermoplastic, PVC
Deck Type 3I:	Recover, Insulated
Deck Description:	Min. 2500 psi structural concrete or concrete plank
System Type A(12):	One or more layers of insulation adhered with approved adhesive, membrane fully adhered

All General and System Limitations apply.

One or more layers of the following insulations:

Top Insulation Layer	Fastener Density/ft^2	Fastener Type
GAFTEMP Fiberboard Minimum 0.5" thick	N/A	N/A

Note: All insulation shall be adhered to the deck in ¾" to 1" wide ribbons of OlyBond 500 or SpotShot Adhesive Fastener, spaced 12" o.c. Please 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:	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:	-162.5 psf (See General Limitation #9)

Membrane Type:	Single Ply, Thermoplastic, PVC
Deck Type 7I:	Recover, Insulated
Deck Description:	Min. 200 psi lightweight insulating concrete
System Type A(13):	One or more layers of insulation adhered with approved adhesive, membrane fully adhered

All General and System Limitations apply.

One or more layers of the following insulations:

Base Insulation Layer	**Fastener Density/ft^2**	**Fastener Type**
ACFoam II, H-Shield, Sarnatherm Minimum 1.5" thick	N/A	N/A
High Density Wood Fiberboard Minimum 0.5" thick	N/A	N/A
DensDeck, DensDeck Prime Minimum 0.25" thick	N/A	N/A

Top Insulation Layer	**Fastener Density/ft^2**	**Fastener Type**
High Density Wood Fiberboard Minimum 1.0" 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 ¾" – 1" wide beads 12" o.c. of OlyBond 500 or Spot Shot Adhesive Fastener. Please 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: 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

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.

Maximum Design Pressure: -120.0 psf (See General Limitation #9)

Membrane Type:	Single Ply, Thermoplastic, PVC
Deck Type 7I:	Recover, Insulated
Deck Description:	Lightweight insulating concrete
System Type A(14):	One or more layers of insulation adhered with approved adhesive, membrane fully adhered

All General and System Limitations apply.

One or more layers of the following insulations:

Insulation Layer	Fastener Density/ft^2	Fastener Type
ACFoam II, H-Shield, ENRGY 3, Sarnatherm Minimum 1.0" thick or tapered	N/A	N/A

Note: All insulation shall be adhered to the deck in ¾" – 1" wide beads 12" o.c. of OlyBond 500 or Spot Shot Adhesive Fastener. Please 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:	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 G410, G410 Felt, S327 or S327 Felt adhered with Sarnacol 2170 adhesive. 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 0.5 gal/sq. The roof cover is immediately placed into the adhesive and the top surface rolled with a weighted roller.
Maximum Design Pressure:	-90.0 psf (See General Limitation #9)

Membrane Type: Single Ply, Thermoplastic, PVC

Deck Type 7I: Recover, Insulated

Deck Description: Gypsum

System Type A(15): One or more layers of insulation adhered with approved adhesive, membrane fully adhered

All General and System Limitations apply.

One or more layers of the following insulations:

Insulation Layer	Fastener Density/ft^2	Fastener Type
ACFoam II, H-Shield, ENRGY 3, Sarnatherm Minimum 1.5" thick	N/A	N/A

Note: All insulation shall be adhered to the deck in ¾" – 1" wide beads 12" o.c. of OlyBond 500 or Spot Shot Adhesive Fastener. Please 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: G410, G410 Felt, S327 or S327 Felt adhered with Sarnacol 2170 adhesive. 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 0.5 gal/sq. The roof cover is immediately placed into the adhesive and the top surface rolled with a weighted roller.

Or

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.

Maximum Design Pressure: -112.5 psf (See General Limitation #9)

Membrane Type:	Single Ply, Thermoplastic, PVC
Deck Type 7I:	Recover, Insulated
Deck Description:	Gypsum
System Type A(16):	One or more layers of insulation adhered with approved adhesive, membrane fully adhered

All General and System Limitations apply.

One or more layers of the following insulations:

Insulation Layer	Fastener Density/ft^2	Fastener Type
High Density Wood Fiberboard Minimum 0.5" thick	N/A	N/A

Note: All insulation shall be adhered to the deck in ¾" – 1" wide beads 12" o.c. of OlyBond 500 or Spot Shot Adhesive Fastener. Please 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:	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:	-135.0 psf (See General Limitation #9)

Membrane Type:	Single Ply, Thermoplastic, PVC
Deck Type 7I:	Recover, Insulated
Deck Description:	Gypsum
System Type A(17):	One or more layers of insulation adhered with approved adhesive, membrane fully adhered

All General and System Limitations apply.

One or more layers of the following insulations:

Base Insulation Layer	**Insulation Fasteners (Table 3)**	**Fastener Density/ft^2**
(Optional) ACFoam II, ACFoam III, H-Shield, ISO 95+ GL, ENRGY3, Multi-Max, Sarnatherm		
Minimum 1.5" thick or tapered	N/A	N/A

Top Insulation Layer	**Insulation Fasteners (Table 3)**	**Fastener Density/ft^2**
DensDeck, DensDeck Prime Minimum 0.25" thick	N/A	N/A
High Density Wood Fiber Minimum 0. 5" thick	N/A	N/A

Note: All insulation shall be adhered to the deck in ½" to ¾" wide beads 12" o.c. of Weather-Tite One Step Foamable Adhesive or Sarnacol 2163. Please 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.

Vapor Retarders:	(Optional) Any UL or FM approved asphaltic vapor retarder may be installed over the deck or the base layer of insulation
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 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 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 7I: Recover, Insulated

Deck Description: Min. 2500 psi structural concrete or concrete plank

System Type A(18): One or more layers of insulation adhered with approved adhesive, membrane fully adhered

All General and System Limitations apply.

One or more layers of the following insulations:

Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft^2
ACFoam II, Multi-Max, ENRGY 3, H-Shield, Sarnatherm Minimum 1.5" 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 ½" to ¾" wide beads 12" o.c. of Weather-Tite One Step Foamable Adhesive or Sarnacol 2163. Please 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.

Vapor Retarders: (Optional) Any UL or FM approved asphaltic vapor retarder may be installed over the deck or the base layer of insulation

Membrane: 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 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.

Maximum Design Pressure = -157.5 psf (See General Limitation #9

Or

G410, G410 Felt, S327 or S327 Felt adhered with Sarnacol 2170 adhesive. 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 0.5 gal/sq. The roof cover is immediately placed into the adhesive and the top surface rolled with a weighted roller.

Maximum Design Pressure = -127.5 psf (See General Limitation #9)

Maximum Design Pressure: See membrane attachment above.

Membrane Type:	Single Ply, Thermoplastic, PVC
Deck Type 7I:	Recover, Insulated
Deck Description:	Min. 2500 psi structural concrete or concrete plank
System Type A(19):	One or more layers of insulation adhered with approved adhesive, membrane fully adhered

All General and System Limitations apply.

One or more layers of the following insulations:

Base Insulation Layer	**Insulation Fasteners (Table 3)**	**Fastener Density/ft^2**
ACFoam II, Multi-Max, ENRGY 3, H-Shield, ISO 95+GL, Sarnatherm Minimum 1.5" thick	N/A	N/A

Top Insulation Layer	**Insulation Fasteners (Table 3)**	**Fastener Density/ft^2**
High Density Wood Fiber Minimum 0.5" thick	N/A	N/A

Note: All insulation shall be adhered to the deck in ½" to ¾" wide beads 12" o.c. of Weather-Tite One Step Foamable Adhesive, Sarnacol 2163 or Weather-Tite Pourable Foam Insulation Adhesive or Sarnacol 2164. Please 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.

Vapor Retarders:	(Optional) Any UL or FM approved asphaltic vapor retarder may be installed over the deck or the base layer of insulation
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:	-127.5 psf (See General Limitation #9)

Membrane Type: Single Ply, Thermoplastic, PVC

Deck Type 7I: Recover, Insulated

Deck Description: Min. 2500 psi structural concrete or concrete plank

System Type A(20): One or more layers of insulation adhered with approved adhesive, membrane fully adhered

All General and System Limitations apply.

One or more layers of the following insulations:

Base Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft^2
Foamular 250, Dow Styrofoam or XPS Minimum 1.0" thick	N/A	N/A

Top Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft^2
DensDeck, DensDeck Prime Minimum 0.25" thick	N/A	N/A

Note: All insulation shall be adhered to the deck in ½" to ¾" wide beads 12" o.c. of Weather-Tite Pourable Foam Insulation Adhesive or Sarnacol 2164. Please 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.

Vapor Retarders: (Optional) Any UL or FM approved asphaltic vapor retarder may be installed over the deck or the base layer of insulation

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 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.

Maximum Design Pressure: -202.5 psf (See General Limitation #9)

Membrane Type:	Single Ply, Thermoplastic, PVC
Deck Type 7I:	Recover, Insulated
Deck Description:	Min. 2500 psi structural concrete or concrete plank
System Type A(21):	One or more layers of insulation adhered with approved adhesive, membrane fully adhered

All General and System Limitations apply.

One or more layers of the following insulations:

Base Insulation Layer	**Insulation Fasteners (Table 3)**	**Fastener Density/ft^2**
Foamular 250, Dow Styrofoam or XPS Minimum 1.0" thick	N/A	N/A

Top Insulation Layer	**Insulation Fasteners (Table 3)**	**Fastener Density/ft^2**
High Density Wood Fiber Minimum 0.5" thick	N/A	N/A

Note: All insulation shall be adhered to the deck in ½" to ¾" wide beads 12" o.c. of Weather-Tite Pourable Foam Insulation Adhesive or Sarnacol 2164. Please 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.

Vapor Retarders:	(Optional) Any UL or FM approved asphaltic vapor retarder may be installed over the deck or the base layer of insulation
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:	-150.0 psf (with EPS) (See General Limitation #9) -162.5 psf (with Foamular 250, Styrofoam or XPS) (See General Limitation #9)

Membrane Type:	Single Ply, Thermoplastic, PVC
Deck Type 7I:	Recover, Insulated
Deck Description:	Min. 2500 psi structural concrete or concrete plank
System Type A(22):	One or more layers of insulation adhered with approved adhesive, membrane fully adhered

All General and System Limitations apply.

One or more layers of the following insulations:

Base Insulation Layer	**Insulation Fasteners (Table 3)**	**Fastener Density/ft^2**
ACFoam II, ACFoam III, ENRGY2, ENRGY 3, Sarnatherm Minimum 1.5" thick	N/A	N/A

Top Insulation Layer	**Insulation Fasteners (Table 3)**	**Fastener Density/ft^2**
High Density Wood Fiber Minimum 0.25" thick	N/A	N/A

Note: All insulation shall be adhered to the deck in ½" to ¾" wide beads 12" o.c. of Weather-Tite Pourable Foam Insulation Adhesive or Sarnacol 2164. Please 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.

Vapor Retarders:	(Optional) Any UL or FM approved asphaltic vapor retarder may be installed over the deck or the base layer of insulation
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:	-127.5 psf (See General Limitation #9)

Membrane Type:	Single Ply, Thermoplastic, PVC
Deck Type 7I:	Recover, Insulated
Deck Description:	Min. 2500 psi structural concrete or concrete plank
System Type A(23):	One or more layers of insulation adhered with approved adhesive, membrane fully adhered

All General and System Limitations apply.

Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft^2
ACFoam II, ACFoam III, Multi-Max FA, JM ISO 1, ISO 95+GL, Sarnatherm		
Minimum 1.5" thick	N/A	N/A
DensDeck, DensDeck Prime		
Minimum 0.5" thick	N/A	N/A

Note: All insulation shall be adhered to the deck in 3-3.5" wide beads spaced 12" o.c. of TITE-SET. Please 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.

Vapor Retarders: (Optional) Any UL or FM approved vapor retarder may be installed over the deck.

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.

Maximum Design Pressure -202.5 psf (See General Limitation #9)

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 -127.5 psf (See General Limitation #9)

Maximum Design Pressure: See Membrane Options above.

Membrane Type:	Single Ply, Thermoplastic, PVC
Deck Type 7I:	Recover, Insulated
Deck Description:	Min. 2500 psi structural concrete or concrete plank
System Type A(24):	One or more layers of insulation adhered with approved adhesive, membrane fully adhered

All General and System Limitations apply.

Base Insulation Layer	**Insulation Fasteners (Table 3)**	**Fastener Density/ft^2**
(Optional) ACFoam II, ACFoam III, Multi-Max FA, JM ISO 1, ISO 95+GL, Sarnatherm Minimum 1.5" thick	N/A	N/A
(Optional) DensDeck, DensDeck Prime Minimum 0.5" thick	N/A	N/A

Top Insulation Layer	**Insulation Fasteners (Table 3)**	**Fastener Density/ft^2**
ACFoam II, ACFoam III, Multi-Max FA, Sarnatherm Tapered	N/A	N/A

Note: All insulation shall be adhered to the deck in 3-3.5" wide beads spaced 12" o.c. of TITE-SET. Please 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.

Vapor Retarders:	(Optional) Any UL or FM approved vapor retarder may be installed over the deck.
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:	-45.0 psf (See General Limitation #9)

Membrane Type: Single Ply, Thermoplastic, PVC

Deck Type 7I: Recover, Insulated

Deck Description: Min. 2500 psi structural concrete or concrete plank

System Type A(25): One or more layers of insulation adhered with approved adhesive, membrane fully adhered

All General and System Limitations apply.

Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft^2
DensDeck, DensDeck Prime Minimum 0.5" thick	N/A	N/A

Note: All insulation shall be adhered to the deck in 3-3.5" wide beads spaced 12" o.c. of TITE-SET. Please 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.

Vapor Retarders: (Optional) Any UL or FM approved vapor retarder may be installed over the deck.

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.

Maximum Design Pressure -202.5 psf (See General Limitation #9)

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 -127.5 psf (See General Limitation #9)

Maximum Design Pressure: See Membrane Options above.

Membrane Type: Single Ply, Thermoplastic, PVC

Deck Type 7I: Recover, Insulated

Deck Description: Concrete/lightweight concrete/cementitious wood fiber/wood/steel

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

All General and System Limitations apply:

Base Insulation Layer	Fastener Density/ft^2	Fastener Type
AC Foam II, AC Foam Composite, AC Foam - 25 PSI		
Minimum 1.3" thick or tapered	1:2 ft^2	Any approved fastener listed in Table 3
Minimum 2" thick or tapered	1:4 ft^2	
E'NRG'Y-2, E'NRG'Y 2 Composite, E'NRG'Y 2 Plus, PSI-25		
Minimum 1.4" thick or tapered	1:2 ft^2	Any approved fastener listed in Table 3
Minimum 2" thick or tapered	1:4 ft^2	
DensDeck, DensDeck Prime		
Minimum ¼" thick	1:1.2 ft^2	Any approved fastener listed in Table 3
Minimum ½" thick	1:1.7 ft^2	
Multi-Max FA, Multi-Max FA - 25 PSI, Thermaroof Composite		
Minimum 1.25" thick or tapered	1:2 ft^2	Any approved fastener listed in Table 3
Minimum 2" thick or tapered	1:4 ft^2	
Sarnatherm, Sarnatherm-25 PSI, Sarnatherm-Composite, Sarnatherm Plus		
Minimum 1.4" thick	1:2 ft^2	Any approved fastener listed in Table 3
Minimum 2" thick	1:4 ft^2	
Pyrox, Millox, Pyrox-25 PSI, Millox-25 PSI, Whiteline		
Minimum 1.3" thick	1:2 ft^2	Any approved fastener listed in Table 3
Minimum 2" thick	1:4 ft^2	
Ultra M-II Iso/glas		
Minimum 1.2" thick or tapered	1:2 ft^2	Any approved fastener listed in Table 3
Minimum 2" thick or tapered	1:4 ft^2	
ISO 95+ GL		
Minimum 1.4" thick or tapered	1:2 ft^2	Any approved fastener listed in Table 3
Minimum 2" thick or tapered	1:4 ft^2	
High Density Wood Fiberboard		
Minimum 1" thick	1:2 ft^2	Any approved fastener listed in Table 3
Perlite		
Minimum ¾" thick	1:2 ft^2	Any approved fastener listed in Table 3

Note: Base layers of insulation shall be mechanically attached using the fastener density listed. 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. Insulation fasteners shall be tested for withdrawal resistance in compliance with Protocol TAS 105 to confirm compliance with the wind load requirements. Please refer to Roofing Application Standard RAS 117 for insulation attachment.

Top Insulation Layer	Fastener Density/ft^2	Fastener Type
(Optional) AC Foam II, AC Foam - 25 PSI Minimum 1.3" thick or tapered	N/A	N/A
(Optional) E'NRG'Y-2, E'NRG'Y 2 Plus, PSI-25 Minimum 1.4" thick or tapered	N/A	N/A
(Optional) DensDeck, DensDeck Prime Minimum ¼" thick	N/A	N/A
(Optional) Multi-Max FA, Multi-Max FA - 25 PSI Minimum 1.25" thick or tapered	N/A	N/A
(Optional) Sarnatherm, Sarnatherm-25 PSI, Sarnatherm Plus Minimum 1.4" thick	N/A	N/A
(Optional) Pyrox, Millox, Pyrox-25 PSI, Millox-25 PSI Minimum 1.3" thick	N/A	N/A
(Optional) Ultra M-II Iso/glas Minimum 1.2" thick or tapered	N/A	N/A
(Optional) ISO 95+ GL Minimum 1.4" thick or tapered	N/A	N/A
(Optional) High Density Wood Fiberboard Minimum 1" thick	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) An FMRC approved vapor retarder approved for use with hot asphalt may be applied to the deck or base insulation layer
Barrier:	(Optional) Minimum 1/4" gypsum or Dens-Deck or Atlas FR10 or FR50.
Membrane:	G410, G410 Felt, S327 or S327 Felt adhered with Sarnacol 2170 applied at 1.25 gal./sq. to the substrate and .5 gal./sq. to the back of the Membrane, or Sarnacol 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 7I:	Recover, Insulated
Deck Description:	Minimum 2500 psi structural concrete or concrete plank
System Type B(2):	Base Layer of insulation mechanically attached, optional top insulation layer adhered with approved adhesive.

All General and System Limitations apply:

Insulation for Base Layer	Fastener Density/ft^2	Fastener Type
ACFoam Supreme, H-Shield, Sarnatherm or H-Shield CG		
Minimum 1.5" thick	1:4	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 for Top Layer	Fastener Density/ft^2	Fastener Type
(Optional) ACFoam Supreme, H-Shield, Sarnatherm or H-Shield CG		
Minimum 1.5" thick	N/A	N/A
(Optional) DensDeck Prime, DensDeck DuraGuard		
Minimum ¼" thick	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 25 lbs/sq. or 0.75" wide beads of Olympic OlyBond 500 spaced 12" o.c.

Vapor Retarder:	(Optional) Any UL or FMRC approved vapor barrier approved for use with hot asphalt may be applied to the deck or perlite base layer.
Barrier:	(Optional) Minimum ¼ " gypsum or DensDeck or Atlas FR10 or FR 50
Membrane:	G410 PS is installed with a 3" wide heat welded seam. Membrane is rolled into insulation with a weighted roller.
Maximum Design Pressure:	-45 psf. (See General Limitation #9)

Membrane Type: Single Ply, Thermoplastic, PVC

Deck Type 7I: Recover, Insulated

Deck Description: Concrete/lightweight concrete/cementitious wood fiber/wood/steel

System Type C(1): All layers of insulation simultaneously attached, membrane adhered.

All General and System Limitations apply:

Base Insulation Layer	Fastener Density/ft^2	Fastener Type
AC Foam II, ACFoam III, AC Foam - 25 PSI, ACFoam Composite, ACFoam Supreme		
Minimum 1.3" thick or tapered	N/A	N/A
E'NRG'Y 2, E'NRG'Y 2 Composite, 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, Thermaroof, Thermaroof Plus		
Minimum 1.25" thick or tapered	N/A	N/A
Sarnatherm, Sarnatherm-25 PSI, Sarnatherm-Composite		
Minimum 1.4" thick or tapered	N/A	N/A
High Density Wood Fiberboard		
Minimum 1" thick	N/A	N/A
Pyrox, Millox, Pyrox-25 PSI, Millox-25 PSI, Whiteline		
Minimum 1.3" thick or tapered	N/A	N/A
Ultra M-II Iso/glas, Ultra M-II AEF		
Minimum 1.2" thick or tapered	N/A	N/A
ISO 95+ GL		
Minimum 1.4" thick or tapered	N/A	N/A
Perlite		
Minimum ¾" thick	N/A	N/A

Note: All 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 to Roofing Application Standard RAS 117 for insulation attachment.

Top Insulation Layer	Fastener Density/ft^2	Fastener Type
AC Foam II, AC Foam III, AC Foam - 25 PSI		
Minimum 1.3" thick or tapered	1:2 ft^2	Any approved fastener listed
Minimum 2" thick or tapered	1:4 ft^2	in Table 3
E'NRG'Y-2, E'NRG'Y 2 Plus, PSI-25		
Minimum 1.4" thick or tapered	1:2 ft^2	Any approved fastener listed
Minimum 2" thick or tapered	1:4 ft^2	in Table 3

DensDeck, DensDeck Prime		
Minimum ¼" thick	1:1.2 ft^2	Any approved fastener listed in Table 3
Minimum ½" thick	1:1.7 ft^2	
Sarnatherm, Sarnatherm-25 PSI, Sarnatherm Plus		
Minimum 1.4" thick	1:2 ft^2	Any approved fastener listed in Table 3
Minimum 2" thick	1:4 ft^2	
Pyrox, Millox, Pyrox-25 PSI, Millox-25 PSI,		
Minimum 1.3" thick	1:2 ft^2	Any approved fastener listed in Table 3
Minimum 2" thick	1:4 ft^2	
Ultra M-II Iso/glas		
Minimum 1.2" thick or tapered	1:2 ft^2	Any approved fastener listed in Table 3
Minimum 2" thick or tapered	1:4 ft^2	
ISO 95+ GL		
Minimum 1.4" thick or tapered	1:2 ft^2	Any approved fastener listed in Table 3
Minimum 2" thick or tapered	1:4 ft^2	
High Density Wood Fiberboard		
Minimum 1" thick	1:2 ft^2	Any approved fastener listed in Table 3

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. Insulation fasteners shall be tested for withdrawal resistance in compliance with Testing Application Standard TAS 105 to confirm compliance with the wind load requirements. Please refer to Roofing Application Standard RAS 117 for insulation attachment.

Vapor Retarder:	(Optional) Sarnavap vapor barrier applied directly to the deck or over base insulation layer.
Barrier:	(Optional) Minimum 1/4" gypsum or Dens-Deck or Atlas FR10 or FR50.
Membrane:	G410, G410 Felt, S327 or S327 Felt adhered with Sarnacol 2170 applied at 1.25 gal./sq. to the substrate and 0.5 gal./sq. to the back of the Membrane, or Sarnacol 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 7I: Recover, Insulated

Deck Description: Concrete/wood/steel

System Type C(2): All layers of insulation simultaneously attached, membrane adhered.

All General and System Limitations apply:

Base Insulation Layer	Fastener Density/ft^2	Fastener Type
AC Foam II, E'NRG'Y 2, Pyrox Minimum 1" thick or tapered	1:2 ft^2	Any approved fastener listed in Table 3

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. Insulation fasteners shall be tested for withdrawal resistance in compliance with Testing Application Standard TAS 105 to confirm compliance with the wind load requirements. Please refer to Roofing Application Standard RAS 117 for insulation attachment.

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

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

Membrane: G410, G410 Felt, S327 or S327 Felt adhered with Sarnacol LR2001 applied to the substrate at a rate of 200ft^2/gal.

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

Membrane Type: Single Ply, Thermoplastic, PVC

Deck Type 7I: Recover, Insulated

Deck Description: Minimum 2500 psi concrete or concrete plank or min. 18-22 ga. steel

System Type C(3): All layers of insulation simultaneously fastened; membrane fully adhered.

All General and System Limitations apply.

Insulation for Base Layer	Fastener Density/ft^2	Fastener Type
Any approved polyisocyanurate		
Minimum 1.5" thick	N/A	N/A

Note: All 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 to Roofing Application Standard RAS 117 for insulation attachment.

Insulation for Top Layer	Fastener Density/ft^2	Fastener Type
DensDeck Prime		
Minimum 5/8" thick	1:2	Sarnafasteners and Sarnaplates

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) Sarnavap vapor barrier applied directly to the deck.

Barrier: None.

Membrane: G410 or S327, adhered with Sarnacol 2170 applied at a rate of 0.75 – 2 gal/sq. to the substrate and 0.5 gal/sq. to the back of the membrane. Minimum 3" wide side lap is sealed with a 1.5" wide heat weld.

Maximum Design Pressures: -60.0 psf. (See General Limitation #7)

Membrane Type: Single Ply, Thermoplastic, PVC

Deck Type 7I: Recover, Insulated

Deck Description: Minimum 2500 psi concrete or concrete plank or min. 18-22 ga. steel

System Type C(4): All layers of insulation simultaneously fastened; membrane fully adhered.

All General and System Limitations apply.

Insulation for Base Layer	Fastener Density/ft^2	Fastener Type
Any approved polyisocyanurate		
Minimum 1.5" thick	N/A	N/A

Note: All 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 to Roofing Application Standard RAS 117 for insulation attachment.

Insulation for Top Layer	Fastener Density/ft^2	Fastener Type
DensDeck Prime		
Minimum 5/8" thick	1:2	Sarnafasteners and Sarnaplates

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) Sarnavap vapor barrier applied directly to the deck.

Barrier: None.

Membrane: G410 Felt or S327 Felt, adhered with Sarnocol 2121 adhesive applied at a rate of 2.0 – 2.5 gal/sq to substrate. Minimum 3" wide side lap is sealed with a 1.5" wide heat weld.

Maximum Design Pressures: -52.5 psf. (See General Limitation #7)

Membrane Type: Single Ply, Thermoplastic, PVC

Deck Type 7I: Recover, Insulated

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

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

All General and System Limitations apply:

Insulation Layer	Fastener Density/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
DensDeck, DensDeck Prime		
Minimum ¼" thick	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
High Density Wood Fiberboard		
Minimum 1" thick	N/A	N/A
Ultra M-II Iso/glas, Ultra M-II AEF		
Minimum 1.2" thick or tapered	N/A	N/A
Perlite (base layer only)		
Minimum ¾" thick	N/A	N/A

Note: All insulation 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 5/8" gypsum or ¼ " Dens-Deck or Atlas FR10 or FR50

Membrane: S327 or S327 Felt attached to deck as specified below.

Fastening #1: Any approved fastener listed herein with 2" Sarnadisc- plates (20 ga. Starlock Plate-Buildex) spaced maximum 12 in. o.c. within minimum 6 in. wide side laps. Laps spaced maximum 72.5 in. and sealed with a minimum 0.75in. wide heat weld on the inside and a minimum 1.5 in. heat weld on the outside.

Maximum Design Pressure -45 psf (See General Limitation # 7)

Fastening #2: Any approved fastener listed herein with approved discs spaced maximum 6" o.c. within the minimum 5.5" side lap spaced maximum 73" o.c. and sealed with a minimum 1.5" weld.

Maximum Design Pressure -52.5 psf (See General Limitation #7)

Fastening #3:	Any approved fastener listed herein 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 minimum 1.5" welds on each side. ***Maximum Design Pressure -52.5 psf (See General Limitation #7)***
Fastening #4:	Any approved fastener listed herein with Sarnadisc-XP plates (Heavy Duty SPM Plate-Buildex) spaced maximum 12 in. o.c. within minimum 5.5 in. wide side laps. Laps spaced maximum 73.5 in. o.c. and sealed with a minimum 1.5 in. wide heat weld. ***Maximum Design Pressure -45.0 psf (See General Limitation #7)***
Fastening #5:	Any approved fastener listed herein with Sarnadisc-XP plates (Heavy Duty SPM Plate-Buildex) spaced maximum 6 in. o.c. within minimum 5.5 in. wide side laps. Laps spaced maximum 73.5 in. o.c. and sealed with a minimum 1.5 in. wide heat weld. ***Maximum Design Pressure -75.0 psf (See General Limitation #7)***
Fastening #6:	Any approved fastener listed herein with 2" Sarnadisc plates (20 ga. Starlock Plate-Buildex) spaced maximum 6 in. o.c. within the minimum 6 in. wide side laps. Laps spaced maximum 72.5 in. and sealed with a minimum 0.75 in. wide heat weld on the inside and a minimum 1.5 in. heat weld on the outside. ***Maximum Design Pressure -82.5 psf (See General Limitation #7)***
Fastening #7:	Sarnabars spaced maximum 4.5 ft. o.c. secured to deck with, King Con, Concrete Spike, #14 HD, or CD-10 fasteners spaced maximum 12 inches o.c. ***Maximum Design Pressure -120.0 psf (See General Limitation #7)***
Fastening #8:	Sarnabar spaced maximum 4.5 ft. o.c secured to deck with Sarnafastener-Concrete, King Con, Concrete Spike, #14 HD, or CD-10 fasteners spaced maximum 6 inches o.c. ***Maximum Design Pressure -232.5 psf (See General Limitation #7)***
Fastening #9:	Sarnabars spaced 3' o.c. maximum, fastened with Sarnafasteners-XP spaced 6" o.c. through the field of the membrane and covered with a 7" minimum width cover strip with minimum 1.5" wide welds on each side. ***Maximum Design Pressure-232.5 psf (See General Limitation #7)***
Maximum Design Pressure:	See Fastening Pattern Above.

Membrane Type: Single Ply, Thermoplastic, PVC

Deck Type 7I: Recover, Insulated

Deck Description: Minimum 2500 psi concrete or concrete plank or min. 18-22 ga. steel

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

The following assembly is approved to a maximum design pressure listed with specific fastening patterns. No substitutions shall be made. All General and System Limitations apply.

All General and System Limitations apply.

One or more of the following.

Insulation Layer	Fastener Density/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
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 insulation 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 Retarders: (Optional) Sarnavap or a FMRC approved vapor barrier applied directly to the deck or over the base insulation layer.

Barrier: (Optional) Minimum 5/8" gypsum or ¼ " Dens-Deck or Atlas FR10 or FR50

Membrane: S327 attached to deck as specified below.

Fastening #1: Sarnafastener-XP screws (#15 SPM Buildex) with Sarnadisc-XP plates (Heavy Duty SPM Plate-Buildex) spaced 12 in. o.c. within 5.5 in. wide side laps. Laps spaced 73 in. o.c. and sealed with a 1.5 in. wide heat weld.
Maximum Design Pressure -45 psf. (See General Limitations # 7)

Fastening # 2:	Sarnafastener-XP screws (#15 SPM Buildex) with 2" Sarnadisc- plates (20 ga. Starlock Plate-Buildex) spaced 12 in. o.c. within 6 in. wide side laps. Laps spaced 72.5 in. and sealed with a 0.75 in. wide heat weld on the inside and a 1.5 in. heat weld on the outside. ***Maximum Design Pressure -45 psf. (See General Limitations # 7)***
Fastening #3:	Sarnafastener-XP screws (#15 SPM Buildex) with Sarnadisc-XP plates (Heavy Duty SPM Plate-Buildex) spaced 6 in. o.c. within 5.5 in. wide side laps. Laps spaced 73.5 in. o.c. and sealed with a 1.5 in. wide heat weld. ***Maximum Design Pressure -75 psf. (See General Limitations # 7)***
Fastening #4:	Sarnafastener-XP screws (#15 SPM Buildex) with 2" Sarnadisc plates (20 ga. Starlock Plate-Buildex) spaced 6 in. o.c. within the 6 in. wide side laps. Laps spaced 72.5 in. and sealed with a 0.75 in. wide heat weld on the inside and a 1.5 in. heat weld on the outside. ***Maximum Design Pressure -82.5 psf. (See General Limitations # 7)***
Fastening # 5:	Sarnabars spaced 3' o.c. maximum fastened with Sarnafasteners-XP 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 -112.5 psf. (See General Limitations # 7)***
Maximum Design Pressures:	See Fastening Pattern. (See General Limitations # 7)

Membrane Type:	Single Ply, Thermoplastic, PVC
Deck Type 7I:	Recover, Insulated
Deck Description:	Minimum 2500 psi concrete or concrete plank or min. 18-22 ga. steel
System Type D(3):	Membrane attached over preliminary fastened insulation.

All General and System Limitations apply.

One or more layers of any approved insulation.

Note: All insulation 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 Retarders:	(Optional) Sarnavap or a FMRC approved vapor barrier applied directly to the deck or over the base insulation layer.
Barrier:	(Optional) Minimum 5/8" gypsum, 1/4" Dens-Deck, or Atlas FR10 or FR50 secured with Dade County approved insulation fasteners at not less than 2 fasteners for a board with no dimension greater than 4' and not less than four fasteners for any board with any greater dimension than 4'.
Membrane:	S327 attached to deck as specified below with Sarnarail Polymer Batten Strips spaced at 114.5" o.c. within a 5.5" wide lap.
Fastening #1:	Sarnafasteners-XP fasteners spaced 6" o.c. through batten strip. Batten strip is lapped 8" and sealed with a 1.25" wide heat weld on outside edge and a 0.75" wide heat weld on inside edge. ***Maximum Design Pressure -52.5 psf. (See General Limitation #7)***
Fastening #2: ***Steel Deck Only***	Sarnafil MAXLoad fasteners spaced 12" o.c. through batten strip. Batten strip is lapped 14" and sealed with a 1.25" wide heat weld on outside edge and a 0.75" wide heat weld on inside edge. ***Maximum Design Pressure -52.5 psf. (See General Limitation #7)***
Fastening #3: ***Steel Deck Only***	Sarnafil MAXLoad fasteners spaced 6" o.c. through batten strip. Batten strip is lapped 8" and sealed with a 1.25" wide heat weld on outside edge and a 0.75" wide heat weld on inside edge. ***Maximum Design Pressure -67.5 psf. (See General Limitation #7)***
Maximum Design Pressures:	See Fastening Pattern. (See General Limitation #7)

Membrane Type:	Single Ply, Thermoplastic, PVC
Deck Type 7I:	Recover, Insulated
Deck Description:	Minimum 2500 psi concrete or concrete plank or min. 18-22 ga. steel
System Type D(4):	Membrane attached over preliminary fastened insulation.

All General and System Limitations apply.

One or more layers of any approved insulation.

Note: All insulation 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 Retarders:	(Optional) Sarnavap or a FMRC approved vapor barrier applied directly to the deck or over the base insulation layer.
Barrier:	(Optional) Minimum 5/8" gypsum, 1/4" Dens-Deck, or Atlas FR10 or FR50 secured with Dade County approved insulation fasteners at not less than 2 fasteners for a board with no dimension greater than 4' and not less than four fasteners for any board with any greater dimension than 4'.
Membrane:	S327 attached to deck as specified below. Sarnafasteners-XP fasteners and Sarnadisc-XPN plates spaced 6" o.c. within 5.5" wide laps spaced 114.5" o.c. Laps are sealed with a 1.75" wide heat weld on outside edge of lap.
Maximum Design Pressures:	-60.0 psf. (See General Limitation #7)

Membrane Type: Single Ply, Thermoplastic, PVC

Deck Type 7I: Recover, Insulated

Deck Description: Minimum 2500 psi concrete or concrete plank or min. 18-22 ga. steel

System Type D(5): Membrane attached over preliminary fastened insulation.

All General and System Limitations apply.

One or more layers of any approved insulation.

Note: All insulation 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 Retarders: (Optional) Sarnavap or a FMRC approved vapor barrier applied directly to the deck or over the base insulation layer.

Barrier: (Optional) Minimum 5/8" gypsum, 1/4" Dens-Deck, or Atlas FR10 or FR50 secured with Dade County approved insulation fasteners at not less than 2 fasteners for a board with no dimension greater than 4' and not less than four fasteners for any board with any greater dimension than 4'.

Membrane: Minimum 45 mil thick S327 attached to deck as specified below with Sarnarail Polymer Batten Strips.

Fastening #1: Sarnafasteners-XP fasteners spaced 6" o.c. through batten strip spaced maximum 73.25" o.c. within the 5.5" wide side lap. Batten strip splice joints are made by overlapping the batten 12" and securing with two Sarnafastener XP screws spaced 6" o.c. Laps are sealed with at 1.5" wide heat weld on the outside edge and 1.0" wide heat weld on the inside edge.
Maximum Design Pressure -75.0 psf. (See General Limitation #7)

Fastening #2: Sarnafasteners-XP fasteners spaced 6" o.c. through batten strip spaced maximum 144" o.c. within the 5.5" wide side lap. Batten strip splice joints are made by overlapping the batten 12" and securing with two Sarnafastener XP screws spaced 6" o.c. Laps are sealed with at 1.5" wide heat weld on the outside edge and 1.0" wide heat weld on the inside edge.
Maximum Design Pressure -52.5 psf. (See General Limitation #7)

Fastening #3:
Steel Deck Only Sarnafil MAXLoad fasteners spaced 18" o.c. through batten strip spaced maximum 73.25" o.c. within the 5.5" wide side lap. Batten strip splice joints are made by overlapping the batten 24" and securing with two Sarnafil MAXLoad screws spaced 18" o.c. Laps are sealed with at 1.5" wide heat weld on the outside edge and 1.0" wide heat weld on the inside edge.
Maximum Design Pressure -45.0 psf. (See General Limitation #7)

Fastening #4: Sarnafasteners-XP fasteners spaced 12" o.c. through batten strip spaced maximum 73.25" o.c. within the 5.5" wide side lap. Batten strip splice joints are made by overlapping the batten 18" and securing with two Sarnafastener XP screws spaced 12" o.c. Laps are sealed with at 1.5" wide heat weld on the outside edge and 1.0" wide heat weld on the inside edge.
Maximum Design Pressure -45.0 psf. (See General Limitation #7)

Maximum Design Pressures: See Fastening Pattern. (See General Limitation #7)

Membrane Type:	Single Ply, Thermoplastic, PVC
Deck Type 7I:	Recover, Insulated
Deck Description:	Min. 18-22 ga. steel
System Type D(6):	Membrane attached over preliminary fastened insulation.

All General and System Limitations apply.

One or more layers of any approved insulation.

Note: All insulation 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 Retarders:	(Optional) Sarnavap or a FMRC approved vapor barrier applied directly to the deck or over the base insulation layer.
Barrier:	(Optional) Minimum 5/8" gypsum, 1/4" Dens-Deck, or Atlas FR10 or FR50 secured with Dade County approved insulation fasteners at not less than 2 fasteners for a board with no dimension greater than 4' and not less than four fasteners for any board with any greater dimension than 4'.
Membrane:	Minimum 48 mil thick S327 attached to deck as specified below with Sarnarail Polymer Batten Strips. Sarnafil MAXLoad fasteners spaced 18" o.c. through batten strip spaced maximum 73.25" o.c. within the 5.5" wide side lap. Batten strip splice joints are made by overlapping the batten 24" and securing with two Sarnafil MAXLoad screws spaced 18" o.c. Laps are sealed with at 1.5" wide heat weld on the outside edge and 1.0" wide heat weld on the inside edge.
Maximum Design Pressures:	-52.5 psf. (See General Limitation #7)

Membrane Type: Single Ply, Thermoplastic, PVC

Deck Type 7I: Recover, Insulated

Deck Description: Minimum 2500 psi concrete or concrete plank or min. 18-22 ga. steel

System Type D(7): Membrane attached over preliminary fastened insulation.

All General and System Limitations apply.

One or more layers of any approved insulation.

Note: All insulation 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 Retarders: (Optional) Sarnavap or a FMRC approved vapor barrier applied directly to the deck or over the base insulation layer.

Barrier: (Optional) Minimum 5/8" gypsum, 1/4" Dens-Deck, or Atlas FR10 or FR50 secured with Dade County approved insulation fasteners at not less than 2 fasteners for a board with no dimension greater than 4' and not less than four fasteners for any board with any greater dimension than 4'.

Membrane: Minimum 48 mil thick S327 attached to deck as specified below with Sarnarail Polymer Batten Strips.

Sarnafasteners-XP fasteners spaced 6" o.c. through batten strip spaced maximum 144" o.c. within the 5.5" wide side lap. Batten strip splice joints are made by overlapping the batten 12" and securing with two Sarnafastener XP screws spaced 6" o.c. Laps are sealed with at 1.5" wide heat weld on the outside edge and 1.0" wide heat weld on the inside edge.

Maximum Design Pressures: -60.0 psf. (See General Limitation #7)

Membrane Type:	Single Ply, Thermoplastic, PVC
Deck Type 7I:	Recover, Insulated
Deck Description:	Minimum 2500 psi concrete or concrete plank or min. 18-22 ga. steel
System Type D(8):	Membrane attached over preliminary fastened insulation.

All General and System Limitations apply.

One or more layers of any approved insulation.

Note: All insulation 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 Retarders:	(Optional) Sarnavap or a FMRC approved vapor barrier applied directly to the deck or over the base insulation layer.
Barrier:	(Optional) Minimum 5/8" gypsum, 1/4" Dens-Deck, or Atlas FR10 or FR50 secured with Dade County approved insulation fasteners at not less than 2 fasteners for a board with no dimension greater than 4' and not less than four fasteners for any board with any greater dimension than 4'.
Membrane:	Minimum 45 mil thick S327 attached to deck as specified below.
Fastening #1:	Sarnafasteners-XP fasteners and Sarnadisc XPN plates spaced 12" o.c. within 5.5" wide side laps spaced maximum 54" o.c. Laps are sealed with a minimum 1.6" wide outside heat weld. ***Maximum Design Pressure -60.0 psf. (See General Limitation #7)***
Fastening #2:	Sarnafasteners-XP fasteners and Sarnadisc XPN plates spaced 6" o.c. within 5.5" wide side laps spaced maximum 54" o.c. Laps are sealed with a minimum 1.6" wide outside heat weld. ***Maximum Design Pressure -90.0 psf. (See General Limitation #7)***
Fastening #3:	Sarnafasteners-XP fasteners and Sarnarail Polymer Batten Strip spaced 12" o.c. within 5.5" wide side laps spaced maximum 54" o.c. Laps are sealed with a minimum 1" wide outside heat weld and a minimum 5/8" wide inside heat weld. ***Maximum Design Pressure -52.5 psf. (See General Limitation #7)***
Maximum Design Pressures:	See Fastening Pattern. (See General Limitation #7)

Membrane Type: Single Ply, Thermoplastic, PVC

Deck Type 7I: Recover, Insulated

Deck Description: Min. 18-22 ga. steel

System Type D(9): Membrane attached over preliminary fastened insulation.

All General and System Limitations apply.

One or more layers of any approved insulation.

Note: All insulation 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 Retarders: (Optional) Sarnavap or a FMRC approved vapor barrier applied directly to the deck or over the base insulation layer.

Barrier: (Optional) Minimum 5/8" gypsum, 1/4" Dens-Deck, or Atlas FR10 or FR50 secured with Dade County approved insulation fasteners at not less than 2 fasteners for a board with no dimension greater than 4' and not less than four fasteners for any board with any greater dimension than 4'.

Membrane: Minimum 45 mil thick S327 attached to deck as specified below.

Fastening #1: Sarnafastener MAXLoad fasteners and Sarnarail Polymer Batten Strip spaced 24" o.c. within 5.5" wide side laps spaced maximum 54" o.c. Laps are sealed with a minimum 1" wide outside heat weld and a minimum 5/8" wide inside heat weld.

Maximum Design Pressure -45.0 psf. (See General Limitation #7)

Fastening #2: Sarnafastener MAXLoad fasteners and Sarnarail Polymer Batten Strip spaced 18" o.c. within 5.5" wide side laps spaced maximum 54" o.c. Laps are sealed with a minimum 1" wide outside heat weld and a minimum 5/8" wide inside heat weld.

Maximum Design Pressure -52.5 psf. (See General Limitation #7)

Fastening #3: Sarnafastener MAXLoad fasteners and Sarnarail Polymer Batten Strip spaced 12" o.c. within 5.5" wide side laps spaced maximum 54" o.c. Laps are sealed with a minimum 1" wide outside heat weld and a minimum 5/8" wide inside heat weld.

Maximum Design Pressure -67.5 psf. (See General Limitation #7)

Fastening #4: Sarnafastener MAXLoad fasteners and Sarnarail Polymer Batten Strip spaced 6" o.c. within 5.5" wide side laps spaced maximum 54" o.c. Laps are sealed with a minimum 1" wide outside heat weld and a minimum 5/8" wide inside heat weld.

Maximum Design Pressure -112.5 psf. (See General Limitation #7)

Fastening #5: Sarnafastener MAXLoad fasteners and Sarnadisc MAXLoad plates spaced 24" o.c. within 6.5" wide side laps spaced maximum 53" o.c. Laps are sealed with a minimum 1.6"" wide outside heat weld.

Maximum Design Pressure -45.0 psf. (See General Limitation #7)

Fastening #6:	Sarnafastener MAXLoad fasteners and Sarnadisc MAXLoad plates spaced 18" o.c. within 6.5" wide side laps spaced maximum 53" o.c. Laps are sealed with a minimum 1.6"" wide outside heat weld. ***Maximum Design Pressure -52.5 psf. (See General Limitation #7)***
Fastening #7:	Sarnafastener MAXLoad fasteners and Sarnadisc MAXLoad plates spaced 12" o.c. within 6.5" wide side laps spaced maximum 53" o.c. Laps are sealed with a minimum 1.6"" wide outside heat weld. ***Maximum Design Pressure -60.0 psf. (See General Limitation #7)***
Fastening #8:	Sarnafastener MAXLoad fasteners and Sarnadisc MAXLoad plates spaced 6" o.c. within 6.5" wide side laps spaced maximum 53" o.c. Laps are sealed with a minimum 1.6"" wide outside heat weld. ***Maximum Design Pressure -105.0 psf. (See General Limitation #7)***
Fastening #9:	Sarnafastener MAXLoad fasteners and Sarnadisc MAXLoad plates spaced 12" o.c. within 7" wide side laps spaced maximum 113" o.c. Laps are sealed with a minimum 1.5"" wide outside heat weld. ***Maximum Design Pressure -45.0 psf. (See General Limitation #7)***
Maximum Design Pressures:	See Fastening Pattern. (See General Limitation #7)

Membrane Type:	Single Ply, Thermoplastic, PVC
Deck Type 7I:	Recover, Insulated
Deck Description:	Concrete / Steel
System Type D(10):	Membrane attached over preliminary fastened insulation.

All General and System Limitations apply.

One or more layers of any approved insulation.

Note: All insulation 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 Retarders:	(Optional) Sarnavap or a FMRC approved vapor barrier applied directly to the deck or over the base insulation layer.
Barrier:	(Optional) Minimum 5/8" gypsum, 1/4" Dens-Deck, or Atlas FR10 or FR50 secured with Dade County approved insulation fasteners at not less than 2 fasteners for a board with no dimension greater than 4' and not less than four fasteners for any board with any greater dimension than 4'.
Membrane:	Minimum 45 mil thick S327 attached to deck as specified below.
Fastening #1: ***Steel Deck Only***	Sarnafil MAXLoad fasteners and ¾" wide Sarnarail Polymer Batten Strip spaced 6" o.c. within 5.5" wide side laps spaced maximum 114.5" o.c. Batten Strip is lapped 8" within lap to provide a minimum 2 screw securement in lap. Laps are sealed with a minimum 1.25" wide outside edge heat weld and minimum 0.75" wide inside edge heat weld. ***Maximum Design Pressure -67.5 psf (See General Limitation #7)***
Fastening #2: ***Steel Deck Only***	Sarnafil MAXLoad fasteners and ¾" wide Sarnarail Polymer Batten Strip spaced 12" o.c. within 5.5" wide side laps spaced maximum 114.5" o.c. Batten Strip is lapped 14" within lap to provide a minimum 2 screw securement in lap. Laps are sealed with a minimum 1.25" wide outside edge heat weld and minimum 0.75" wide inside edge heat weld. ***Maximum Design Pressure -45.0 psf (See General Limitation #7)***
Fastening #3: ***Steel or Concrete Deck Only***	Sarnafasteners-XP fasteners or ITW Buildex Large Head #15 Roofgrip fasteners and ¾" wide Sarnarail Polymer Batten Strip spaced 6" o.c. within 5.5" wide side laps spaced maximum 114.5" o.c. Batten Strip is lapped 8" within lap to provide a minimum 2 screw securement in lap. Laps are sealed with a minimum 1.25" wide outside edge heat weld and minimum 0.75" wide inside edge heat weld. ***Maximum Design Pressure -60.0 psf. (See General Limitation #7)***
Maximum Design Pressures:	See Fastening Pattern. (See General Limitation #7)

Membrane Type: Single Ply, Thermoplastic, PVC

Deck Type 7I: Recover, Insulated

Deck Description: Steel

System Type D(11): Membrane attached over preliminary fastened insulation.

All General and System Limitations apply.

One or more layers of any approved insulation.

Note: All insulation 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 Retarders: (Optional) Sarnavap or a FMRC approved vapor barrier applied directly to the deck or over the base insulation layer.

Barrier: (Optional) Minimum 5/8" gypsum, 1/4" Dens-Deck, or Atlas FR10 or FR50 secured with Dade County approved insulation fasteners at not less than 2 fasteners for a board with no dimension greater than 4' and not less than four fasteners for any board with any greater dimension than 4'.

Membrane: Minimum 45 mil thick S327 attached to deck as specified below.

Sarnafil MAXLoad fasteners and ¾" wide Sarnarail Polymer Batten Strip spaced 6" o.c. within 5.5" wide side laps spaced maximum 114.5" o.c. Batten Strip is lapped 8" within lap to provide a minimum 2 screw securement in lap. Laps are sealed with a minimum 1.25" wide outside edge heat weld and minimum 0.75" wide inside edge heat weld.

Maximum Design Pressures: -75.0 psf (See General Limitation #7)

Membrane Type:	Single Ply, Thermoplastic, PVC
Deck Type 7I:	Recover, Insulated
Deck Description:	Concrete / Steel
System Type D(12):	Membrane attached over preliminary fastened insulation.

All General and System Limitations apply.

One or more layers of any approved insulation.

Note: All insulation 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 Retarders:	(Optional) Sarnavap or a FMRC approved vapor barrier applied directly to the deck or over the base insulation layer.
Barrier:	(Optional) Minimum 5/8" gypsum, 1/4" Dens-Deck, or Atlas FR10 or FR50 secured with Dade County approved insulation fasteners at not less than 2 fasteners for a board with no dimension greater than 4' and not less than four fasteners for any board with any greater dimension than 4'.
Membrane:	Minimum 45 mil thick S327 attached to deck as specified below.
Fastening #1: ***Steel Deck Only***	Sarnafil MAXLoad fasteners and Sarnadisc MAXLoad plates spaced 6" o.c. within 7" wide side laps spaced maximum 113" o.c. Laps are sealed with a minimum 0.875" wide outside edge heat weld. ***Maximum Design Pressure -60.0 psf (See General Limitation #7)***
Fastening #2: ***Steel or Concrete Deck Only***	Sarnafasteners-XP fasteners and Sarnadisc XPN plates spaced 6" o.c. within 5.5" wide side laps spaced maximum 114.5" o.c. Laps are sealed with a minimum 0.5" wide outside edge heat weld. ***Maximum Design Pressure -45.0 psf. (See General Limitation #7)***
Maximum Design Pressures:	See Fastening Pattern. (See General Limitation #7)

Membrane Type:	Single Ply, Thermoplastic, PVC
Deck Type 7:	Recover, Non-Insulated
Deck Description:	Concrete/lightweight concrete/cementitious wood fiber/steel
System Type F(1):	Membrane adhered to sustrate.

All General and System Limitations apply:

Barrier:	None
Membrane:	G410, G410 Felt, S327 or S327 Felt adhered with Sarnacol 2170 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 7:	Recover, Non-Insulated
Deck Description:	Structural Concrete
System Type F(2):	Membrane adhered to existing smooth BUR

All General and System Limitations apply:

Barrier:	None
Membrane:	G410, G410 Felt, S327 or S327 Felt adhered with Sarnacol LR2001 applied to the substrate at a rate of 200ft^2/gal.
Maximum Design Pressure:	-300 psf (See General Limitation #9)

RECOVER SYSTEM LIMITATIONS:

1 All System Limitations and General Limitations shall apply. See specific deck type Notice of Acceptance for deck type System Limitations.

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