



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)

Kelly Company/2001 Inc.
325 Thomaston Avenue
Waterbury, CT 06702

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 the BCCO and accepted by the Building Code and Product Review Committee to be used in Miami Dade County and other areas where allowed by the Authority Having Jurisdiction (AHJ).

This NOA shall not be valid after the expiration date stated below. The Miami-Dade County Product Control Division (In Miami Dade County) and/or the AHJ (in areas other than Miami Dade County) reserve the right to have this product or material tested for quality assurance purposes. If this product or material fails to perform in the accepted manner, the manufacturer will incur the expense of such testing and the AHJ may immediately revoke, modify, or suspend the use of such product or material within their jurisdiction. BORA reserves the right to revoke this acceptance, if it is determined by Miami-Dade County Product Control Division that this product or material fails to meet the requirements of the applicable building code.

This product is approved as described herein, and has been designed to comply with the High Velocity Hurricane Zone of the Florida Building Code.

DESCRIPTION: 2001 Inc. Single Ply PVC Roof Systems over Recover Decks

LABELING: Each unit shall bear a permanent label with the manufacturer's name or logo, city, state and following statement: "Miami-Dade County Product Control Approved", unless otherwise noted herein.

RENEWAL of this NOA shall be considered after a renewal application has been filed and there has been no change in the applicable building code negatively affecting the performance of this product.

TERMINATION of this NOA will occur after the expiration date or if there has been a revision or change in the materials, use, and/or manufacture of the product or process. Misuse of this NOA as an endorsement of any product, for sales, advertising or any other purposes shall automatically terminate this NOA. Failure to comply with any section of this NOA shall be cause for termination and removal of NOA.

ADVERTISEMENT: The NOA number preceded by the words Miami-Dade County, Florida, and followed by the expiration date may be displayed in advertising literature. If any portion of the NOA is displayed, then it shall be done in its entirety.

INSPECTION: A copy of this entire NOA shall be provided to the user by the manufacturer or its distributors and shall be available for inspection at the job site at the request of the Building Official.

This NOA consists of pages 1 through 22.
 The submitted documentation was reviewed by Frank Zuloaga, RRC



NOA No.: 02-1022.06
Expiration Date: 05/16/07
Approval Date: 12/05/02
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ROOFING SYSTEM APPROVAL

Category: Roofing
Sub-Category: Single Ply
Material: PVC
Deck Type: Recover
Maximum Design Pressure -232 psf (See Specific System Herein)
Fire Classification: See General Limitation #1

TRADE NAMES OF PRODUCTS MANUFACTURED OR LABELED BY APPLICANT:

TABLE 1

<u>Product</u>	<u>Dimensions</u>	<u>Test Specification</u>	<u>Product Description</u>
2001 PVC	Various	ASTM D 4434	Fiberglass reinforced PVC roofing membrane.
2001 PVC Felt	Various	ASTM D 4434	Fiberglass reinforced PVC roofing membrane with a non-woven felt backing.
2001 PVC Polyester	Various	ASTM D 4434	Polyester reinforced PVC roofing membrane.
2001 PVC Felt Polyester	Various	ASTM D 4434	Polyester reinforced PVC roofing membrane.

APPROVED INSULATIONS:

TABLE 2

<u>Product Name</u>	<u>Product Description</u>	<u>Manufacturer (With Current NOA)</u>
ACFoam II, ACFoam III, ACFoam 25 PSI, ACFoam Supreme	Isocyanurate Insulation	Atlas Roofing Corp.
ACFoam Composite	Isocyanurate Insulation with perlite facer	Atlas Roofing Corp.
Dens Deck	Silicon treated gypsum	G-P Products
E'NRG'Y 2, E'NRG'Y 2 PSI-25	Isocyanurate Insulation	Johns Manville
E'NRG'Y 2 Composite	Isocyanurate Insulation with perlite facer	Johns Manville
E'NRG'Y 2 Plus	Isocyanurate Insulation with wood fiberboard facer	Johns Manville
E'NRG'Y Gypsum Composite	Isocyanurate Insulation with gypsum board facer	Johns Manville
EPS	Expanded polystyrene	Generic
XPS	Extruded polystyrene	Generic
High Density Wood Fiberboard	Wood fiber insulation	Generic



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APPROVED INSULATIONS:

TABLE 2

Product Name	Product Description	Manufacturer (With Current NOA)
Perlite Insulation Board	Perlite Insulation	Generic
Type X Gypsum	Gypsum Wallboard	Generic
ISO 95+ GL	Isocyanurate Insulation	Firestone
Pyrox, Pyrox 25 PSI, Whiteline	Isocyanurate Insulation	Apache Products
Millox, Millox 25 PSI	Isocyanurate Insulation with wood fiberboard facer	Apache Products
Multi-Max FA, FA 25 PSI	Isocyanurate Insulation	Rmax, Inc.
Thermarroof, Thermarroof Plus	Isocyanurate Insulation	Rmax, Inc.
Ultra M-II Iso/glas	Isocyanurate Insulation	Homasote Co.
Sarnatherm	Isocyanurate insulation board.	Sarnafil, Inc.
Sarnatherm Composite	Isocyanurate insulation board with perlite facer.	Sarnafil, Inc.
Sarnatherm Plus	Isocyanurate board with wood fiberboard facer.	Sarnafil, Inc.
Sarnatherm 25 PSI	Polyisocyanurate insulation board.	Sarnafil, Inc.

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 & #15 Roofgrip Fasteners	Insulation fastener for wood, steel and concrete.		ITW Buildex Corp.
6.	AccuTrac Hextra	Insulation fastener for wood, steel and concrete		ITW Buildex Corp.



APPROVED FASTENERS:

TABLE 3

Fastener Number	Product Name	Product Description	Dimensions	Manufacturer (With Current NOA)
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 Mfg. Group, Inc.
13.	Olympic Fastener ASAP	Pre-assembled Insulation fastener and plate		Olympic Mfg. Group, Inc.
14.	Olympic Polypropylene	Polypropylene plastic plate	3.25" round	Olympic Mfg. Group, Inc.
15.	Olympic G-2	3.5" round galvalume AZ55 steel plate	3.5" round	Olympic Mfg. Group, Inc.
16.	Olympic Standard	3" round galvalume AZ50 steel plate	3" round	Olympic Mfg. 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.



APPROVED FASTENERS:

TABLE 3

Fastener Number	Product Name	Product Description	Dimensions	Manufacturer (With Current NOA)
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.

EVIDENCE SUBMITTED:

<u>Test Agency</u>	<u>Test Identifier</u>	<u>Description</u>	<u>Date</u>
Factory Mutual Research Corp.	J.I. 0X3A3.AM	Wind Uplift	07/31/94
Factory Mutual Research Corp.	J.I. 0P6A6.AM	Wind Uplift	03/03/94
Factory Mutual Research Corp.	J.I.2X2A5.AM	Wind Uplift	07/31/94
Underwriters Laboratories, Inc.	R8992	Fire Classification	1994
Factory Mutual Research Corp.	J.I. 1Z5A6.AM	Wind Uplift	07/18/97
Factory Mutual Research Corp.	J.I. 4B3A2.AM	Wind Uplift	06/19/97
Factory Mutual Research Corp.	J.I. 0B9A0.AM	Wind Uplift	10/22/96
Factory Mutual Research Corp.	J.I. 1B7A5.AM	Wind Uplift	02/23/98
Factory Mutual Research Corp.	3001580	Wind Uplift	11/16/98
Factory Mutual Research Corp.	3003337	Wind Uplift	06/11/99
Celotex Technical Center	MTS Job No. 258215	Wind Uplift	09/09/97



APPROVED ASSEMBLIES

- Membrane Type:** Single Ply, Thermoplastic, PVC
- Deck Type 7I:** Recover
- 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	Insulation Fasteners (Table 3)	Fastener Density/ft²
AC Foam II, AC Foam III, AC Foam - 25 PSI, AC Foam Composite (bottom layer only), AC Foam 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, any of the above tapered Minimum 1.4" thick	N/A	N/A
Dens-Deck Minimum ¼" thick	N/A	N/A
Multi-Max FA, Multi-Max FA - 25 PSI, Thermarroof, Thermarroof Plus, any of the above tapered Minimum 1.25" thick	N/A	N/A
Sarnatherm, Sarnatherm-25 PSI, Sarnatherm-Composite (bottom layer only), any of the above tapered Minimum 1.4" thick	N/A	N/A
High Density Wood Fiberboard Minimum 1" thick	N/A	N/A
Pyrox, Millox, Pyrox-25 PSI, Millox-25 PSI, Whiteline, any of the above tapered Minimum 1.3" thick	N/A	N/A
Ultra M-II Iso/glas, Ultra M-II AEF, or tapered Minimum 1.2" thick	N/A	N/A
ISO 95+ GL, or tapered Minimum 1.4" thick	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 ft² 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 ¼” gypsum or Dens-Deck or Atlas FR10 or FR50.

Membrane: 2001 smooth backed or 2001 felt backing 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
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	Insulation Fasteners (Table 3)	Fastener Density/ft²
AC Foam II, or tapered Minimum 1.3" thick	N/A	N/A
E'NRG'Y 2, or tapered Minimum 1.4" 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 with Sarnacol LR2001 adhesive and at a rate of 200 ft²/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: 2001 Felt Back membrane, 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.
 Or
 2001 smooth backed membrane, 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 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
Deck Description: Concrete/lightweight concrete/cementitious wood fiber/wood/steel
System Type B: Base layer of insulation mechanically attached, top layer fully adhered with approved asphalt, membrane adhered.

All General and System Limitations apply:

Base Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft²
AC Foam II, AC Foam Composite (bottom layer only), AC Foam - 25 PSI, any of the above tapered		
Minimum 1.3" thick	Any approved fastener in Table 3	1:2 ft ²
Minimum 2" thick	Any approved fastener in Table 3	1:4 ft ²
E'NRG'Y-2, E'NRG'Y 2 Composite (bottom layer only), E'NRG'Y 2 Plus, PSI-25, any of the above tapered		
Minimum 1.4" thick	Any approved fastener in Table 3	1:2 ft ²
Minimum 2" thick	Any approved fastener in Table 3	1:4 ft ²
Dens-Deck		
Minimum ¼" thick	Any approved fastener in Table 3	1:1.2 ft ²
Minimum ½" thick	Any approved fastener in Table 3	1:1.7 ft ²
Multi-Max FA, Multi-Max FA - 25 PSI, Thermarof Composite (bottom layer only), any of the above tapered		
Minimum 1.25" thick	Any approved fastener in Table 3	1:2 ft ²
Minimum 2" thick	Any approved fastener in Table 3	1:4 ft ²
Sarnatherm, Sarnatherm-25 PSI, Sarnatherm-Composite (bottom layer only), Sarnatherm Plus		
Minimum 1.4" thick	Any approved fastener in Table 3	1:2 ft ²
Minimum 2" thick	Any approved fastener in Table 3	1:4 ft ²
Pyrox, Millox, Pyrox-25 PSI, Millox-25 PSI, Whiteline (bottom layer only)		
Minimum 1.3" thick	Any approved fastener in Table 3	1:2 ft ²
Minimum 2" thick	Any approved fastener in Table 3	1:4 ft ²
Ultra M-II Iso/glas, or tapered		
Minimum 1.2" thick	Any approved fastener in Table 3	1:2 ft ²
Minimum 2" thick	Any approved fastener in Table 3	1:4 ft ²
ISO 95+ GL, or tapered		
Minimum 1.4" thick	Any approved fastener in Table 3	1:2 ft ²
Minimum 2" thick	Any approved fastener in Table 3	1:4 ft ²
High Density Wood Fiberboard		
Minimum 1" thick	Any approved fastener in Table 3	1:2 ft ²
Perlite (base layer only)		
Minimum ¾" thick	Any approved fastener in Table 3	1:2 ft ²



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

**Insulation Fasteners
(Table 3)**

**Fastener
Density/ft²**

Any of the insulation listed for base layer

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 ft². 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: 2001 smooth backed or 2001 felt backing 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
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	Insulation Fasteners (Table 3)	Fastener Density/ft²
AC Foam II, AC Foam III, AC Foam - 25 PSI, AC Foam Composite (bottom layer only), AC Foam 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, any of the above tapered Minimum 1.4" thick	N/A	N/A
Dens-Deck Minimum ¼" thick	N/A	N/A
Multi-Max FA, Multi-Max FA - 25 PSI, Thermarroof, Thermarroof Plus, any of the above tapered Minimum 1.25" thick	N/A	N/A
Sarnatherm, Sarnatherm-25 PSI, Sarnatherm-Composite (bottom layer only), any of the above tapered Minimum 1.4" thick	N/A	N/A
High Density Wood Fiberboard Minimum 1" thick	N/A	N/A
Pyrox, Millox, Pyrox-25 PSI, Millox-25 PSI, Whiteline, any of the above tapered Minimum 1.3" thick	N/A	N/A
Ultra M-II Iso/glas, Ultra M-II AEF or tapered Minimum 1.2" thick	N/A	N/A
ISO 95+ GL, or tapered Minimum 1.4" thick	N/A	N/A
Perlite (base layer only) 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	Insulation Fasteners (Table 3)	Fastener Density/ft²
AC Foam II, AC Foam III, AC Foam - 25 PSI, any of the above tapered Minimum 1.3" thick	Any approved fastener in Table 3	1:2 ft ²
Minimum 2" thick	Any approved fastener in Table 3	1:4 ft ²
E'NRG'Y-2, E'NRG'Y 2 Plus, PSI-25, any of the above tapered		



Minimum 1.4" thick	Any approved fastener in Table 3	1:2 ft²
Minimum 2" thick	Any approved fastener in Table 3	1:4 ft²
Dens-Deck		
Minimum ¼" thick	Any approved fastener in Table 3	1:1.2 ft²
Minimum ½" thick	Any approved fastener in Table 3	1:1.7 ft²
Sarnatherm, Sarnatherm-25 PSI, Sarnatherm-Composite, Sarnatherm Plus		
Minimum 1.4" thick	Any approved fastener in Table 3	1:2 ft²
Minimum 2" thick	Any approved fastener in Table 3	1:4 ft²
Pyrox, Millox, Pyrox-25 PSI, Millox-25 PSI, Whiteline (bottom layer only)		
Minimum 1.3" thick	Any approved fastener in Table 3	1:2 ft²
Minimum 2" thick	Any approved fastener in Table 3	1:4 ft²
Ultra M-II Iso/glas, or tapered		
Minimum 1.2" thick	Any approved fastener in Table 3	1:2 ft²
Minimum 2" thick	Any approved fastener in Table 3	1:4 ft²
ISO 95+ GL, or tapered		
Minimum 1.4" thick	Any approved fastener in Table 3	1:2 ft²
Minimum 2" thick	Any approved fastener in Table 3	1:4 ft²
High Density Wood Fiberboard		
Minimum 1" thick	Any approved fastener in Table 3	1:2 ft²

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:	2001 smooth backed or 2001 felt backing 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
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	Insulation Fasteners (Table 3)	Fastener Density/ft²
AC Foam II, E'NRG'Y 2, Pyrox, any of the above tapered Minimum 1 thick	Any approved fastener in Table 3	1:2 ft²

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 ¼” gypsum or Dens-Deck or Atlas FR10 or FR50.

Membrane: 2001 or 2001 feltback adhered with Sarnacol LR2001 applied to the substrate at a rate of 200ft²/gal.

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



Membrane Type: Single Ply, Thermoplastic, PVC
Deck Type 7I: Recover
Deck Description: Steel or Structural concrete decks
System Type D(1): Membrane attached over preliminary fastened insulation.

All General and System Limitations apply:

Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft²
AC Foam II, AC Foam III, AC Foam - 25 PSI, AC Foam Composite (bottom layer only), AC Foam Supreme, Pyrox, Millox, Pyrox-25 PSI, Millox-25 PSI, Whiteline, any of the above tapered Minimum 1.3" thick	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, any of the above tapered Minimum 1.4" thick	N/A	N/A
Dens-Deck Minimum ¼" thick	N/A	N/A
Multi-Max FA, Multi-Max FA - 25 PSI, Thermarroof, Thermarroof Plus, any of the above tapered Minimum 1.25" thick	N/A	N/A
High Density Wood Fiberboard Minimum 1" thick	N/A	N/A
Ultra M-II Iso/glas, Ultra M-II AEF or tapered Minimum 1.2" 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 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: 2001 PVC Polyester attached to deck as specified below.
Fastening: Any approved fastener listed herein 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 0.75in. wide heat weld on the inside and a 1.5 in. heat weld on the outside.
Maximum Design Pressure: -45 psf (See General Limitation #7)



Membrane Type: Single Ply, Thermoplastic, PVC
Deck Type 7I: Recover
Deck Description: Concrete/lightweight concrete/cementitious wood fiber/wood/steel
System Type D(2): Membrane attached over preliminary fastened insulation.

All General and System Limitations apply:

Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft²
AC Foam II, AC Foam III, AC Foam - 25 PSI, AC Foam Composite (bottom layer only), AC Foam Supreme, Pyrox, Millox, Pyrox-25 PSI, Millox-25 PSI, Whiteline, any of the above tapered Minimum 1.3" thick	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, any of the above tapered Minimum 1.4" thick	N/A	N/A
Dens-Deck Minimum 1/4" thick	N/A	N/A
Multi-Max FA, Multi-Max FA - 25 PSI, Thermarroof, Thermarroof Plus, any of the above tapered Minimum 1.25" thick	N/A	N/A
High Density Wood Fiberboard Minimum 1" thick	N/A	N/A
Ultra M-II Iso/glas, Ultra M-II AEF or tapered Minimum 1.2" thick	N/A	N/A
Perlite (base layer only) Minimum 3/4" 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, 1/4" Dens-Deck, or Atlas FR10 or FR50.

Membrane: 2001 PVC Polyester attached to deck as specified below.

Fastening: Any approved fastener listed herein with approved discs spaced 6" o.c. within the 5.5" side lap spaced 73" o.c. and sealed with a minimum 1.5" weld.
 Or
 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 1.5" welds on each side.

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



Membrane Type: Single Ply, Thermoplastic, PVC
Deck Type 7I: Recover
Deck Description: Steel and Structural concrete
System Type D (3): Membrane attached over preliminary fastened insulation.

All General and System Limitations apply:

Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft²
AC Foam II, AC Foam III, AC Foam - 25 PSI, AC Foam Composite (bottom layer only), AC Foam Supreme, Pyrox, Millox, Pyrox-25 PSI, Millox-25 PSI, Whiteline, any of the above tapered Minimum 1.3" thick	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, any of the above tapered Minimum 1.4" thick	N/A	N/A
Dens-Deck Minimum ¼" thick	N/A	N/A
Multi-Max FA, Multi-Max FA - 25 PSI, Thermarroof, Thermarroof Plus, any of the above tapered Minimum 1.25" thick	N/A	N/A
High Density Wood Fiberboard Minimum 1" thick	N/A	N/A
Ultra M-II Iso/glas, Ultra M-II AEF or tapered Minimum 1.2" thick	N/A	N/A
Perlite 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: 2001 PVC Polyester attached to deck as specified below.
Fastening: Any approved fastener listed herein with Sarnadiscck-XP plates (Heavy Duty SPM Plate-Buildex) spaced 12 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: -45 psf. (See General Limitations # 7)



Membrane Type: Single Ply, Thermoplastic, PVC
Deck Type 7I: Recover
Deck Description: Steel and Structural concrete
System Type D(4): Membrane attached over preliminary fastened insulation.

All General and System Limitations apply:

Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft²
AC Foam II, AC Foam III, AC Foam - 25 PSI, AC Foam Composite (bottom layer only), AC Foam Supreme, Pyrox, Millox, Pyrox-25 PSI, Millox-25 PSI, Whiteline, any of the above tapered Minimum 1.3" thick	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, any of the above tapered Minimum 1.4" thick	N/A	N/A
Dens-Deck Minimum ¼" thick	N/A	N/A
Multi-Max FA, Multi-Max FA - 25 PSI, Thermarroof, Thermarroof Plus, any of the above tapered Minimum 1.25" thick	N/A	N/A
High Density Wood Fiberboard Minimum 1" thick	N/A	N/A
Ultra M-II Iso/glas, Ultra M-II AEF or tapered Minimum 1.2" thick	N/A	N/A
Perlite 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: 2001 PVC Polyester attached to deck as specified below.
Fastening: Any approved fastener listed herein with Sarnadiscck-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)



Membrane Type: Single Ply, Thermoplastic, PVC
Deck Type 7I: Recover
Deck Description: Steel or Structural concrete decks
System Type D(5): Membrane attached over preliminary fastened insulation.

All General and System Limitations apply:

Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft²
AC Foam II, AC Foam III, AC Foam - 25 PSI, AC Foam Composite (bottom layer only), AC Foam Supreme, Pyrox, Millox, Pyrox-25 PSI, Millox-25 PSI, Whiteline, any of the above tapered Minimum 1.3" thick	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, any of the above tapered Minimum 1.4" thick	N/A	N/A
Dens-Deck Minimum ¼" thick	N/A	N/A
Multi-Max FA, Multi-Max FA - 25 PSI, Thermarroof, Thermarroof Plus, any of the above tapered Minimum 1.25" thick	N/A	N/A
High Density Wood Fiberboard Minimum 1" thick	N/A	N/A
Ultra M-II Iso/glas, Ultra M-II AEF or tapered Minimum 1.2" thick	N/A	N/A
Perlite 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: 2001 PVC Polyester attached to deck as specified below.
Fastening: Any approved fastener listed herein 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 Limitation #7)



Membrane Type: Single Ply, Thermoplastic, PVC
Deck Type 7I: Recover
Deck Description: 2500 psi structural concrete or concrete plank
System Type D(6): Membrane mechanically attached over preliminary fastened insulation.

All General and System Limitations apply.

One or more layers of the following.

Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft²
AC Foam II, AC Foam III, AC Foam - 25 PSI, AC Foam Composite (bottom layer only), AC Foam Supreme, Pyrox, Millox, Pyrox-25 PSI, Millox-25 PSI, Whiteline, any of the above tapered Minimum 1.3" thick	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, any of the above tapered Minimum 1.4" thick	N/A	N/A
Dens-Deck Minimum ¼" thick	N/A	N/A
Multi-Max FA, Multi-Max FA - 25 PSI, Thermarroof, Thermarroof Plus, any of the above tapered Minimum 1.25" thick	N/A	N/A
High Density Wood Fiberboard Minimum 1" thick	N/A	N/A
Ultra M-II Iso/glas, Ultra M-II AEF or tapered Minimum 1.2" thick	N/A	N/A
Perlite 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: None.
Membrane: 2001 PVC Polyester attached to deck as specified below.
Fastening: Sarnabars spaced 4.5 ft. o.c. secured to deck with, King Con, Concrete Spike, #14 HD, or CD-10 fasteners spaced 12 inches o.c.
Maximum Design Pressure: -120 psf. (See General Limitation #7)



Membrane Type: Single Ply, Thermoplastic, PVC
Deck Type 7I: Recover
Deck Description: 2500 psi structural concrete or concrete plank
System Type D(7): Membrane attached over preliminary fastened insulation.

All General and System Limitations apply.

One or more layers of the following.

Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft²
AC Foam II, AC Foam III, AC Foam - 25 PSI, AC Foam Composite (bottom layer only), AC Foam Supreme, Pyrox, Millox, Pyrox-25 PSI, Millox-25 PSI, Whiteline, any of the above tapered Minimum 1.3" thick	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, any of the above tapered Minimum 1.4" thick	N/A	N/A
Dens-Deck Minimum ¼" thick	N/A	N/A
Multi-Max FA, Multi-Max FA - 25 PSI, Thermarroof, Thermarroof Plus, any of the above tapered Minimum 1.25" thick	N/A	N/A
High Density Wood Fiberboard Minimum 1" thick	N/A	N/A
Ultra M-II Iso/glas, Ultra M-II AEF or tapered Minimum 1.2" thick	N/A	N/A
Perlite 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) Any UL or FMRC approved vapor barrier approved for use with hot asphalt may be applied to the deck or perlite base layer.
Barrier: None.
Membrane: 2001 PVC Polyester attached to deck as specified below.
Fastening: Sarnabar spaced 4.5 ft. oc secured to deck with Sarnafastener-Concrete, King Con, Concrete Spike, #14 HD, or CD-10 fasteners spaced 6 inches o.c.
Maximum Design Pressure: -232.5 psf. (See General Limitation #7)



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

All General and System Limitations apply:

Barrier: None
Membrane: 2001 or 2001 feltback 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
Deck Description: Structural Concrete
System Type F(2): Membrane adhered to existing smooth BUR

All General and System Limitations apply:

Barrier: None
Membrane: 2001 or 2001 feltback adhered with Sarnacol LR2001 applied to the substrate at a rate of 200ft²/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 Professional Engineer, Registered Architect, or Registered Roof Consultant may be submitted. Said revised fastener spacing shall utilize the withdrawal resistance value taken from Testing Application Standards TAS 105 and calculations in compliance with Roofing Application Standard RAS 117.
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



NOA No.: 02-1022.06
Expiration Date: 05/16/07
Approval Date: 12/05/02
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