MIAMI-DADE COUNTY
PRODUCT CONTROL SECTION
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DEPARTMENT OF REGULATORY AND ECONOMIC RESOURCES (RER)
BOARD AND CODE ADMINISTRATION DIVISION

NOTICE OF ACCEPTANCE (NOA)

Tremco CPG, Inc.
3735 Green Road
Beachwood, OH 44122

SCOPE:

This NOA is being issued under the applicable rules and regulations governing the use of construction materials. The documentation submitted has been reviewed and accepted by Miami-Dade County RER - Product Control Section 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 Section (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. RER reserves the right to revoke this acceptance if it is determined by Miami-Dade County Product Control Section that this product or material fails to meet the requirements of the applicable building code.

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

DESCRIPTION: TremPly KEE Roof Systems over Steel 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 revises NOA No.20-0731.08 and consists of pages 1 through 49.
The submitted documentation was reviewed by Alex Tigera.

ROOFING SYSTEM APPROVAL

Category:	Roofing
Sub-Category:	Single Ply
Material:	KEE
Deck Type:	Steel
Maximum Design Pressure	–112.50 psf

TRADE NAMES OF PRODUCTS MANUFACTURED OR LABELED BY APPLICANT:

TABLE 1

Product	Dimensions	Test Specification	Product Description
TremPly KEE	Various	ASTM D 6754	KEE, polyester reinforced, single ply membrane
TremPly KEE FB	Various	ASTM D 6754	KEE, fleece-backed, polyester reinforced, single ply membrane
TremPly KEE LV Bonding Adhesive	5 gal. pails	Proprietary	Low VOC solvent based “contact” adhesive
TremPly KEE FB Bonding Adhesive	5 gal. pails	Proprietary	One side "substrate only" fleece back solvent based adhesive
Tremco Low Rise Foam Insulation Adhesive		Proprietary	Elastomeric, One step foamable adhesive
Tremco Low Rise Foam Insulation Adhesive (BG)	5 gal. or 50 gal. pails	Proprietary	Two-component, VOC free, polyurethane adhesive
Tremco Low Rise Green Foam Insulation Adhesive	5 gal. or 50 gal. pails	Proprietary	Two-component, VOC free, polyurethane adhesive
TremPly KEE Walkway & Protection Materials	0.080” x 28” or 56” x 43’ ¼" x 24" x 48"	N/A	Vinyl walk way Vinyl protection pad
TremPly KEE FB WB II Bonding Adhesive	5 gal. pails	proprietary	One side “substrate only” fleece backed water based adhesive

APPROVED INSULATIONS:

TABLE 2

Product Name	Product Description	Manufacturer (With Current NOA)
ACFoam–II	Polyisocyanurate insulation	Atlas Roofing Corporation
ACFoam Composite	Polyisocyanurate insulation with perlite facer	Atlas Roofing Corporation
DensDeck	Silicon treated gypsum	Georgia-Pacific Gypsum LLC
DensDeck Prime	Silicon treated gypsum	Georgia-Pacific Gypsum LLC
Ultra-Max	Polyisocyanurate foam insulation	Rmax Operating, LLC
Multi-Max FA-3	Polyisocyanurate foam insulation	Rmax Operating, LLC
Thermaroof Composite-3	Polyisocyanurate/perlite composite insulation	Rmax Operating, LLC
Tapered Thermaroof-3	Polyisocyanurate/perlite composite insulation	Rmax Operating, LLC
SECUROCK Gypsum-Fiber Roof Board	Gypsum Coverboard	USG Corporation
SECUROCK Glass-Mat Roof Board	Gypsum Coverboard	USG Corporation
SECUROCK Cement Roof Board	Gypsum based Coverboard	USG Corporation
H-Shield	Polyisocyanurate insulation	Hunter Panels, a div. of Carlisle Const. Materials
H-Shield CG	Polyisocyanurate insulation	Hunter Panels, a div. of Carlisle Const. Materials
H-Shield WF	Polyisocyanurate insulation	Hunter Panels, a div. of Carlisle Const. Materials
H-Shield NB	Polyisocyanurate insulation	Hunter Panels, a div. of Carlisle Const. Materials
H-Shield HD	Polyisocyanurate insulation	Hunter Panels, a div. of Carlisle Const. Materials
ENRGY 3	Polyisocyanurate insulation	Johns Manville Corporation
ENRGY 3 25 PSI	Polyisocyanurate insulation	Johns Manville Corporation
ENRGY 3 AGF 25 PSI	Polyisocyanurate insulation	Johns Manville Corporation
ENRGY 3 CGF 25 PSI	Polyisocyanurate insulation	Johns Manville Corporation
R-Panel	Polyisocyanurate insulation	Johns Manville Corporation
ValuTherm CGF	Polyisocyanurate insulation	Johns Manville Corporation
ValuTherm AGF 25 PSI	Polyisocyanurate insulation	Johns Manville Corporation
ValuTherm CGF 25 PSI	Polyisocyanurate insulation	Johns Manville Corporation
DEXcell FA Glass Mat Roof Board	Gypsum Coverboard	National Gypsum Company a dba of New NGC, Inc
DEXcell Cement Roof Board	Cementitious Coverboard	National Gypsum Company a dba of New NGC, Inc

APPROVED FASTENERS/ADHESIVES:

TABLE 3

Fastener Number	Product Name	Product Description	Dimensions	Manufacturer (With Current NOA)
1.	Dekfast PLT-O-2-1/2-12B	Galvalume AZ50 stress plate	1.5" x 2.5"	SFS Group USA, Inc.
2.	Dekfast PLT-R-2-3/8-6B	Barbed, galvalume AZ50 stress plate	2-3/8" Dia.	SFS Group USA, Inc.
3.	*isofast* PLT-R-2-3/8-BL plates	Galvalume AZ50 stress plate, #15 belted fasteners	2-3/8" Dia.	SFS Group USA, Inc.
4.	Dekfast DF-#14-PH3	Insulation and membrane fasteners	Various	SFS Group USA, Inc.
5.	Dekfast PLT-H-2-7/8	Galvalume AZ50 steel plate	2 7/8" x 3 ¼"	SFS Group USA, Inc.
6.	OMG Heavy Duty	Self-drilling fastener for use in steel, wood or concrete decks	Various	OMG, Inc.
7.	OMG 3-in Galvalume Steel Plate	Galvalume coated steel plate	3" round	OMG, Inc.
8.	OMG 3-in Ribbed Galvalume Plate	Galvalume coated steel plate	3" round	OMG, Inc.
9.	Dekfast DF-#15-PH3	Self-drilling, carbon fastener	Various	SFS Group USA, Inc.
10.	Dekfast PLT-O-2-3/4-12B	Oval stress plate	1½" x 2¾"	SFS Group USA, Inc.
11.	Trufast #15 EHD fasteners	Insulation fastener for wood, steel and concrete decks	Various	Altenloh, Brinck & Co. U.S., Inc.
12.	Trufast 2-3/4" Barbed Seam Plate (EHD)	AZ-55 Galvalume steel stress plate	2.75" round	Altenloh, Brinck & Co. U.S., Inc.
13.	Dekfast PLT-R-3	Galvalume AZ50 stress plate	3" round	SFS Group USA, Inc.
14.	Trufast 3" Metal Insulation Plate	Galvalume AZ50 stress plate	3.23" round	Altenloh, Brinck & Co. U.S., Inc.
15.	Trufast #14 HD Stainless Steel Bi-Metal Fastener	Insulation fastener for steel and wood decks	Various	Altenloh, Brinck & Co. U.S., Inc.
16.	OMG XHD	Self-drilling fastener for use in steel or wood decks	Various	OMG, Inc.
17.	OMG #15 Roofgrip	Carbon steel fastener	Various	OMG, Inc.
18.	*isoweld* FI-P-6.8-PVC	Galvanized steel plate with PVC coating	3" round	SFS Group USA, Inc.
19.	OMG #14 Roofgrip	Carbon steel fastener	Various	OMG, Inc.
20.	ICP Adhesives CR-20	A two component elastomeric polyurethane foam adhesive		ICP Adhesives and Sealants, Inc.
21.	Insta Stik Quik Set Insulation Adhesive	A single component urethane foam adhesive		DuPont de Nemours, Inc.
22.	Millennium One Step Foamable Insulation Adhesive	A two component, low rise, polyurethane foam adhesive		H.B. Fuller Company

APPROVED FASTENERS/ADHESIVES:

TABLE 3

Fastener Number	Product Name	Product Description	Dimensions	Manufacturer (With Current NOA)
23.	Millennium PG-1 Low Viscosity Insulation Adhesive	A two component, low rise, polyurethane foam adhesive		H.B. Fuller Company
24.	OlyBond	A two component polyurethane foam adhesive		OMG, Inc.
25.	OlyBond 500	A two component polyurethane foam adhesive		OMG, Inc.
26.	Polyset Board Max	Polyurethane adhesive		ICP Adhesives and Sealants, Inc.

EVIDENCE SUBMITTED:

Test Agency/Identifier	Name	Report	Date
Factory Mutual Research Corp.	FM 4470	1Z2A5.AM	01/12/96
	FM 4470	1Z3A8.AM	08/13/97
	FM 4470	3003689	09/22/99
	FM 4470	3003251	10/15/99
	FM 4470	3006872	06/13/00
	FM 4470	3009071	01/03/02
	FM 4470	3014050	07/08/03
	FM 4470	3013125	09/23/03
	FM 4470	3013068	09/23/03
	FM 4470	3023458	07/18/06
	FM 4470	3024311	11/01/06
	FM 4470	3026964	07/25/07
	FM 4470	3028651	04/17/08
	FM 4470	3030785	08/12/08
	FM 4470	3033396	09/04/09
	FM 4470	3037770	10/22/09
	FM 4470	3036192	11/23/09
	FM 4470	3037168	04/12/10
	FM 4470	3038211	06/30/10
	FM 4470	3044075	04/06/12
	FM 4470	3046131	10/17/12
	FM 4470	3045983	10/18/12
	FM 4470	3048494	11/19/13
	FM 4470	3051574	09/11/14
	FM 4470	3051607	03/25/15
	FM 4470	3055227	05/21/15
	FM 4470	3051608	10/23/16
	FM 4470	3061365	10/25/17
	FM 4470	3059662	02/05/19
Underwriters Laboratories	UL 790	98NK12810	08/11/98
	UL 790	98NK17212	08/21/98
	UL 790	12CA39420	01/08/13
Trinity | ERD	TAS 114	02843.02.05-08	02/04/05
	TAS 114	4006.08.00-1-R1	10/18/05
	TAS 117 & ASTM D6862	C8500SC.11.07-R1	08/07/09
	TAS 114/117	C12410.08.09	08/14/09
	TAS 114	4006.07.97-1-R1	07/15/10
	TAS 114	4015.10.96-1-R1	07/20/10
	FM 4470 / TAS 114	S32410.09.10	09/21/10
	FM 4470 / TAS 114	S44050.09.13	09/10/13
	ASTM D 6754	S47410.12.14	12/15/14
PRI Construction Materials Technologies LLC	ASTM D 3747	HGC-142-02-03-R1	06/16/16
	FM 4474	SMCP-005-02-01	09/14/15
	ASTM D 6164	SRI-121-02-01	02/01/19
Nemo | etc.	FM 4474 / TAS 114	SFS-SC10010.02.16-R1	07/06/16

DECK STRESS ANALYSIS CALCULATIONS/REPORTS

Engineer/Agency	Identifier	Assemblies	Date
Robert Nieminen, P.E.	Signed/Sealed Calculations	D(2), D(28)	12/11/15
	Signed/Sealed Calculations	C(6), C(8), C(10), C(12)	02/20/20
FM Approval Deck Limitation	RoofNav Listing	B(6), B(8), B(11), C(11), C(13), D(1), D(3), D(4), D(5) D(6), D(8) through D(12), D(14) through D(27), D(29), D(30)	11/23/15
	RoofNav Listing	B(9), B(10), B(12), B(13), B(14), B(15), B(16), C(7),C(9)	02/18/20
Zachary Priest, P.E.	Signed/Sealed Calculations	D(13)	09/14/15

APPROVED ASSEMBLIES

Membrane Type: Single Ply, KEE

Deck Type 2I: Steel Decks, Insulated

Deck Description: Min. 18-22 ga. steel deck

System Type B(1): Base layer of insulation mechanically attached, top layer adhered; membrane adhered

All General and System Limitations apply. Roof accessories not listed in Table 1 of this NOA are not approved and shall not be installed unless said accessories demonstrate compliance with prescriptive Florida Building Code requirements and are field fabricated utilizing the approved membranes listed in Table 1.

One or more layers of the following insulations:

Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft^2
ACFoam-II, H-Shield, ENRGY 3, Multi-Max FA-3 Minimum 1.5" thick	**4, 9 with 5**	**1:2 ft^2**
DensDeck, DensDeck Prime Minimum ¼" thick	**4, 9 with 5**	**1:2 ft^2**

Note: Insulation layer shall be mechanically attached with fasteners and density described above. 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).

Membrane: TremPly KEE FB roof cover adhered to the insulation with Tremply KEE FB WB II Bonding Adhesive at 0.83 to 1 gal/sq.

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

Membrane Type:	Single Ply, KEE
Deck Type 2I:	Steel Decks, Insulated
Deck Description:	Min. 18-22 ga. steel deck
System Type B(2):	Base layer of insulation mechanically attached, top layer adhered; membrane adhered

All General and System Limitations apply. Roof accessories not listed in Table 1 of this NOA are not approved and shall not be installed unless said accessories demonstrate compliance with prescriptive Florida Building Code requirements and are field fabricated utilizing the approved membranes listed in Table 1.

One or more layers of the following insulations:

Base Insulation Layer	**Insulation Fasteners (Table 3)**	**Fastener Density/ft^2**
SECUROCK Gypsum-Fiber Roof Board Minimum 0.5" thick	**6, 16, 17 with 7; 4 with 13**	**1:4 ft^2**

Note: Base layer shall be mechanically attached with fasteners and density described above. 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).

Middle Insulation Layer	**Insulation Fasteners (Table 3)**	**Fastener Density/ft^2**
ENRGY-3 Minimum 1.5" thick	**N/A**	**N/A**

Top Insulation Layer	**Insulation Fasteners (Table 3)**	**Fastener Density/ft^2**
SECUROCK Gypsum-Fiber Roof Board Minimum 0.25" thick	**N/A**	**N/A**

Note: Apply insulation layer in a ¾" to 1" wide beads 12" o.c. of Tremco Low Rise Foam Insulation Adhesive or Tremco Low Rise Foam Insulation Adhesive (BG) or Tremco Low Rise Green Foam Insulation Adhesive or Millennium One Step Foamable Insulation Adhesive or Millennium PG-1 Low Viscosity Insulation Adhesive. 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:	TremPly KEE FB roof cover adhered with approved asphalt at 20-25 lbs./sq. or spatter-applied ICP Adhesives CR-20 or TremPly KEE FB Bonding Adhesive solvent adhesive at 1 gal/sq. or Tremply KEE FB WB II Bonding Adhesive at 0.83 gal/sq. Laps are sealed with 1.5-inch heat weld. Or TremPly KEE roof cover adhered with TremPly KEE LV Bonding Adhesive Bonding Adhesive applied at an application rate 0.5 gal/sq. Laps are sealed with 1.5-inch heat weld.
Maximum Design Pressure:	-45 psf (See General Limitation #9.)

Membrane Type: Single Ply, KEE

Deck Type 2I: Steel Decks, Insulated

Deck Description: Min. 18-22 ga. steel deck

System Type B(3): Base layer of insulation mechanically attached, top layer adhered; membrane adhered

All General and System Limitations apply. Roof accessories not listed in Table 1 of this NOA are not approved and shall not be installed unless said accessories demonstrate compliance with prescriptive Florida Building Code requirements and are field fabricated utilizing the approved membranes listed in Table 1.

One or more layers of the following insulations:

Base Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft^2
ACFoam–II, H-Shield, ENRGY 3 Minimum 2" thick	**6 with 7; 4 with 13**	**1:2.67 ft^2**

Note: Base layer shall be mechanically attached with fasteners and density described above. 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).

Top Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft^2
SECUROCK Gypsum-Fiber Roof Board Minimum 0.25" thick	**N/A**	**N/A**

Note: Apply top layer of insulation in a full mopping of any approved mopping hot asphalt within the EVT range and at a rate of 25 lbs/100 ft^2 or OlyBond Adhesive applied in a full coating application of 1gal/100 ft^2 or ¾" to 1" wide beads 12" o.c. of Tremco Low Rise Foam Insulation Adhesive, Tremco Low Rise Foam Insulation Adhesive (BG) or Tremco Low Rise Green Foam Insulation Adhesive, OlyBond 500, Millennium One Step Foamable Insulation Adhesive, Millennium PG-1 Low Viscosity Insulation Adhesive or Insta Stik Quik Set Insulation Adhesive. 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: TremPly KEE roof cover adhered to the insulation with TremPly KEE LV Bonding Adhesive Bonding Adhesive applied at an application rate of 50 ft²/gal. Laps are sealed with 1.5-inch heat weld.
Or
TremPly KEE FB roof cover adhered to the insulation with approved asphalt at 20-25 lbs./sq., TremPly KEE FB Bonding Adhesive solvent adhesive at 90 ft^2/gal or Tremply KEE FB WB II Bonding Adhesive at 100 ft²/gal. Laps are sealed with 1.5-inch heat weld.

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

Membrane Type:	Single Ply, KEE
Deck Type 2I:	Steel Decks, Insulated
Deck Description:	Min. 18-22 ga., Type B, Grade 33 steel deck secured to minimum ¼" thick structural supports spaced 6' o.c. with Traxx/5 fasteners spaced 6" o.c. along the center of the supports. Deck side laps are secured 24" o.c. with Traxx/1 fasteners. **This Tested Assembly has been analyzed for allowable deck stress. See Deck Stress Analysis Table.**
System Type B(4):	Base layer of insulation mechanically attached, top layer adhered; membrane adhered

All General and System Limitations apply. Roof accessories not listed in Table 1 of this NOA are not approved and shall not be installed unless said accessories demonstrate compliance with prescriptive Florida Building Code requirements and are field fabricated utilizing the approved membranes listed in Table 1.

One or more layers of the following insulations:

Base Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft^2
ACFoam–II, H-Shield, ENRGY 3 Minimum 2" thick	**5 with 13; 16 with 15**	**1:1.33 ft^2**

Note: Base layer shall be mechanically attached with fasteners and density described above. 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).

Top Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft^2
SECUROCK Gypsum-Fiber Roof Board Minimum 0.25" thick	**N/A**	**N/A**

Note: Apply top layer of insulation in a full mopping of any approved mopping hot asphalt within the EVT range and at a rate of 25 lbs/100 ft^2 or ¾" to 1" wide beads 6" o.c. of Tremco Low Rise Foam Insulation Adhesive, Tremco Low Rise Foam Insulation Adhesive (BG) or Tremco Low Rise Green Foam Insulation Adhesive, OlyBond 500, Millennium One Step Foamable Insulation Adhesive, Millennium PG-1 Low Viscosity Insulation Adhesive or Insta Stik Quik Set Insulation Adhesive. 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:	TremPly KEE roof cover adhered to the insulation with TremPly KEE LV Bonding Adhesive Bonding Adhesive applied at an application rate of 50 ft²/gal. Laps are sealed with 1.5-inch heat weld. Or TremPly KEE FB oroof cover adhered to the insulation with approved asphalt at 20-25 lbs./sq., TremPly KEE FB Bonding Adhesive solvent adhesive at 90 ft²/gal or Tremply KEE FB WB II Bonding Adhesive at 100 ft²/gal. Laps are sealed with 1.5-inch heat weld.
Maximum Design Pressure:	-60 psf (See General Limitation #7.)

Membrane Type: Single Ply, KEE

Deck Type 2I: Steel Decks, Insulated

Deck Description: 18-22 ga. steel deck

System Type B(5): Base layer of insulation mechanically attached, top layer adhered; membrane adhered

All General and System Limitations apply. Roof accessories not listed in Table 1 of this NOA are not approved and shall not be installed unless said accessories demonstrate compliance with prescriptive Florida Building Code requirements and are field fabricated utilizing the approved membranes listed in Table 1.

One or more layers of the following insulations:

Base Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft^2
ACFoam-II, Multi-Max FA-3, H-Shield		
Minimum 1.5" thick	**4**	**1:2 ft^2**
Minimum 2" thick	**4**	**1:4 ft^2**
DensDeck, DensDeck Prime		
Minimum 0.25" thick	**4**	**1:2 ft^2**

Note: Base layer shall be mechanically attached with fasteners and density described above. 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).

Top Insulation Layer (Optional)	Insulation Fasteners (Table 3)	Fastener Density/ft^2
ACFoam-II, Multi-Max FA-3, H-Shield		
Minimum 1.5" thick	**N/A**	**N/A**

Note: Apply optional top layer of insulation in a full mopping of any approved mopping hot asphalt within the EVT range and at a rate of 20-40 lbs/100 ft^2 or in ¾" to 1" wide beads 12" o.c. of Tremco Low Rise Foam Insulation Adhesive, Tremco Low Rise Foam Insulation Adhesive (BG) or Tremco Low Rise Green Foam Insulation Adhesive, Millennium One Step Foamable Insulation Adhesive, Millennium PG-1 Low Viscosity Insulation Adhesive or Insta Stik Quik Set Insulation Adhesive or OlyBond Adhesive at application rate of 1gal/100 ft^2. Refer to Roofing Application Standard RAS 117 and insulation adhesive manufacturer's Roofing Component Product Control Approval for insulation attachment requirements. Insulations listed as base layer shall be used only as base layers with an optional top layer insulation installed as the final membrane substrate.

Membrane: TremPly KEE roof cover adhered to the insulation with TremPly KEE LV Bonding Adhesive Bonding Adhesive applied at an application rate of 1 gal./sq. to the backside of the membrane and to the substrate. Laps are sealed with 1.5-inch heat weld.
Or
TremPly KEE FB roof cover adhered to the insulation with approved asphalt at 20-25 lbs./sq., TremPly KEE FB Bonding Adhesive solvent adhesive at 1 gal. per 100 ft^2 or Tremply KEE FB WB II Bonding Adhesive at 100 ft^2/gal. Laps are sealed with 1.5-inch heat weld.

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

Membrane Type:	Single Ply, KEE
Deck Type 2I:	Steel Decks, Insulated
Deck Description:	Min. 18-22 ga., Type B, Grade 80 steel deck secured to minimum ¼" thick structural supports spaced 6' o.c. with Traxx/5 fasteners spaced 6" o.c. along the center of the supports. Deck side laps are secured 24" o.c. with Traxx/1 fasteners. **This Tested Assembly has been analyzed for allowable deck stress. See Deck Stress Analysis Table.**
System Type B(6):	Base layer of insulation mechanically attached, top layer adhered; membrane adhered

All General and System Limitations apply. Roof accessories not listed in Table 1 of this NOA are not approved and shall not be installed unless said accessories demonstrate compliance with prescriptive Florida Building Code requirements and are field fabricated utilizing the approved membranes listed in Table 1.

One or more layers of the following insulations:

Base Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft^2
ACFoam–II, H-Shield, ENRGY 3 Minimum 2.0" thick	**4 with 13**	**1:2 ft^2**

Note: Base layer shall be mechanically attached with fasteners and density described above. 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).

Top Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft^2
DensDeck Prime, SECUROCK Gypsum-Fiber Roof Board Minimum 0.25" thick	**N/A**	**N/A**

Note: Top insulation shall be adhered with Tremco Low Rise Foam Insulation Adhesive, Tremco Low Rise Foam Insulation Adhesive (BG) or Tremco Low Rise Green Foam Insulation Adhesive, Millennium One Step Foamable Insulation Adhesive, Millennium PG-1 Low Viscosity Insulation Adhesive, Polyset Board Max in ½" to ¾" wide beads spaced 12" o.c. Refer to Roofing Application Standard RAS 117 and insulation adhesive manufacturer's Roofing Component Product Control Approval for insulation attachment requirements. Insulations listed as base layer shall be used only as base layers with an optional top layer insulation installed as the final membrane substrate.

Membrane:	TremPly KEE roof cover adhered to the insulation with TremPly KEE LV Bonding Adhesive Bonding Adhesive applied at an application rate of 0.5 gal/sq to the backside of the membrane and to the substrate. Laps are sealed with 1.5-inch heat weld. Or TremPly KEE FB roof cover adhered with approved asphalt at 20-25 lbs./sq., or spatter-applied ICP Adhesives CR-20 at 4 lb/sq. or TremPly KEE FB Bonding Adhesive solvent adhesive at 1 gal/sq. or Tremply KEE FB WB II Bonding Adhesive at 0.83 gal/sq. Laps are sealed with 1.5-inch heat weld.
Maximum Design Pressure:	-52.5 psf (See General Limitation #7.)

Membrane Type:	Single Ply, KEE
Deck Type 2I:	Steel Decks, Insulated
Deck Description:	Min. 18-22 ga., Type B, Grade 80 steel deck secured to minimum ¼" thick structural supports spaced 6' o.c. with Traxx/5 fasteners spaced 6" o.c. along the center of the supports. Deck side laps are secured 24" o.c. with Traxx/1 fasteners. **This Tested Assembly has been analyzed for allowable deck stress. See Deck Stress Analysis Table.**
System Type B(7):	Base layer of insulation mechanically attached, top layer adhered; membrane adhered

All General and System Limitations apply. Roof accessories not listed in Table 1 of this NOA are not approved and shall not be installed unless said accessories demonstrate compliance with prescriptive Florida Building Code requirements and are field fabricated utilizing the approved membranes listed in Table 1.

One or more layers of the following insulations:

Base Insulation Layer		**Insulation Fasteners (Table 3)**	**Fastener Density/ft^2**
ACFoam–II, H-Shield, ENRGY 3			
Fastening #1:	**Minimum 2.0" thick**	**4 with 13**	**1:1.33 ft^2**
Fastening #2:	**Minimum 2.0" thick**	**4 with 13**	**1:1 ft^2**

Note: Base layer shall be mechanically attached with fasteners and density described above. 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).

Top Insulation Layer	**Insulation Fasteners (Table 3)**	**Fastener Density/ft^2**
DensDeck Prime, SECUROCK Gypsum-Fiber Roof Board Minimum 0.25" thick	**N/A**	**N/A**

Note: Top insulation shall be adhered with Tremco Low Rise Foam Insulation Adhesive, Tremco Low Rise Foam Insulation Adhesive (BG) OR Tremco Low Rise Green Foam Insulation Adhesive, Millennium One Step Foamable Insulation Adhesive, Millennium PG-1 Low Viscosity Insulation Adhesive, Polyset Board Max in ½" to ¾" wide beads spaced 6" o.c. Refer to Roofing Application Standard RAS 117 and insulation adhesive manufacturer's Roofing Component Product Control Approval for insulation attachment requirements. Insulations listed as base layer shall be used only as base layers with an optional top layer insulation installed as the final membrane substrate.

Membrane:	TremPly KEE roof cover adhered to the insulation with TremPly KEE LV Bonding Adhesive Bonding Adhesive applied at an application rate of 0.5 gal/sq to the backside of the membrane and to the substrate. Laps are sealed with 1.5-inch heat weld. Or TremPly KEE FB roof cover adhered with approved asphalt at 20-25 lbs./sq. or spatter-applied ICP Adhesives CR-20 at 4 lb/sq. or TremPly KEE FB Bonding Adhesive solvent adhesive at 1 gal/sq. or Tremply KEE FB WB II Bonding Adhesive at 0.83 gal/sq. Laps are sealed with 1.5-inch heat weld.
Maximum Design Pressure:	-67.5 psf for Fastening #1 (See General Limitation #7.) -90 psf for Fastening #2 (See General Limitation #7.)

Membrane Type: Single Ply, KEE

Deck Type 2I: Steel Decks, Insulated

Deck Description: Min. 18-22 ga. steel deck

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

All General and System Limitations apply. Roof accessories not listed in Table 1 of this NOA are not approved and shall not be installed unless said accessories demonstrate compliance with prescriptive Florida Building Code requirements and are field fabricated utilizing the approved membranes listed in Table 1.

One or more layers of the following.

Base Insulation Layer (Optional)	**Insulation Fasteners (Table 3)**	**Fastener Density/ft²**
ACFoam-II, H-Shield, ENRGY 3 Minimum 1.5" thick	**N/A**	**N/A**

Top Insulation Layer	**Insulation Fasteners (Table 3)**	**Fastener Density/ft²**
SECUROCK Gypsum-Fiber Roof Board Minimum 0.25" thick	**4 with 5 or 13; 6 with 7; 15 with 14;**	**1:2 ft²**

Note: All layers shall be simultaneously fastened; see top or base layer above 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.

Membrane: TremPly KEE roof cover adhered to the insulation with TremPly KEE LV Bonding Adhesive Bonding Adhesive applied at an application rate of 50 ft²/gal. Laps are sealed with 1.5-inch heat weld.

Or

TremPly KEE FB roof cover adhered to the insulation with approved asphalt at 20-25 lbs./sq., TremPly KEE FB Bonding Adhesive solvent adhesive at 90 ft²/gal or Tremply KEE FB WB II Bonding Adhesive at 100 ft²/gal. Laps are sealed with 1.5-inch heat weld.

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

Membrane Type: Single Ply, KEE

Deck Type 2I: Steel Decks, Insulated

Deck Description: Min. 18-22 ga. steel deck.

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

All General and System Limitations apply. Roof accessories not listed in Table 1 of this NOA are not approved and shall not be installed unless said accessories demonstrate compliance with prescriptive Florida Building Code requirements and are field fabricated utilizing the approved membranes listed in Table 1.

One or more layers of the following insulations:

Base Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft^2
ACFoam-II, H-Shield, H-Shield CG Minimum 1.5" thick	**11 with 14;**	**1:2 ft^2**
SECUROCK Gypsum-Fiber Roof Board, DensDeck Prime Minimum 0.25" thick	**11 with 14;**	**1:2 ft^2**

Note: All layers shall be simultaneously fastened; see top or base layer above 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.

Membrane: TremPly KEE FB roof cover fully adhered with spatter-applied ICP Adhesives CR-20. Laps are sealed with 1.5-inch heat weld.

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

Membrane Type: Single Ply, KEE

Deck Type 2I: Steel Decks, Insulated

Deck Description: Min. 22 ga., Type B, Grade 33 steel deck

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

All General and System Limitations apply. Roof accessories not listed in Table 1 of this NOA are not approved and shall not be installed unless said accessories demonstrate compliance with prescriptive Florida Building Code requirements and are field fabricated utilizing the approved membranes listed in Table 1.

One or more layers of the following.

Base Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft^2
ACFoam–II, H-Shield, ENRGY 3, Multi-Max FA-3 Minimum 1.5" thick	**9 with 18**	**1:5.33 ft^2**

Note: All layers shall be simultaneously fastened; see top or base layer above 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.

Membrane: TremPly KEE roof cover shall be bonded to *isoweld* FI-P-6.8-PVC plates with *isoweld* Induction Bonding Tool. Laps are sealed with 1.5-inch heat weld.

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

Membrane Type: Single Ply, KEE

Deck Type 2I: Steel Decks, Insulated

Deck Description: Min. 18-22 ga., Type B, ASTM A653, Grade 80 steel attached to structural steel supports spaced max. 6' o.c. attached with ITW Buildex Traxx/5 fasteners spaced max. 6 in. o.c. at each rib. Deck side laps secured with ITW Buildex Traxx/1 fasteners spaced 36" o.c.

Or

Min. 18-22 ga., Type B, ASTM A653, Grade 40 steel attached to structural steel supports spaced max. 6' o.c. with 5/8" puddle welds. Deck side laps secured with ITW Buildex Traxx/1 fasteners spaced 36" o.c.

This Tested Assembly has been analyzed for allowable deck stress. See Deck Stress Analysis Table.

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

All General and System Limitations apply. Roof accessories not listed in Table 1 of this NOA are not approved and shall not be installed unless said accessories demonstrate compliance with prescriptive Florida Building Code requirements and are field fabricated utilizing the approved membranes listed in Table 1.

One or more layers of the following.

Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft^2
ACFoam-II Minimum 1.5" thick	**N/A**	**N/A**

Note: All insulation shall have preliminary attachment prior to the application of approved welding plates and fasteners as outlined below. See membrane description for fastener details. 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.

Membrane: TremPly KEE roof cover shall be bonded to *isoweld* FI-P-6.8-PVC plates as specified below:

Fastening: Insulation shall be mechanically attached with Dekfast DF-#14-PH3, Dekfast DF-#15-PH3 with *isoweld* FI-P-6.8-PVC plates spaced 12" o.c. in fastener rows spaced 60" o.c. Membrane shall be bonded to plates with *isoweld* Induction Bonding Tool. Laps are sealed with 1.5-inch heat weld.

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

Membrane Type: Single Ply, KEE

Deck Type 2I: Steel Decks, Insulated

Deck Description: Min. 18-22 ga., Type WR, Grade 33 steel attached to structural steel supports spaced max. 6 ft o.c. attached with SFS Intec SD5-#12-HW5/16 fasteners and ¾" steel washers spaced max. 6 in. o.c. Deck side laps secured with SFS Intec SDL-#14-HW5/16 fasteners spaced 24" o.c. **This Tested Assembly has been analyzed for allowable deck stress. See Deck Stress Analysis Table**

System Type C(5): All layers of insulation simultaneously attached; membrane adhered.

All General and System Limitations apply. Roof accessories not listed in Table 1 of this NOA are not approved and shall not be installed unless said accessories demonstrate compliance with prescriptive Florida Building Code requirements and are field fabricated utilizing the approved membranes listed in Table 1.

One or more layers of the following.

Insulation Layer	**Insulation Fasteners (Table 3)**	**Fastener Density/ft^2**
ACFoam–II, H-Shield, ENRGY 3, Multi-Max FA-3 Minimum 1.5" thick	**9 with 18**	**See Design Presure**

Note: All insulation shall have preliminary attachment prior to the application of approved welding plates and fasteners as outlined below. See membrane description for fastener details. 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.

Membrane: TremPly KEE roof cover shall be bonded to *isoweld* FI-P-6.8-PVC plates with *isoweld* Induction Bonding Tool. Laps are sealed with 1.5-inch heat weld.

	Maximum Pressure	**Fastener Spacing**	**Fastener Row Spacing**
Maximum Design Pressures:	-45 psf (See General Limitation #7)	2 ft	2 ft
	-67.5 psf (See General Limitation #7)	1.5 ft	2 ft
	-82.5 psf (See General Limitation #7)	1.5 ft	1.5 ft

Membrane Type:	Single Ply, KEE
Deck Type 2I:	Steel, Insulated
Deck Description:	18-22 ga., ASTM A653 Grade 80, steel deck attached to structural steel supports spaced max. 6 ft o.c. attached with 12-24 x 1¼ HWH Impax 45 fasteners spaced max. 6" o.c. at supports. Deck side laps secured 24" o.c. with 14x7/8 HWH Lap-S/D fasteners. **This Tested Assembly has been analyzed for allowable deck stress. See Deck Stress Analysis Table.**
System Type D(1):	Membrane mechanically attached over preliminary fastened insulation.

All General and System Limitations apply. Roof accessories not listed in Table 1 of this NOA are not approved and shall not be installed unless said accessories demonstrate compliance with prescriptive Florida Building Code requirements and are field fabricated utilizing the approved membranes listed in Table 1.

One or more layers of the following insulations:

Insulation Layer	**Insulation Fasteners (Table 3)**	**Fastener Density/ft^2**
ACFoam-II Minimum 1.0" 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.

Membrane:	TremPly KEE, TremPly KEE FB secured through the preliminarily attached insulation as specified below.
Fastening #1:	Dekfast DF-#15-PH3 fasteners with Dekfast PLT-O-2-3/4-12B plates, spaced 12" o.c. within the 5" laps in rows spaced 95" o.c. The side laps are sealed with a minimum 1.5" heat weld. ***Maximum Design Pressure –45.0 psf. (See General Limitation #7)***
Fastening #2:	Dekfast DF-#15-PH3 fasteners with Dekfast PLT-O-2-3/4-12B plates, spaced 6" o.c. within the 5" laps in rows spaced 95" o.c. The side laps are sealed with a minimum 1.5" heat weld. ***Maximum Design Pressure -52.5 psf. (See General Limitation #7)***
Maximum Design Pressures:	See Fastening Options Above

Membrane Type: Single Ply, KEE

Deck Type 2I: Steel Decks, Insulated

Deck Description: 18-22 ga. steel deck

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

All General and System Limitations apply. Roof accessories not listed in Table 1 of this NOA are not approved and shall not be installed unless said accessories demonstrate compliance with prescriptive Florida Building Code requirements and are field fabricated utilizing the approved membranes listed in Table 1.

One or more layers of the following insulations:

Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft^2
ACFoam–II, H-Shield Minimum 1" thick	**N/A**	**N/A**
ENRGY 3, ACFoam–II, H-Shield, H-Shield WF, H-Shield NB Minimum 1.4" thick	**N/A**	**N/A**
Ultra-Max, ACFoam Composite, Thermaroof Composite-3, ENRGY-3 Composite Minimum 1.5" 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.

Membrane: TremPly KEE roof cover attached through the preliminary fastened insulation to the deck as specified below:

Fastening: Fasten with Dekfast DF-#15-PH3 and stress plates spaced 12" o.c. through the 3.5" head laps or fastening tabs spaced 51" o.c. Laps are sealed with 1.5-inch heat weld.

Maximum Design Pressures: –52.5 psf (See General Limitation #9.)

Membrane Type:	Single Ply, KEE
Deck Type 2I:	Steel, Insulated
Deck Description:	18-22 ga., ASTM A653 SS/A1008 SS Grade 80 Steel deck attached to structural supports spaced max. 6 ft o.c. attached with ITW Buildex Traxx/5 fasteners spaced max. 6 in. o.c. at supports (one fastener was installed at each bearing attachment). Deck side laps secured with ITW Buildex Traxx/1 fasteners spaced max. 24" o.c. **This Tested Assembly has been analyzed for allowable deck stress. See Deck Stress Analysis Table.**
System Type D(3):	Membrane mechanically attached over preliminary fastened insulation.

All General and System Limitations apply. Roof accessories not listed in Table 1 of this NOA are not approved and shall not be installed unless said accessories demonstrate compliance with prescriptive Florida Building Code requirements and are field fabricated utilizing the approved membranes listed in Table 1.

One or more layers of the following insulations:

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

Top Insulation Layer (Optional)	**Insulation Fasteners (Table 3)**	**Fastener Density/ft^2**
DensDeck, DensDeck Prime		
Minimum ¼" 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.

Membrane:	TremPly KEE, TremPly KEE FB secured through the preliminarily attached insulation as specified below.
Fastening:	Trufast #15 EHD fasteners and Trufast 2-3/4" Barbed Seam Plate (EHD) spaced 12" o.c. within the 6" wide side laps in rows spaced 94" o.c. The roof cover side laps are sealed with a minimum 1.5" heat weld.
Maximum Design Pressures:	-45 psf. (See General Limitation #7)

Membrane Type: Single Ply, KEE

Deck Type 2I: Steel Decks, Insulated

Deck Description: Min. 22 ga., ASTM A653 or A1008 SS Grade 80 steel deck secured to structural supports spaced maximum 5 ft o.c.. attached with Traxx/5 fasteners spaced 6" o.c. Deck side laps are secured with Traxx/1 fasteners spaced 30" o.c.
This Tested Assembly has been analyzed for allowable deck stress. See Deck Stress Analysis Table.

System Type D(4): Membrane mechanically attached over preliminary fastened insulation.

All General and System Limitations apply. Roof accessories not listed in Table 1 of this NOA are not approved and shall not be installed unless said accessories demonstrate compliance with prescriptive Florida Building Code requirements and are field fabricated utilizing the approved membranes listed in Table 1.

One or more layers of the following insulations:

Insulation Layer	**Insulation Fasteners (Table 3)**	**Fastener Density/ft^2**
ENRGY 3, ACFoam–II, H-Shield, H-Shield WF, H-Shield NB Minimum 1.5" thick	**N/A**	**N/A**
Ultra-Max, ACFoam Composite, Thermaroof Composite-3, ENRGY-3 Composite Minimum 1.5" thick	**N/A**	**N/A**

Top Insulation Layer (Optional)	**Insulation Fasteners (Table 3)**	**Fastener Density/ft^2**
DensDeck, DensDeck Prime, SECUROCK Gypsum-Fiber Roof Board Minimum 0.25" 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.

Membrane: TremPly KEE secured through the preliminarily attached insulation as specified below.

Fastening: Dekfast DF-#15-PH3 fasteners with Dekfast PLT-R-2-3/8-6B or *isofast* PLT-R-2-3/8-BL, spaced 6" o.c. within the 5" open laps in rows spaced 144.0" o.c., or installed through integral 3-1/2" fastening tab. The outside 1.5" of the lap is heat welded.

Maximum Design Pressures: -45 psf. (See General Limitation #7)

Membrane Type: Single Ply, KEE

Deck Type 2I: Steel Decks, Insulated

Deck Description: 18-22 ga. ASTM A 611, Grade 80 steel deck secured to structural supports spaced maximum 6 ft o.c. fastened with ITW Buildex Traxx/5 at a maximum spacing of 6" o.c. Side laps shall be fastened with Traxx/1 screws at a maximum spacing of 30 inches o.c.
This Tested Assembly has been analyzed for allowable deck stress. See Deck Stress Analysis Table.

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

All General and System Limitations apply. Roof accessories not listed in Table 1 of this NOA are not approved and shall not be installed unless said accessories demonstrate compliance with prescriptive Florida Building Code requirements and are field fabricated utilizing the approved membranes listed in Table 1.

One or more layers of the following insulations:

Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft^2
ENRGY 3, ACFoam–II, H-Shield, H-Shield WF, H-Shield NB Minimum 1.5" thick	**N/A**	**N/A**
Ultra-Max, ACFoam Composite, Thermaroof Composite-3, ENRGY-3 Composite Minimum 1.5" 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.

Membrane: TremPly KEE secured through the preliminarily attached insulation as specified below.

Fastening: Dekfast DF-#15-PH3 with plates spaced 18" o.c. within the 5" open laps in rows spaced 51" o.c. The outside 1.5" of the lap is heat welded.

Maximum Design Pressures: -45 psf. (See General Limitation #7)

Membrane Type: Single Ply, KEE

Deck Type 2I: Steel Decks, Insulated

Deck Description: Min. 18-22 ga., (*See Specific Deck type below*) steel deck fastened to steel support at a maximum span of 6' o.c. Steel deck shall be fastened with SFS Intec Impax 5 or ITW Buildex Traxx/5 at a maximum spacing of 6" o.c. Side laps shall be fastened with SFS Intec ¼-14 Lap Tek or Traxx/1 screws at a maximum spacing of 30 inches o.c.
This Tested Assembly has been analyzed for allowable deck stress. See Deck Stress Analysis Table.

System Type D(6): Membrane mechanically attached over preliminary fastened insulation.

All General and System Limitations apply. Roof accessories not listed in Table 1 of this NOA are not approved and shall not be installed unless said accessories demonstrate compliance with prescriptive Florida Building Code requirements and are field fabricated utilizing the approved membranes listed in Table 1.

One or more layers of the following insulations:

Insulation Layer	**Insulation Fasteners (Table 3)**	**Fastener Density/ft^2**
ENRGY 3, ACFoam–II, H-Shield, H-Shield WF, H-Shield NB Minimum 1.5" thick	**N/A**	**N/A**
Ultra-Max, ACFoam Composite, Thermaroof Composite-3, ENRGY-3 Composite Minimum 1.5" thick	**N/A**	**N/A**

Top Insulation Layer (Optional)	**Insulation Fasteners (Table 3)**	**Fastener Density/ft^2**
DensDeck, DensDeck Prime, SECUROCK Gypsum-Fiber Roof Board Minimum 0.25" 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.

Membrane: TremPly KEE secured through the preliminarily attached insulation as specified below.

Fastening #1: (*ASTM A1008/A1008M-01a or A653/A653M-01a SS, Grade 80*) Dekfast DF-#15-PH3 with plates spaced 12" o.c. in the 5" lap of membrane in rows spaced 72" o.c. The outside 1.5" of the lap is heat welded.
Maximum Design Pressure: -45 psf. (See General Limitation #7)

Fastening #2: (*Type B, Grade 80*) Dekfast DF-#15-PH3 with plates spaced 6" o.c. in the 5" lap of membrane in rows spaced 96" o.c. The outside 1.5" of the lap is heat welded.
Maximum Design Pressure: -52.5 psf. (See General Limitation #7)

Maximum Design Pressures: See Fastening Options Above

Membrane Type: Single Ply, KEE

Deck Type 2I: Steel Decks, Insulated

Deck Description: Min. 22 ga., ASTM A653 or A1008 SS Grade 80 steel deck secured to structural supports spaced maximum 4 ft o.c. attached with Traxx/5 fasteners spaced 6" o.c. Deck side laps are secured with Traxx/1 fasteners spaced 30" o.c.
This Tested Assembly has been analyzed for allowable deck stress. See Deck Stress Analysis Table.

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

All General and System Limitations apply. Roof accessories not listed in Table 1 of this NOA are not approved and shall not be installed unless said accessories demonstrate compliance with prescriptive Florida Building Code requirements and are field fabricated utilizing the approved membranes listed in Table 1.

One or more layers of the following insulations:

Insulation Layer	**Insulation Fasteners (Table 3)**	**Fastener Density/ft^2**
ENRGY 3, ACFoam–II, H-Shield, H-Shield WF, H-Shield NB Minimum 1.5" thick	**N/A**	**N/A**
Ultra-Max, ACFoam Composite, Thermaroof Composite-3, ENRGY-3 Composite Minimum 1.5" thick	**N/A**	**N/A**

Top Insulation Layer (Optional)	**Insulation Fasteners (Table 3)**	**Fastener Density/ft^2**
DensDeck, DensDeck Prime, SECUROCK Gypsum-Fiber Roof Board Minimum 0.25" 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.

Membrane: TremPly KEE secured through the preliminarily attached insulation as specified below.

Fastening: Dekfast DF-#15-PH3 fasteners with Dekfast PLT-R-2-3/8-6B or *isofast* PLT-R-2-3/8-BL plates, spaced 6" o.c. through the top of the roof cover in rows spaced 144.0" o.c.. Rows are sealed by either welding a 6" cover strip or prefabricated 4.5" surface tab (closed lap configuration) over the fasteners. The edge of tab or both edges of cover strip are heat welded min. 1.5". The outside 1.5" of the lap is heat welded.

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

Membrane Type: Single Ply, KEE

Deck Type 2I: Steel Decks, Insulated

Deck Description: Min. 22 ga., Type B, Grade 33 steel deck secured to structural supports spaced maximum 6 ft o.c. attached with 5/8" puddle welds at each flute along intermediate supports. Deck side laps secured 24" o.c. with 14x7/8 HWH fasteners.
This Tested Assembly has been analyzed for allowable deck stress. See Deck Stress Analysis Table.

System Type D(8): Membrane mechanically attached over preliminary fastened insulation.

All General and System Limitations apply. Roof accessories not listed in Table 1 of this NOA are not approved and shall not be installed unless said accessories demonstrate compliance with prescriptive Florida Building Code requirements and are field fabricated utilizing the approved membranes listed in Table 1.

One or more layers of the following insulations:

Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft^2
H-Shield HD Minimum ½" 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.

Membrane: TremPly KEE secured through the preliminarily attached insulation as specified below.

Fastening: Dekfast DF-#15-PH3 with Dekfast PLT-O-2-3/4-12B plates spaced 6" o.c. within the 5" laps in rows spaced 69" o.c. The side laps are sealed with a minimum 1.5" heat weld.

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

Membrane Type: Single Ply, KEE

Deck Type 2I: Steel Decks, Insulated

Deck Description: 18-22 ga., Type B, Grade 33 steel deck fastened to steel support at a maximum span of 6' o.c. Steel deck shall be fastened with SFS Intec Impax 5 or ITW Buildex Traxx/5 at a maximum spacing of 6" o.c. Side laps shall be fastened with SFS Intec ¼-14 Lap Tek or Traxx/1 screws at a maximum spacing of 30 inches o.c.
This Tested Assembly has been analyzed for allowable deck stress. See Deck Stress Analysis Table.

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

All General and System Limitations apply. Roof accessories not listed in Table 1 of this NOA are not approved and shall not be installed unless said accessories demonstrate compliance with prescriptive Florida Building Code requirements and are field fabricated utilizing the approved membranes listed in Table 1.

One or more layers of the following insulations:

Insulation Layer	**Insulation Fasteners (Table 3)**	**Fastener Density/ft^2**
ENRGY 3, ACFoam–II, H-Shield, H-Shield WF, H-Shield NB Minimum 1.5" thick	**N/A**	**N/A**
Ultra-Max, ACFoam Composite, Thermaroof Composite-3, ENRGY-3 Composite Minimum 1.5" thick	**N/A**	**N/A**

Top Insulation Layer (Optional)	**Insulation Fasteners (Table 3)**	**Fastener Density/ft^2**
DensDeck, DensDeck Prime, SECUROCK Gypsum-Fiber Roof Board Minimum 0.25" 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.

Membrane: TremPly KEE secured through the preliminarily attached insulation as specified below.

Fastening #1: Dekfast DF-#15-PH3 with plates spaced 12" o.c. in the 5" lap of membrane in rows spaced 51" o.c. The outside 1.5" of the lap is heat welded.
Maximum Design Pressure: -52.5 psf. (See General Limitation #7)

Fastening #2: Dekfast DF-#15-PH3 with plates spaced 6" o.c. in the 5" lap of membrane in rows spaced 51" o.c. The outside 1.5" of the lap is heat welded.
Maximum Design Pressure: -60 psf. (See General Limitation #7)

Maximum Design Pressures: See Fastening Options Above

Membrane Type: Single Ply, KEE

Deck Type 2I: Steel Decks, Insulated

Deck Description: 18-20 ga., Grade 33, Type B steel deck or 18-22 ga., Type B, Grade 80 steel deck fastened to steel support at a maximum span of 6' o.c. Steel deck shall be fastened with SFS Intec Impax 5 or ITW Buildex Traxx/5 at a maximum spacing of 6" o.c. Side laps shall be fastened with SFS Intec ¼-14 Lap Tek or Traxx/1 screws at a maximum spacing of 30 inches o.c. **This Tested Assembly has been analyzed for allowable deck stress. See Deck Stress Analysis Table.**

System Type D(10): Membrane mechanically attached over preliminary fastened insulation.

All General and System Limitations apply. Roof accessories not listed in Table 1 of this NOA are not approved and shall not be installed unless said accessories demonstrate compliance with prescriptive Florida Building Code requirements and are field fabricated utilizing the approved membranes listed in Table 1.

One or more layers of the following insulations:

Insulation Layer	**Insulation Fasteners (Table 3)**	**Fastener Density/ft^2**
ENRGY 3, ACFoam–II, H-Shield, H-Shield WF, H-Shield NB Minimum 1.5" thick	**N/A**	**N/A**
Ultra-Max, ACFoam Composite, Thermaroof Composite-3, ENRGY-3 Composite Minimum 1.5" thick	**N/A**	**N/A**

Top Insulation Layer (Optional)	**Insulation Fasteners (Table 3)**	**Fastener Density/ft^2**
DensDeck, DensDeck Prime, SECUROCK Gypsum-Fiber Roof Board Minimum 0.25" 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.

Membrane: TremPly KEE secured through the preliminarily attached insulation as specified below.

Fastening #1: Dekfast DF-#15-PH3 with plates spaced 12" o.c. in the 5" lap of membrane in rows spaced 51" o.c. The outside 1.5" of the lap is heat welded.
Maximum Design Pressure: –52.5 psf. (See General Limitation #7)

Fastening #2: Dekfast DF-#15-PH3 with plates spaced 6" o.c. in the 5" lap of membrane in rows spaced 51" o.c. The outside 1.5" of the lap is heat welded.
Maximum Design Pressure: -67.5 psf. (See General Limitation #7)

Maximum Design Pressures: See Fastening Options Above

Membrane Type: Single Ply, KEE

Deck Type 2I: Steel Decks, Insulated

Deck Description: 18-22 ga. Type B, Grade 80 steel deck secured to structural supports spaced maximum 6 ft o.c. fastened with ITW Buildex Traxx/5 at a maximum spacing of 6" o.c. Side laps shall be fastened with Traxx/1 screws at a maximum spacing of 30 inches o.c.
This Tested Assembly has been analyzed for allowable deck stress. See Deck Stress Analysis Table.

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

All General and System Limitations apply. Roof accessories not listed in Table 1 of this NOA are not approved and shall not be installed unless said accessories demonstrate compliance with prescriptive Florida Building Code requirements and are field fabricated utilizing the approved membranes listed in Table 1.

One or more layers of the following insulations:

Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft^2
ENRGY 3, ACFoam–II, H-Shield, H-Shield WF, H-Shield NB Minimum 1.5" thick	**N/A**	**N/A**
Ultra-Max, ACFoam Composite, Thermaroof Composite-3, ENRGY-3 Composite Minimum 1.5" 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.

Membrane: TremPly KEE secured through the preliminarily attached insulation as specified below.

Fastening: Dekfast DF-#15-PH3 with plates spaced 12" o.c. in the 5" open laps in rows spaced 51" o.c. The outside 1.5" of the lap is heat welded.

Maximum Design Pressures: -60 psf. (See General Limitation #7)

Membrane Type:	Single Ply, KEE
Deck Type 2I:	Steel, Insulated
Deck Description:	Min. 22 ga., Type B, Grade 80 steel deck secured to structural supports spaced maximum 4 ft-6 in. o.c. with ITW Buildex Traxx/5 fasteners spaced max. 6 in. o.c. at each rib. Deck side laps secured with ITW Buildex Traxx/1 fasteners spaced max. 24" o.c. **This Tested Assembly has been analyzed for allowable deck stress. See Deck Stress Analysis Table.**
System Type D(12):	Membrane mechanically attached over preliminary fastened insulation.

All General and System Limitations apply. Roof accessories not listed in Table 1 of this NOA are not approved and shall not be installed unless said accessories demonstrate compliance with prescriptive Florida Building Code requirements and are field fabricated utilizing the approved membranes listed in Table 1.

One or more layers of the following insulations:

Base Insulation Layer	**Insulation Fasteners (Table 3)**	**Fastener Density/ft^2**
H-Shield Minimum 1.5" 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.

Membrane:	TremPly KEE or TremPly KEE FB, secured through the preliminarily attached insulation using Dekfast DF-#15-PH3 with Dekfast PLT-O-2-1/2-12B or Dekfast PLT-O-2-3/4-12B plates, spaced 6" o.c. within the 6" laps in rows spaced 104.5" o.c. The side laps are sealed with a minimum 1.5" heat weld.
Maximum Design Pressures:	-60.0 psf (See General Limitation #7).

Membrane Type: Single Ply, KEE

Deck Type 2I: Steel, Insulated

Deck Description: Min 22 ga., Type B, Grade 33 steel deck attached to structural steel supports spaced max. 4 ft-6 in. o.c. with ITW Buildex Traxx/5 fasteners spaced max. 6 in. o.c. at each rib. Deck side laps secured with ITW Buildex Traxx/1 fasteners spaced max. 24" o.c.
This Tested Assembly has been analyzed for allowable deck stress. See Deck Stress Analysis Table.

System Type D(13): Membrane mechanically attached over preliminary fastened insulation.

All General and System Limitations apply. Roof accessories not listed in Table 1 of this NOA are not approved and shall not be installed unless said accessories demonstrate compliance with prescriptive Florida Building Code requirements and are field fabricated utilizing the approved membranes listed in Table 1.

One or more layers of the following insulations:

Base Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft^2
ENRGY 3 **Minimum 1.5" 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.

Membrane: TremPly KEE or TremPly KEE FB secured through the preliminarily attached insulation using Dekfast DF-#15-PH3 with Dekfast PLT-O-2-1/2-12B or Dekfast PLT-O-2-3/4-12B plates, spaced 6" o.c. within the 5" laps in rows spaced 69" o.c. The side laps are sealed with a minimum 1.5" heat weld.

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

Membrane Type: Single Ply, KEE

Deck Type 2I: Steel, Insulated

Deck Description: Min 22 ga., Type B, Grade 33 steel deck attached to structural steel supports spaced max. 4 ft-6 in. o.c. with ITW Buildex Traxx/5 fasteners spaced max. 6 in. o.c. at each rib. Deck side laps secured with ITW Buildex Traxx/1 fasteners spaced max. 24" o.c.
This Tested Assembly has been analyzed for allowable deck stress. See Deck Stress Analysis Table.

System Type D(14): Membrane mechanically attached over preliminary fastened insulation.

All General and System Limitations apply. Roof accessories not listed in Table 1 of this NOA are not approved and shall not be installed unless said accessories demonstrate compliance with prescriptive Florida Building Code requirements and are field fabricated utilizing the approved membranes listed in Table 1.

One or more layers of the following insulations:

Base Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft^2
Miami-Dade Approved Lightweight Concrete Minimum 2.0" thick, Minimum 300 psi.	**N/A**	**N/A**

Note: Load capacity of the structural substrate must be verified for the additional load of the LWC. The LWC must be properly vented.

Membrane: TremPly KEE or TremPly KEE FB secured through the preliminarily attached insulation using Dekfast DF-#15-PH3 with Dekfast PLT-O-2-1/2-12B or Dekfast PLT-O-2-3/4-12B plates, spaced 6" o.c. within the 5" laps in rows spaced 69" o.c. The side laps are sealed with a minimum 1.5" heat weld.

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

Membrane Type:	Single Ply, KEE
Deck Type 2I:	Steel, Insulated
Deck Description:	Min. 22 ga. Type B, Grade 80 steel deck attached to structural supports spaced max. 5 ft o.c. with ITW Buildex Traxx/5 fasteners spaced max. 6 in. o.c. at supports (one fastener was installed at each bearing attachment). Deck side laps secured with ITW Buildex Traxx/1 fasteners spaced max. 24" o.c. **This Tested Assembly has been analyzed for allowable deck stress. See Deck Stress Analysis Table.**
System Type D(15):	Membrane mechanically attached over preliminary fastened insulation.

All General and System Limitations apply. Roof accessories not listed in Table 1 of this NOA are not approved and shall not be installed unless said accessories demonstrate compliance with prescriptive Florida Building Code requirements and are field fabricated utilizing the approved membranes listed in Table 1.

One or more layers of the following insulations:

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

Top Insulation Layer (Optional)	**Insulation Fasteners (Table 3)**	**Fastener Density/ft^2**
DensDeck, DensDeck Prime		
Minimum ¼" 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.

Membrane:	TremPly KEE or TremPly KEE FB, secured through the preliminarily attached insulation as specified below.
Fastening:	Trufast #15 EHD fasteners and Trufast 2-3/4" Barbed Seam Plate (EHD) spaced 6" o.c. within the 6" wide side laps in rows spaced 94" o.c. The roof cover side laps are sealed with a minimum 1.5" heat weld.
Maximum Design Pressures:	-67.5 psf. (See General Limitation #7)

Membrane Type: Single Ply, KEE

Deck Type 2I: Steel Decks, Insulated

Deck Description: 18- 22 ga., Type B, Grade 80 steel deck attached to structural supports spaced maximum 6 ft o.c. with Traxx/5 fasteners spaced 6” o.c. Deck side laps are secured with Traxx/1 fasteners spaced 30” o.c.
This Tested Assembly has been analyzed for allowable deck stress. See Deck Stress Analysis Table.

System Type D(16): Membrane mechanically attached over preliminary fastened insulation.

All General and System Limitations apply. Roof accessories not listed in Table 1 of this NOA are not approved and shall not be installed unless said accessories demonstrate compliance with prescriptive Florida Building Code requirements and are field fabricated utilizing the approved membranes listed in Table 1.

One or more layers of the following insulations:

Insulation Layer	**Insulation Fasteners (Table 3)**	**Fastener Density/ft^2**
ENRGY 3, ACFoam–II, H-Shield, H-Shield WF, H-Shield NB Minimum 1.5” thick	**N/A**	**N/A**
Ultra-Max, ACFoam Composite, Thermaroof Composite-3, ENRGY-3 Composite Minimum 1.5” thick	**N/A**	**N/A**

Top Insulation Layer (Optional)	**Insulation Fasteners (Table 3)**	**Fastener Density/ft^2**
DensDeck, DensDeck Prime, SECUROCK Gypsum-Fiber Roof Board Minimum 0.25” 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.

Membrane: TremPly KEE secured through the preliminarily attached insulation as specified below.

Fastening: Dekfast DF-#15-PH3 fasteners with Dekfast PLT-R-2-3/8-6B or *isofast* PLT-R-2-3/8-BL plates, spaced 6" o.c. within the 5” open laps in rows spaced 72.0" o.c., or installed through integral 3-1/2” fastening tab. The outside 1.5” of the lap is heat welded.

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

Membrane:	Single Ply, KEE
Deck Type 2I:	Steel, Insulated
Deck Description:	Min. 18-22 ga., Type B, Grade 80 steel deck secured to structural supports spaced 6 ft o.c. with Traxx/5 fasteners spaced 6" o.c. Deck side laps are secured with Traxx/1 fasteners spaced 30" o.c. **This Tested Assembly has been analyzed for allowable deck stress. See Deck Stress Analysis Table.**
System Type D(17):	Membrane fastened over preliminarily secured insulation.

All General and System Limitations apply. Roof accessories not listed in Table 1 of this NOA are not approved and shall not be installed unless said accessories demonstrate compliance with prescriptive Florida Building Code requirements and are field fabricated utilizing the approved membranes listed in Table 1.

One or more layers of any of the following insulations.

Insulation Layer	**Insulation Fasteners (Table 3)**	**Fastener Density/ft^2**
Miami-Dade Approved Lightweight Concrete Minimum 2.0" thick, Minimum 300 psi.	**N/A**	**N/A**

Note: Load capacity of the structural substrate must be verified for the additional load of the LWC. The LWC must be properly vented.

Membrane:	TremPly KEE secured through the preliminarily attached insulation as specified below.
Fastening:	Dekfast DF-#15-PH3 fasteners with Dekfast PLT-R-2-3/8-6B or *isofast* PLT-R-2-3/8-BL plates spaced 6" o.c. within the 5" over laps in rows spaced 72.0" o.c., or installed through integral 3-1/2" fastening tab. The outside 1.5" of the lap is heat welded.
Maximum Design Pressure:	-67.5 psf. (See General Limitation #7)

Membrane:	Single Ply, KEE
Deck Type 2I:	Steel, Insulated
Deck Description:	Min. 18-22 ga., Type B, Grade 33 steel deck secured to structural supports spaced at a maximum span of 6 ft o.c. Steel deck shall be fastened with SFS Intec Impax 5 or ITW Buildex Traxx/5 at a maximum spacing of 6" o.c. Side laps shall be fastened with SFS Intec ¼-14 Lap Tek or Traxx/1 screws at a maximum spacing of 30 inches o.c. **This Tested Assembly has been analyzed for allowable deck stress. See Deck Stress Analysis Table.**
System Type D(18):	Membrane fastened over preliminarily secured insulation.

All General and System Limitations apply. Roof accessories not listed in Table 1 of this NOA are not approved and shall not be installed unless said accessories demonstrate compliance with prescriptive Florida Building Code requirements and are field fabricated utilizing the approved membranes listed in Table 1.

One or more layers of any of the following insulations.

Insulation Layer	**Insulation Fasteners (Table 3)**	**Fastener Density/ft^2**
Miami-Dade Approved Lightweight Concrete Minimum 2.0" thick, Minimum 300 psi.	**N/A**	**N/A**

Note: Load capacity of the structural substrate must be verified for the additional load of the LWC. The LWC must be properly vented.

Membrane:	TremPly KEE secured through the preliminarily attached insulation as specified below.
Fastening #1:	Dekfast DF-#15-PH3 and Dekfast PLT-O-2-3/4-12B plates spaced 12" o.c. in the 5" lap of membrane in rows spaced 51" o.c. The outside 1.5" of the lap is heat welded. ***Maximum Design Pressure: -52.5 psf. (See General Limitation #7)***
Fastening #2:	Dekfast DF-#15-PH3 and Dekfast PLT-O-2-3/4-12B plates spaced 6" o.c. in the 5" lap of membrane in rows spaced 51" o.c. The outside 1.5" of the lap is heat welded. ***Maximum Design Pressure: -60 psf. (See General Limitation #7)***
Maximum Design Pressure:	See Fastening Options Above

Membrane:	Single Ply, KEE
Deck Type 2I:	Steel, Insulated
Deck Description:	Min. 18-22 ga., Type B, Grade 80 steel deck secured to steel support at a maximum span of 6 ft o.c. Steel deck shall be fastened with SFS Intec Impax 5 or ITW Buildex Traxx/5 at a maximum spacing of 6" o.c. Side laps shall be fastened with SFS Intec ¼-14 Lap Tek or Traxx/1 screws at a maximum spacing of 30 inches o.c. **This Tested Assembly has been analyzed for allowable deck stress. See Deck Stress Analysis Table.**
System Type D(19):	Membrane fastened over preliminarily secured insulation.

All General and System Limitations apply. Roof accessories not listed in Table 1 of this NOA are not approved and shall not be installed unless said accessories demonstrate compliance with prescriptive Florida Building Code requirements and are field fabricated utilizing the approved membranes listed in Table 1.

One or more layers of any of the following insulations.

Insulation Layer	**Insulation Fasteners (Table 3)**	**Fastener Density/ft^2**
Miami-Dade Approved Lightweight Concrete Minimum 2.0" thick, Minimum 300 psi.	**N/A**	**N/A**

Note: Load capacity of the structural substrate must be verified for the additional load of the LWC. The LWC must be properly vented.

Membrane:	TremPly KEE secured through the preliminarily attached insulation as specified below.
Fastening #1:	Dekfast DF-#15-PH3 and Dekfast PLT-O-2-3/4-12B plates spaced 12" o.c. in the 5" lap of membrane in rows spaced 72" o.c. The outside 1.5" of the lap is heat welded. ***Maximum Design Pressure: -45 psf. (See General Limitation #7)***
Fastening #2:	Dekfast DF-#15-PH3 and Dekfast PLT-O-2-1/2-12B or Dekfast PLT-O-2-3/4-12B plates spaced 6" o.c. in the 5" lap of membrane in rows spaced 96" o.c. The outside 1.5" of the lap is heat welded. ***Maximum Design Pressure: -52.5 psf. (See General Limitation #7)***
Maximum Design Pressure:	See Fastening Options Above

Membrane: Single Ply, KEE

Deck Type 2I: Steel, Insulated

Deck Description: Min.18-20 ga., Type B, Grade 33 or min. 18-22 ga., Type B, Grade 80 steel deck secured to steel support at a maximum span of 6 ft o.c. Steel deck shall be fastened with SFS Intec Impax 5 or ITW Buildex Traxx/5 at a maximum spacing of 6" o.c. Side laps shall be fastened with SFS Intec ¼-14 Lap Tek or Traxx/1 screws at a maximum spacing of 30 inches o.c.

This Tested Assembly has been analyzed for allowable deck stress. See Deck Stress Analysis Table.

System Type D(20): Membrane fastened over preliminarily secured insulation.

All General and System Limitations apply. Roof accessories not listed in Table 1 of this NOA are not approved and shall not be installed unless said accessories demonstrate compliance with prescriptive Florida Building Code requirements and are field fabricated utilizing the approved membranes listed in Table 1.

One or more layers of any of the following insulations.

Insulation Layer	**Insulation Fasteners (Table 3)**	**Fastener Density/ft^2**
Miami-Dade Approved Lightweight Concrete Minimum 2.0" thick, Minimum 300 psi.	**N/A**	**N/A**

Note: Load capacity of the structural substrate must be verified for the additional load of the LWC. The LWC must be properly vented.

Membrane: TremPly KEE secured through the preliminarily attached insulation as specified below.

Fastening #1: Dekfast DF-#15-PH3 and Dekfast PLT-O-2-3/4-12B plates spaced 12" o.c. in the 5" lap of membrane in rows spaced 51" o.c. The outside 1.5" of the lap is heat welded.
Maximum Design Pressure: –52.5 psf. (See General Limitation #7)

Fastening #2: Dekfast DF-#15-PH3 and Dekfast PLT-O-2-1/2-12B or Dekfast PLT-O-2-3/4-12B plates spaced 6" o.c. in the 5" lap of membrane in rows spaced 51" o.c. The outside 1.5" of the lap is heat welded.
Maximum Design Pressure: -67.5 psf. (See General Limitation #7)

Maximum Design Pressure: See Fastening Options Above

Membrane: Single Ply, KEE

Deck Type 2I: Steel, Insulated

Deck Description: Min. 18-22 ga., Grade 80, Type B steel deck secured to steel support at a span of 5 ft or 6 ft o.c. (See Fastening Options Below). Steel deck shall be fastened with ITW Buildex Traxx/5 at a maximum spacing of 6" o.c. Side laps shall be fastened with Traxx/1 screws at a maximum spacing of 30 inches o.c.

This Tested Assembly has been analyzed for allowable deck stress. See Deck Stress Analysis Table.

System Type D(21): Membrane fastened over preliminarily secured insulation.

All General and System Limitations apply. Roof accessories not listed in Table 1 of this NOA are not approved and shall not be installed unless said accessories demonstrate compliance with prescriptive Florida Building Code requirements and are field fabricated utilizing the approved membranes listed in Table 1.

One or more layers of any of the following insulations.

Insulation Layer	**Insulation Fasteners (Table 3)**	**Fastener Density/ft^2**
Miami-Dade Approved Lightweight Concrete Minimum 2.0" thick, Minimum 300 psi.	**N/A**	**N/A**

Note: Load capacity of the structural substrate must be verified for the additional load of the LWC. The LWC must be properly vented.

Membrane: TremPly KEE secured through the preliminarily attached insulation as specified below.

Fastening #1: (*18-22 ga. steel deck with 6 ft. span*) Dekfast DF-#15-PH3 and Dekfast PLT-O-2-1/2-12B or Dekfast PLT-O-2-3/4-12B plates spaced 18" o.c. within the 5" open laps in rows spaced 51" o.c. The outside 1.5" of the lap is heat welded.
Maximum Design Pressure: -45 psf. (See General Limitation #7)

Fastening #2: (*18-22 ga. steel deck with 6 ft. span*) Dekfast DF-#15-PH3 and Dekfast PLT-O-2-1/2-12B or Dekfast PLT-O-2-3/4-12B plates spaced 12" o.c. in the 5" open laps in rows spaced 51" o.c. The outside 1.5" of the lap is heat welded.
Maximum Design Pressure: -60 psf. (See General Limitation #7)

Fastening #3: (*18 ga steel deck with 6 ft span or 20 ga. steel deck with 5 ft span*) Fasten with Dekfast DF-#15-PH3 and Dekfast PLT-O-2-1/2-12B or Dekfast PLT-O-2-3/4-12B plates spaced 6" o.c. through the top of the roof cover spaced at maximum intervals of 104.5" Fastener rows are sealed by either welding a 6" cover strip or prefabricated 4.5" surface tab.(closed lap configutration) over the fasteners. The edge of the stripping and/or surface tabs shall be welded a minimum of 1". Laps are sealed with 1.5-inch heat weld.
Maximum Design Pressure: -75 psf. (See General Limitation #7)

Maximum Design Pressure: See Fastening Options Above

Deck Type 2I: Steel Decks, Insulated

Deck Description: Min. 18 ga. Type B, Grade 80 steel deck attached to structural supports spaced maximum 6 ft o.c. with ITW Buildex Traxx/5 at a maximum spacing of 6" o.c. Side laps shall be fastened with Traxx/1 screws at a maximum spacing of 30 inches o.c.
This Tested Assembly has been analyzed for allowable deck stress. See Deck Stress Analysis Table.

System Type D(22): Membrane mechanically attached over preliminary fastened insulation.

All General and System Limitations apply. Roof accessories not listed in Table 1 of this NOA are not approved and shall not be installed unless said accessories demonstrate compliance with prescriptive Florida Building Code requirements and are field fabricated utilizing the approved membranes listed in Table 1.

One or more layers of the following insulations:

Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft^2
ENRGY 3, ACFoam–II, H-Shield, H-Shield WF, H-Shield NB Minimum 1.5" thick	**N/A**	**N/A**
Ultra-Max, ACFoam Composite, Thermaroof Composite-3, ENRGY-3 Composite Minimum 1.5" 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.

Membrane: TremPly KEE secured through the preliminarily attached insulation as specified below.

Fastening: Fasten with Dekfast DF-#15-PH3 and plates spaced 6" o.c. through the top of the roof cover spaced at maximum intervals of 104.5" Fastener rows are sealed by either welding a 6" cover strip or prefabricated 4.5" surface tab.(closed lap configutration) over the fasteners. The edge of the stripping and/or surface tabs shall be welded a minimum of 1". Laps are sealed with 1.5-inch heat weld.

Maximum Design Pressures: -75 psf. (See General Limitation #7)

Membrane Type: Single Ply, KEE

Deck Type 2I: Steel Decks, Insulated

Deck Description: Min. 22 ga., Type B, Grade 80 steel decking placed over minimum 0.25" thick structural supports having maximum 5 ft spans. Deck shall be anchored with ITW Buildex Traxx/4 or Traxx/5 fasteners spaced at maximum 6" o.c. at supports. Deck side laps shall be secured with ITW Buildex Traxx/1 fasteners spaced at a maximum 18" o.c.
This Tested Assembly has been analyzed for allowable deck stress. See Deck Stress Analysis Table.

System Type D(23): Membrane mechanically attached over preliminary fastened insulation.

All General and System Limitations apply. Roof accessories not listed in Table 1 of this NOA are not approved and shall not be installed unless said accessories demonstrate compliance with prescriptive Florida Building Code requirements and are field fabricated utilizing the approved membranes listed in Table 1.

Vapor Barrier: (Optional) Any UL or FM approved vapor barrier applied to the roof deck or over a base layer of insulation.

Fire Barrier: (Optional) Min. ¼" DensDeck or DensDeck Prime attached with 4 fasteners per 4' x 8' sheet.

One or more layers of the following insulations:

Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft^2
Any approved polyisocyanurate Listed in Table 2 Minimum 1" 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.

Membrane: TremPly KEE roof cover attached through the presecured insulation to the deck using Dekfast DF-#15-PH3 and plates spaced 6" o.c. through the tabs spaced a maximum of 51" o.c. Laps are sealed with 1.5-inch heat weld.

Maximum Design Pressures: -75 psf (See General Limitation #7)

Membrane Type:	Single Ply, KEE
Deck Type 2I:	Steel, Insulated
Deck Description:	Min. 18 ga., Type B, Grade 80 Steel deck attached to structural supports spaced max. 6 ft o.c. with ITW Buildex Traxx/5 fasteners spaced max. 6 in. o.c. at each rib. Deck side laps secured with ITW Buildex Traxx/1 fasteners spaced max. 24" o.c. **This Tested Assembly has been analyzed for allowable deck stress. See Deck Stress Analysis Table.**
System Type D(24):	Membrane mechanically attached over preliminary fastened insulation.

All General and System Limitations apply. Roof accessories not listed in Table 1 of this NOA are not approved and shall not be installed unless said accessories demonstrate compliance with prescriptive Florida Building Code requirements and are field fabricated utilizing the approved membranes listed in Table 1.

One or more layers of the following insulations:

Insulation Layer	**Insulation Fasteners (Table 3)**	**Fastener Density/ft^2**
H-Shield Minimum 1.5" 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.

Membrane:	TremPly KEE or TremPly KEE FB, secured through the preliminarily attached insulation as specified below.
Fastening:	Dekfast DF-#15-PH3 with Dekfast PLT-O-2-1/2-12B or Dekfast PLT-O-2-3/4-12B plates, spaced 6" o.c. within the 6" closed laps in rows spaced 94" o.c. The side laps are sealed with a minimum 1.5" heat weld.
Maximum Design Pressures:	–82.5 psf. (See General Limitation #7)

Membrane Type:	Single Ply, KEE
Deck Type 2I:	Steel, Insulated
Deck Description:	18-22 ga. Type B, Grade 80 Steel deck attached to structural supports spaced max. 6 ft o.c. with ITW Buildex Traxx/5 fasteners spaced max. 6 in. o.c. at each rib. Deck side laps secured with ITW Buildex Traxx/1 fasteners spaced max. 24" o.c. **This Tested Assembly has been analyzed for allowable deck stress. See Deck Stress Analysis Table.**
System Type D(25):	Membrane mechanically attached over preliminary fastened insulation.

All General and System Limitations apply. Roof accessories not listed in Table 1 of this NOA are not approved and shall not be installed unless said accessories demonstrate compliance with prescriptive Florida Building Code requirements and are field fabricated utilizing the approved membranes listed in Table 1.

One or more layers of the following insulations:

Insulation Layer	**Insulation Fasteners (Table 3)**	**Fastener Density/ft^2**
H-Shield Minimum 1.5" 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.

Membrane:	TremPly KEE, TremPly KEE FB secured through the preliminarily attached insulation as specified below.
Fastening:	Dekfast DF-#15-PH3 with Dekfast PLT-O-2-3/4-12B plates, spaced 6" o.c. within the 6" closed laps in rows spaced 47" o.c. The side laps are sealed with a minimum 1.5" heat weld.
Maximum Design Pressures:	-112.5 psf. (See General Limitation #7)

STEEL DECK SYSTEM LIMITATIONS:

1. If mechanical attachment to the structural deck through the lightweight insulating concrete is proposed, a field withdrawal resistance testing shall be performed to determine equivalent or enhanced fastener patterns and density. All testing and fastening design shall be in compliance with Testing Application Standard TAS 105 and Roofing Application Standard RAS 117 and/or RAS 137, calculations shall be signed and sealed by a Florida registered Professional Engineer, Registered Architect, or Registered Roof Consultant.
2. For steel deck application where specific deck construction is not referenced: The deck shall be a minimum 22 gage attached with 5/8" puddle welds with weld washers at every flute with maximum deck spans of 5 ft. o.c.

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., adhered using the adhesives and application rates as reported herein 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 and/or RAS 137. 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.)**
10. All products listed herein shall have a quality assurance audit in accordance with the Florida Building Code and Rule 61G20-3 of the Florida Administrative Code.

END OF THIS ACCEPTANCE