

DEPARTMENT OF REGULATORY AND ECONOMIC RESOURCES (RER) BOARD AND CODE ADMINISTRATION DIVISION NOTICE OF ACCEPTANCE (NOA)

Holcim Solutions and Products US, LLC. 26 Century Boulevard, Suite 205 Nashville, TN 37214

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: Firestone UltraPly TPO SA Single Ply Roof Systems over Concrete 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. 15-0209.02 and consists of pages 1 through 93.

The submitted documentation was reviewed by Jorge L. Acebo.

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ROOFING SYSTEM APPROVAL

<u>Category:</u>	Roofing
<u>Sub-Category:</u>	Single Ply Roofing
<u>Material:</u>	TPO SA
<u>Deck Type:</u>	Concrete
Maximum Design Pressure:	-445 psf.

TRADE NAMES OF PRODUCTS MANUFACTURED OR LABELED BY APPLICANT: TABLE 1

		Test	
Product	Dimensions	Specifications	Product Description
UltraPly TPO SA	Various	TAS 131	Reinforced TPO 0.045" or 0.060" thick membrane.
UltraPly TPO Reinforced Curb Corner	Various	TAS 131	TPO curb flashing
UltraPly 18" Curb Flashing	Various	TAS 131	TPO curb flashing
UltraPly TPO Inside/Outside Corner	Various	TAS 131	Molded TPO for corner flashing
UltraPly TPO Large Pipe Flashing	Various	TAS 131	TPO flashing for large round penetrations
UltraPly TPO T-Joint Cover	Various	TAS 131	TPO flashing for T-joints
UltraPly TPO Penetration Kit	Various	TAS 131	A penetration sealing kit for UltraPly TPO
UltraPly TPO Walkway Pad	Various	TAS 131	TPO walkway pad
UltraPly TPO Coated Metal	Various	TAS 131	TPO laminated to hot-dipped galvanized steel for flashing
UltraPly TPO Premium Walkway Pad	Various	TAS 131	TPO walkway pad
UltraPly TPO Reinforced Split Pipe Boot	Various	TAS 131	TPO flashing for round penetrations 1" to 9" in diameter
UltraPly TPO 8" Reinforced Cover Strip	Various	TAS 131	8" wide 60 mil TPO cover strip
UltraPly TPO Universal Pipe Boot	Various	TAS 131	TPO flashing for round penetrations 1" to 6" in diameter
UltraPly TPO Unsupported Flashing	Various	TAS 131	Unreinforced TPO used for flashing
SBS Base	3.3" x 50'	ASTM 6163	Fiberglass reinforced SBS base sheet
SBS Poly Torch Base	39.4" x 33'6"	ASTM D 6222	Polyester reinforced modified bitumen membrane. Torch applied.

MIAMI-DADE COUNTY APPROVED

Product	Dimensions	<u>Test</u> Specifications	Product Description
SBS Glass Torch Base	39.4" x 33'10"	ASTM D 6163	Modified bitumen base sheet with a burn-off film and reinforced with non-woven fiberglass mat.
SBS Premium Base	39.4" x 50'	ASTM D 6164	Polyester reinforced SBS modified bitumen ply with sanded surfaces
SBS Poly Base	39.4" x 50'	ASTM D 6164	Polyester reinforced SBS modified bitumen membrane with sanded surfaces.
MB Base	36 x 108'	ASTM D 4601	Fiberglass reinforced base sheet, asphalt coated on both sides. Applied in hot asphalt or mechanically attached.
BASEGARD SA	39.4" x 65' 3"	ASTM D6163	Fiberglass reinforced SBS modified bitumen, self-adhering base sheet with a smooth sanded surface.
APP 80 Glass Base	39.4" x 65'4"	ASTM D6509	Fiberglass reinforced modified bitumen, smooth surfaced base sheet.
V-Force	45" x 134"	Proprietary	A vapor retarder made of SBS modified bitumen adhesive laminated to a woven high density polyethylene top surface
I.S.O. Stick	5 gal & 1500 ml	Proprietary	A dual component polyurethane adhesive.
I.S.O. Twin Pack Insulation Adhesive	1500 ml	Proprietary	A dual component polyurethane adhesive.
I.S.O. Fix II	30 lbs.	Proprietary	A single component polyurethane adhesive.
I.S.O. Spray R	15 gal pail & 55 gal drum	Proprietary	A two-part polyurethane adhesive
SA Primer	5 gal.	Proprietary	Polymer based primer

TRADE NAMES OF PRODUCTS MANUFACTURED OR LABELED BY APPLICANT: Table 1



APPROVED INSULATIONS:

Product Name

TABLE 2Product Description

I I buuct Maine	<u>I I buuct Description</u>	
	_	(With Current NOA)
ISO 95+ GL	Polyisocyanurate foam insulation	Holcim Solutions and
ISO 95+ GL Tapered		Products US, LLC
ISOGARD HD	Polyisocyanurate with a coated	Holcim Solutions and
	fiberglass facer	Products US, LLC
ISOGARD HD Composite	Polyisocyanurate with a coated	Holcim Solutions and
	fiberglass facer composite insulation.	Products US, LLC
DensDeck Prime	Silicon treated gypsum	Georgia Pacific Gypsum LLC
RESISTA	Polyisocyanurate foam core laminated	Holcim Solutions and
RESISTA Tapered	to a coated fiberglass facer	Products US, LLC
SECUROCK Gypsum-Fiber Roof	Rigid, gypsum-based board stock	United States Gypsum Corp.
Board		
GenFlex ISO Insulation	Polyisocyanurate foam insulation	Holcim Solutions and
GenFlex ISO Insulation Tapered		Products US, LLC
Coated Glass Facer	Polyisocyanurate foam insulation	Holcim Solutions and
Coated Glass Facer Tapered		Products US, LLC
GenFlex HD ISO	Polyisocyanurate with a coated	Holcim Solutions and
	fiberglass facer	Products US, LLC
GenFlex HD Composite ISO	Polyisocyanurate with a coated	Holcim Solutions and
	fiberglass facer composite insulation.	Products US, LLC

APPROVED FASTENERS:

		TABLE 3		
Fastener <u>Number</u>	Product <u>Name</u>	Product <u>Description</u>	Dimensions	Manufacturer (With Current NOA)
1.	Firestone Heavy-Duty	#15 Fastener for steel, Wood, concrete decks	N/A	Holcim Solutions and Products US, LLC
2.	Concrete Drive Fastener	Structural concrete fastener	Various	Holcim Solutions and Products US, LLC
3.	Insulation Fastening Plate	Galvalume insulation plate	3" diameter	Holcim Solutions and Products US, LLC



Manufacturer

EVIDENCE SUBMITTED:

Test Agency	<u>Test Identifier</u>	Description	<u>Date</u>
UL LLC	03NK34486	UL 790	03/22/05
FM Approvals	3004249	4470	11/03/99
	3014031	4470	07/22/02
	3029384	4470	06/07/10
	3030650	4470	07/10/09
	3033218	4470	08/12/08
	3036642	4470	10/09/09
	3039133	4470	04/07/11
	3036747	4470	02/12/10
	3040535	4470	10/05/10
	3035017	4470	08/22/12
	3038191	4470	08/04/11
	3035560	4470	01/11/10
	3047700	4470	08/16/13
	3047398	4470	08/15/13
	3042666	4470	08/14/12
	3041939	4470	08/14/12
	3044047	4470	05/17/12
	3042665	4470	05/04/12
	797-07096-267	4470	08/22/12
	797-05604-267	4470	06/07/10
	797-05830-267	4470	08/30/10
	797-07680-267	4470	09/12/12
	797-08513-267	4470	06/18/13
Trinity ERD	F8300.07.08	TAS 131/ ASTM D6878	07/30/08
	F8300.11.08-R3	TAS 131/ ASTM D6878	02/25/11
PRI Construction Materials	FBP-038-02-01	ASTM D6164	12/27/10
Technologies, LLC	FBP-038-02-02	ASTM D6164	12/28/10
	FBP-044-02-01, R10	TAS 114 H, J	06/01/17
	FBP-053-02-01	TAS 110/ASTM D6131	10/08/12
	FBP-054-02-04, Rev 1	FM 4474 B/TAS 114 D	02/07/13
	FBP-064-02-01	ASTM D 6509	08/02/12
	FBP-076-02-01	TAS 110	10/23/12
	FBP-085-02-01, R1	FM 4474 D/TAS 114 J	10/04/12
	FBP-115-02-01	ASTM D 1644 & 2196	04/04/13
	FBP-149-02-01	FM 4474 D	12/18/13
	FBP-154-02-02	FM 4474 D	12/18/13
	FBP-158-02-01	FM 4474 D	04/28/14
	FBP-162-02-01 FBP-165-02-01	ASTM D 1970 FM 4474/TAS 114 J	10/02/13 04/28/14
	FBP-165-02-01 FBP-166-02-01	ASTM D6163	04/28/14 05/15/14
	FBP-175-02-01	FM 4474 D/TAS 114 J	03/13/14 04/28/14
	FBP-175-02-01 FBP-176-02-01	ASTM D 4601	04/28/14 07/15/14
	FBP-178-02-03	FM 4474 B/TAS 114 D	07/23/14
	FBP-185-02-02	FM 4474 B/TAS 114 D FM 4474 B/TAS 114 D	07/23/14
	1 D1 -105-02-02		07/31/14



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EVIDENCE SUBMITTED: (CONTINUED)

Test Agency	<u>Test Identifier</u>	Description	Date
PRI Construction Materials	FBP-206-02-01	FM 4474 D/TAS 114 J	02/02/15
Technologies, LLC	FBP-208-02-01	TAS 131/ASTM D6878	04/06/15
	FBP-214-02-01.1	ASTM C 1289	11/09/16
	FBP-214-02-02	ASTM C 1289	02/10/15
	FBP-222-02-03	TAS 114 C	04/01/15
	FBP-225-02-01	FM 4474 D/TAS 114 J	03/19/15
	FBP-233-02-03	FM 4474 D/TAS 114 J	06/01/15
	FBP-246-02-01	ASTM C 1289	10/05/15
	FBP-260-02-02	FM 4474 B	10/09/15
	FBP-280-02-01	ASTM C 1289	04/27/16
	FBP-293-02-01	ASTM D 4601	04/27/16
	FBP-315-02-01	ASTM C 1289	10/28/16



APPROVED ASSEMBLIES

Membrane Type:	Single Ply, TPO, Reinforced
Deck Type 3I:	Concrete, Insulated
Deck Description:	Min. 2500 psi structural concrete or concrete plank.
System Type A(1):	One or more layers of insulation adhered with approved adhesive; membrane Fully 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.

Base Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft ²
ISO 95+ GL, RESISTA, GenFlex ISO Insulation,	Coated Glass Facer	
Minimum: 1" thick	N/A	N/A

Note: Base insulation shall be adhered to the deck with I.S.O. Twin Pack Insulation Adhesive applied in ½ to ¾ " wide ribbons spaced 12" o.c. or with I.S.O. Stick applied in ¾ to 1" wide ribbons spaced 12" o.c. Please refer to Roofing Application Standard RAS 117 for insulation attachment.

Middle Insulation Layer (Optional)	Insulation Fasteners (Table 3)	Fastener Density/ft ²
ISO 95+ GL, GenFlex ISO Insulation		
Minimum 1" thick	N/A	N/A

Note: Optional middle insulation shall be adhered to the previous insulation layer with I.S.O. Twin Pack Insulation Adhesive applied in ½ to ¾ " wide ribbons spaced 12" o.c. or I.S.O. Stick applied in ¾" to 1" wide ribbons spaced 12" o.c. Please refer to Roofing Application Standard RAS 117 for insulation attachment.

One or more layers		
Additional Middle Insulation Layer (Optional)	Insulation Fasteners	Fastener
	(Table 3)	Density/ft ²
ISO 95+ GL Tapered, ISO 95+ GL, RESISTA, Gen	Flex ISO Insulation Tapered,	GenFlex ISO
Insulation, Coated Glass Facer		
Minimum: 1" thick	NA	NA

Note: Optional additional middle insulation shall be adhered to the previous insulation layer with I.S.O. Twin Pack Insulation Adhesive applied in ½ to ¾ " wide ribbons spaced 12" o.cPlease refer to Roofing Application Standard RAS 117 for insulation attachment.

Top Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft ²
Plywood		
Minimum 19/32" thick	N/A	N/A

Note: Top Insulation layer shall be adhered to the previous insulation layer with I.S.O. Twin Pack Insulation Adhesive applied in ½ to ¾ " wide ribbons spaced 12" o.c. Please refer to Roofing Application Standard RAS 117 for insulation attachment.



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Membrane:	Min. 45 mil UltraPly TPO SA self-adhered with 1.5" wide heat weld at the 2" wide side laps.
Maximum Design Pressure:	-45 psf. (See General Limitation #9)



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Membrane Type:	Single Ply, TPO, Reinforced
Deck Type 3I:	Concrete, Insulated
Deck Description:	Min. 2500 psi structural concrete or concrete plank.
System Type A(2):	Vapor Barrier and insulation adhered with approved adhesive; membrane fully adhered.

Vapor Barrier V-Force self-adhered to the primed concrete deck.

Note: Concrete deck shall be primed with primer-Force WB Primer at a rate of 150-200 ft²/gal and allowed to dry prior to application of Vapor Barrier.

Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft ²
ISO 95+ GL, GenFlex ISO Insulation		
Minimum: 1.5" thick	N/A	N/A

Note: Insulation shall be adhered to the Vapor Barrier using I.S.O. Spray R, I.S.O. Stick or I.S.O. Twin Pack Adhesive, applied in ³/₄" to 1" wide ribbons spaced 12" on center. Please refer to Roofing Application Standard RAS 117 for insulation attachment.

Membrane:	Min. 45 mil UltraPly TPO SA self-adhered with 1.5" wide heat weld at the 2" wide side laps.
Maximum Design Pressure:	 -57.5 psf. using I.S.O. Stick in ribbons ³/₄" – 1" wide spaced 12" o.c. (See General Limitation #9) -97.5 psf using I.S.O. Twin Pack Adhesive in ribbons ³/₄" – 1" wide spaced 12" o.c. (See General Limitation #9)



Membrane Type:	Single Ply, TPO, Reinforced
Deck Type 3I:	Concrete, Insulated
Deck Description:	Min. 2500 psi structural concrete or concrete plank
System Type A(3):	Base layer of insulation mechanically fastened; top layer adhered with approved adhesive.

Vapor Barrier	One ply of BASEGARD SA is self-adhered to a concrete deck primed with SA Primer applied at a rate of 200 ft^2/gal .		
One or more layers			
Base Insulation Layer	•	Insulation Fasteners	Fastener
		(Table 3)	Density/ft ²
ISO 95+ GL, GenFlex			
Minimum 1-1/2" thicl	K	N/A	N/A

Note: Base Insulation layer shall be adhered to the deck with I.S.O. Twin Pack Insulation Adhesive applied in ¹/₂"to ³/₄" wide ribbons spaced 12" o.c. or I.S.O. Stick applied in ³/₄" to 1" wide ribbons spaced 12" o.c. Please refer to Roofing Application Standard RAS 117 for insulation attachment.

Top Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft ²
ISOGARD HD, GenFlex HD ISO		
Minimum ¹ /2" thick	N/A	N/A

ISOGARD HD Composite, GenFlex HD Composite ISO

Minimum 2" thick	N/A	N/A
Note: Top insulation layer shall be adhered to base insulations with I.S.O. Twin Pack Insulation Adhesive in continuous ¹ / ₂ " to ³ / ₄ " wide beads spaced 12" o.c. or I.S.O. Stick applied in continuous ³ / ₄ " to 1" wide ribbons spaced 12" o.c. See Roofing Application Standard RAS 117 for fastening		
details.	Ultraphy TDO SA salf adhared with 1	

Membrane:Min. 45 mil UltraPly TPO SA self-adhered with 1.5" wide heat weld at the 3"
wide side laps.Maximum Design

Pressure: -90 psf. (See General Limitation #7)



Membrane Type:	Single Ply, TPO, Reinforced
Deck Type 3I:	Concrete, Insulated
Deck Description:	2500 psi or greater structural concrete or concrete plank
System Type A(4):	One or more layers of insulation adhered with approved adhesive; membrane fully adhered.

Base Insulation Layer	(Table 3)	Fastener Density/ft ²
ISO 95+ GL, GenFlex ISO Insulation		
Minimum 1.5" thick	N/A	N/A

Note: Base insulation shall be adhered to the deck with I.S.O. Twin Pack Insulation Adhesive applied in ½ to ¾ " wide ribbons, spaced as listed below, Please refer to Roofing Application Standard RAS 117 for insulation attachment.

Top Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft ²
DensDeck Prime Minimum ¼" thick	N/A	N/A

Note: All subsequent layers of insulation shall be adhered to the previous layer of insulation with I.S.O. Twin Pack Insulation Adhesive applied in ½ to ¾" wide ribbons Please refer to Roofing Application Standard RAS 117 for insulation attachment.

Membrane: Min. 45 mil UltraPly TPO SA self-adhered with 1.5" wide heat weld at the 2" wide side laps.

Maximum Design

Pressure:-127.5 psf. using I.S.O Twin Pack Insulation Adhesive in ribbons spaced 12" o.c.
(See General Limitation #9)
-187.5 psf. using I.S.O Twin Pack Insulation Adhesive in ribbons spaced 8" o.c.
(See General Limitation #9)
-247.5 psf. using I.S.O Twin Pack Insulation Adhesive in ribbons spaced 4" o.c.
(See General Limitation #9)



Membrane Type:	Single Ply, TPO, Reinforced
Deck Type 3I:	Concrete, Insulated
Deck Description:	Min. 2500 psi structural concrete or concrete plank.
System Type A(5):	Vapor Barrier and insulation adhered with approved adhesive; membrane adhered.

Vapor Barrier: One ply of APP 80 Glass Base torch adhered to the concrete deck.

Base Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft ²
ISO 95+ GL, RESISTA, GenFlex ISO Insulation, Coated Glass Facer		
Minimum: 1- ¹ / ₂ " thick	N/A	N/A

Note: Base insulation shall be adhered to the vapor barrier I.S.O. Twin Pack Insulation Adhesive applied in ¹/₂ to ³/₄ " wide ribbons spaced 12" o.c. Please refer to Roofing Application Standard RAS 117 for insulation attachment.

Middle Insulation Layer (Optional)	Insulation Fasteners (Table 3)	Fastener Density/ft ²
ISO 95+ GL, RESISTA, GenFlex ISO Insulation, Coated Glass Facer		
Minimum: 1- ¹ / ₂ " thick	N/A	N/A

Note: Optional Middle insulation shall be adhered to the base insulation layer with I.S.O. Twin Pack Insulation Adhesive applied in ½ to ¾ " wide ribbons spaced 12" o.c. Please refer to Roofing Application Standard RAS 117 for insulation attachment.

Top Insulation Layer (Optional)	Insulation Fasteners	Fastener
	(Table 3)	Density/ft ²
ISO 95+ GL Tapered, RESISTA Tapered, GenFlex	ISO Insulation Tapered, Coa	ted Glass Facer
Tapered		
Minimum: ½" thick with a ¼" per ft. taper	N/A	N/A

Note: Optional Top insulation shall be adhered to the previous insulation layer with I.S.O. Twin Pack Insulation Adhesive applied in ½ to ¾ " wide ribbons spaced 12" o.c. Please refer to Roofing Application Standard RAS 117 for insulation attachment.

Membrane:	Min. 45 mil UltraPly TPO SA self-adhered with 1.5" wide heat weld at the 2" wide side laps.
Maximum Design Pressure:	-142.5 psf. (See General Limitation #9)



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Membrane Type:	Single Ply, TPO, Reinforced
Deck Type 3I:	Concrete, Insulated
Deck Description:	Min. 2500 psi structural concrete or concrete plank.
System Type A(6):	One or more layers of insulation adhered with approved adhesive; membrane Fully adhered.

Base Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft ²
ISO 95+ GL, RESISTA, GenFlex ISO Insulation	, Coated Glass Facer	
Minimum: 1" thick	N/A	N/A

Note: Base insulation shall be adhered to the deck with I.S.O. Twin Pack Insulation Adhesive applied in ½ to ¾ " wide ribbons spaced 12" o.c. Please refer to Roofing Application Standard RAS 117 for insulation attachment.

Middle Insulation Layer (Optional)	Insulation Fasteners (Table 3)	Fastener Density/ft ²
ISO 95+ GL, GenFlex ISO Insulation		
Minimum: 1" thick	N/A	N/A

Note: Optional Middle insulation shall be adhered to the base insulation layer with I.S.O. Twin Pack Insulation Adhesive applied in ½ to ¾ " wide ribbons spaced 12" o.c. Please refer to Roofing Application Standard RAS 117 for insulation attachment.

Top Insulation Layer (Optional)	Insulation Fasteners	Fastener
	(Table 3)	Density/ft ²
ISO 95+ GL Tapered, RESISTA Tapered, GenFlex I Tapered	SO Insulation Tapered, Coa	ted Glass Facer
Minimum: ¹ / ₂ " thick with a ¹ / ₄ " per ft. taper	N/A	N/A

Note: Optional Top insulation shall be adhered to the previous insulation layer with I.S.O. Twin Pack Insulation Adhesive applied in $\frac{1}{2}$ to $\frac{3}{4}$ " wide ribbons spaced as listed below Please refer to Roofing Application Standard RAS 117 for insulation attachment.

Membrane:	Min. 45 mil UltraPly TPO SA self-adhered with 1.5" wide heat weld at the 2" wide side laps.
Maximum Design Pressure:	-142.5 psf. (See General Limitation #9)



Membrane Type:	Single Ply, TPO, Reinforced
Deck Type 3I:	Concrete, Insulated
Deck Description:	Min. 2500 psi structural concrete or concrete plank.
System Type A(7):	One or more layers of insulation adhered with approved adhesive; membrane Fully adhered.

Base Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft ²
ISO 95+ GL, RESISTA, GenFlex ISO Insulation, Coated Glass Facer		
Minimum: 1" thick	N/A	N/A

Note: Base insulation shall be adhered to the deck with I.S.O. Stick applied in ³/₄" to 1" wide ribbons spaced 12" o.c., Please refer to Roofing Application Standard RAS 117 for insulation attachment.

Middle Insulation Layer (Optional)	Insulation Fasteners (Table 3)	Fastener Density/ft ²
ISO 95+ GL, GenFlex ISO Insulation		
Minimum: 1" thick	N/A	N/A

Note: Optional Middle insulation shall be adhered to the base insulation layer with I.S.O. Stick Pack Insulation Adhesive applied in ³/₄" to 1" wide ribbons spaced 12" o.cPlease refer to Roofing Application Standard RAS 117 for insulation attachment.

Top Insulation Layer (Optional)	Insulation Fasteners	Fastener
	(Table 3)	Density/ft ²
ISO 95+ GL, ISO 95+ GL Tapered, RESISTA, RESISTA Tapered, GenFlex ISO Insulation,		
GenFlex ISO Insulation Tapered, Coated Glass Facer, Coated Glass Facer Tapered		
Minimum: 1" thick with a ¼" per ft. taper	N/A	N/A

Note: Optional Top insulation shall be adhered to the previous insulation layer with I.S.O. Stick applied in ³/₄" to 1" wide ribbons spaced 12" o.cPlease refer to Roofing Application Standard RAS 117 for insulation attachment.

Membrane:	Min. 45 mil UltraPly TPO SA self-adhered with 1.5" wide heat weld at the 2" wide side laps.
Maximum Design Pressure:	-142.5 psf. (See General Limitation #9)



Membrane Type:	Single Ply, Thermoplastic, TPO
Deck Type 3I:	Concrete, Insulated
Deck Description:	Min. 2500 psi structural concrete or concrete plank.
System Type A(8):	One or more layers of insulation adhered with approved adhesive; membrane fully adhered.

All General and System Limitations apply.

One or more layers of any of the following insulations.Insulation FastenersFastenerBase Insulation LayerInsulation FastenersFastener(Table 3)Density/ft²ISO 95+ GL, GenFlex ISO InsulationN/A

Note: Base Insulation layer shall be adhered to the deck with I.S.O. Twin Pack Insulation Adhesive applied in ¹/₂" to ³/₄" wide ribbons spaced 12" o.c. Please refer to Roofing Application Standard RAS 117 for insulation attachment.

Middle Insulation Layer (Optional)	Insulation Fasteners	Fastener
	(Table 3)	Density/ft ²
ISO 95+ GL, GenFlex ISO Insulation,		
Minimum 1.5" thick	N/A	N/A

Note: Optional Middle Insulation layer shall be adhered to the Base Insulation Layer with I.S.O. Twin Pack Insulation Adhesive applied in 1/2" to 3/4" wide ribbons spaced 12" o.c. Please refer to Roofing Application Standard RAS 117 for insulation attachment.

Top Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft ²
ISOGARD HD, GenFlex HD ISO		
Minimum ¹ / ₂ " thick	N/A	N/A

Note: Top Insulation layer shall be adhered to the previous layer of roof insulation with I.S.O. Twin Pack Insulation Adhesive applied in ½" to ¾" wide ribbons spaced 12" o.c. Please refer to Roofing Application Standard RAS 117 for insulation attachment.

Membrane:	Min. 45 mil UltraPly TPO SA self-adhered with 1.5" wide heat weld at the 2" wide side laps.
Maximum Design	
Pressure:	-157.5 psf (See General Limitation #9)



Membrane Type:	Single Ply, TPO, Reinforced
Deck Type 3I:	Concrete, Insulated
Deck Description:	Min. 2500 psi structural concrete or concrete plank.
System Type A(9):	One or more layers of insulation adhered with approved adhesive; membrane fully adhered.

All General and System Limitations apply.

One or more layers of any of the following insulations.

Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft ²
ISO 95+ GL, GenFlex ISO Insulation		
Minimum: 1.5" thick	N/A	N/A

Note: All Insulation layers shall be adhered to the deck with I.S.O. Twin Pack Insulation Adhesive applied in 1/2 to 3/4 in. wide ribbons spaced 12" o.c.. Please refer to Roofing Application Standard RAS 117 for insulation attachment.

Membrane: Min. 45 mil UltraPly TPO SA self-adhered with 1.5" wide heat weld at the 2" wide side laps.

Maximum Design Pressure:

-157.5 psf (See General Limitation #9)



Membrane Type:	Single Ply, TPO, Reinforced
Deck Type 3I:	Concrete, Insulated
Deck Description:	Min. 2500 psi structural concrete or concrete plank.

System Type A(10): One or more layers of insulation adhered with approved adhesive; membrane 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.

Insulation Fasteners

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One or more layers of any of the following insulations.

Insulation	(Table 3)	Density/ft ²
ISO 95+ GL, GenFlex ISO Insulation		v
Minimum 1" thick	N/A	N/A

Note: Base insulation shall be adhered to the deck with I.S.O. Spray R, I.S.O. Fix II or I.S.O. Stick applied in ³/₄" to 1" wide ribbons, spaced 12" o.c. or I.S.O. Twin Pack Insulation Adhesive applied in continuous ¹/₂" to ³/₄" wide ribbons spaced 12" o.c. Please refer to Roofing Application Standard RAS 117 for insulation attachment.

Membrane:	Min. 45 mil UltraPly TPO SA self-adhered with 1.5" wide heat weld at the 2" wide side laps.

Maximum Design Pressure:

-145 psf. (See General Limitation #9)



Membrane Type:	Single Ply, TPO, Reinforced
Deck Type 3I:	Concrete, Insulated
Deck Description:	Min. 2500 psi structural concrete or concrete plank.
System Type A(11):	One or more layers of insulation adhered with approved adhesive; membrane adhered.

One or more layers of any of the following insulations.Insulation FastenersBase Insulation Layer (Optional)Insulation Fasteners(Table 3)

ISO 95+ GL, GenFlex ISO Insulation Minimum 1" thick

Note: Optional Base layer of insulation shall be adhered to the deck with I.S.O. Spray R, I.S.O. Fix II or I.S.O. Stick applied in ³/₄ to 1" wide ribbons, spaced 12" o.c. or I.S.O. Twin Pack Insulation Adhesive applied in ¹/₂ to ³/₄" wide ribbons, spaced 12" o.c. Please refer to Roofing Application Standard RAS 117 for insulation attachment.

N/A

Top Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft ²
DensDeck Prime		
Minimum 1/4" thick	N/A	N/A

Note: Top layer of insulation shall be adhered with I.S.O. Stick applied in ³/₄ to 1" wide ribbons spaced 12" o.c. Please refer to Roofing Application Standard RAS 117 for insulation attachment.

Membrane: Min. 45 mil UltraPly TPO SA self-adhered with 1.5" wide heat weld at the 2" wide side laps.

Maximum DesignPressure:-160 psf. (See General Limitation #9)



Fastener Density/ft²

N/A

Membrane Type:	Single Ply, TPO, Reinforced
Deck Type 3I:	Concrete, Insulated
Deck Description:	2500 psi or greater structural concrete or concrete plank
System Type A(12):	One or more layers of insulation adhered with approved adhesive; membrane fully adhered.

Base Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft ²
ISO 95+ GL, GenFlex ISO Insulation Minimum 1.5" thick	N/A	N/A

Note: Insulation shall be adhered to the deck with I.S.O. Twin Pack Insulation Adhesive applied in 1/2 to 3/4" wide ribbons spaced as listed below Please refer to Roofing Application Standard RAS 117 for insulation attachment

Membrane:	Min. 45 mil UltraPly TPO SA self-adhered with 1.5" wide heat weld at the 2" wide side laps.
Maximum Design Pressure:	 -165 psf. using I.S.O. Twin Pack Insulation Adhesive with ribbons spaced 12" o.c. (See General Limitation #9) -210 psf. using I.S.O. Twin Pack Insulation Adhesive with ribbons spaced 8"
	o.c. (See General Limitation #9)



Membrane Type:	Single Ply, TPO, Reinforced
Deck Type 3I:	Concrete, Insulated
Deck Description:	Min. 2500 psi structural concrete or concrete plank.
System Type A(13):	Vapor Barrier and insulation adhered with approved adhesive; membrane adhered.

One or more layers of any of the following insulations.

Base Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft ²
ISO 95+ GL, GenFlex ISO Insulation		
Minimum 1" thick	N/A	N/A
Middle Insulation Layer (Optional)	Insulation Fasteners (Table 3)	Fastener Density/ft ²
Tapered ISO 95+ GL, Tapered GenFlex ISO Insulation		
Minimum ¹ / ₂ " thick with a ¹ / ₄ " per ft. taper	N/A	N/A
Top Insulation Layer (Optional)	Insulation Fasteners (Table 3)	Fastener Density/ft ²
ISOGARD HD, GenFlex HD ISO		
Minimum ¹ / ₂ " thick	N/A	N/A
Plywood		
Minimum 19/32" thick	N/A	N/A
DensDeck Prime		
Minimum ¹ / ₄ " thick	N/A	N/A

Note: Insulation shall be adhered using I.S.O. Twin Pack Insulation Adhesive in continuous ¹/₂" to ³/₄" wide beads spaced 12" o.c., I.S.O. Fix II or I.S.O. Stick applied in continuous ³/₄" to 1" wide ribbons spaced 12" o.c. See Roofing Application Standard RAS 117 for insulation attachment.

Membrane:	Min. 45 mil UltraPly TPO SA self-adhered with 1.5" wide heat weld at the 2" wide side laps.
Maximum Design Pressure:	-172.5 psf. (See General Limitation #9)



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Vapor Barrier:One ply of MB Base, SBS Base, SBS Poly Base or SBS Premium Base fully
adhered to the concrete deck with a full mopping of hot asphalt applied at a rate
of 20 - 25 lbs./square.

Membrane Type:	Single Ply, TPO, Reinforced
Deck Type 3I:	Concrete, Insulated
Deck Description:	Min. 2500 psi structural concrete or concrete plank.
System Type A(14):	Vapor Barrier and insulation adhered with approved adhesive; membrane adhered.

Vapor BarrierOne ply of MB Base, SBS Base, SBS Poly Base or SBS Premium Base fully
adhered to the concrete deck with a full mopping of hot asphalt applied at a rate
of 20 - 25 lbs./square.

One or more layers of any of the following insulations.

Base Insulation Layer	Insulation Fasteners	Fastener
	(Table 3)	Density/ft ²
ISO 95+ GL, RESISTA, GenFlex ISO Insulation, Coated	Glass Facer	
Minimum: 1" thick	N/A	N/A

Note: Base Insulation shall be adhered using I.S.O. Twin Pack Insulation Adhesive in continuous $\frac{1}{2}$ " to $\frac{3}{4}$ " wide beads spaced 12" o.c. See Roofing Application Standard RAS 117 for insulation attachment.

Middle Insulation Layer (Optional)	Insulation Fasteners (Table 3)	Fastener Density/ft ²
Tapered ISO 95+ GL, ISO 95+ GL, RESISTA Tapered, RESISTA, GenFlex ISO Insulation, Tapered GenFlex ISO Insulation, Coated Glass Facer, Coated Glass Facer Tapered		
Minimum: 1" thick	N/A	N/A
Top Insulation Layer DensDeck Prime	Insulation Fasteners (Table 3)	Fastener Density/ft ²
Minimum: ¹ /4" thick	N/A	N/A
Plywood Minimum 19/32" thick	N/A	N/A

Note: Insulation shall be adhered using I.S.O. Twin Pack Insulation Adhesive in continuous ¹/₂" to ³/₄" wide beads spaced 12" o.c., See Roofing Application Standard RAS 117 for insulation attachment.

Membrane:	Min. 45 mil UltraPly TPO SA self-adhered with 1.5" wide heat weld at the 2" wide side laps.
Maximum Design	-45 psf (See General Limitation #9) for Plywood
Pressure:	-60 psf. (See General Limitation #9) for DensDeck Prime



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Membrane Type:	Single Ply, TPO, Reinforced
Deck Type 3I:	Concrete, Insulated
Deck Description:	Min. 2500 psi structural concrete or concrete plank.
System Type A(15):	Vapor Barrier and insulation adhered with approved adhesive; membrane adhered.

One or more layers of any of the following insulations.

Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft ²
ISOGARD HD, GenFlex HD ISO		
Minimum: ½" thick	N/A	N/A
DensDeck Prime		
Minimum: ¼" thick	N/A	N/A

Note: Insulation shall be adhered using I.S.O. Twin Pack Insulation Adhesive in continuous ¹/₂" to ³/₄" wide beads spaced 12" o.c., I.S.O. Fix II or I.S.O. Stick applied in continuous ³/₄" to 1" wide ribbons spaced 12" o.c. See Roofing Application Standard RAS 117 for insulation attachment.

Membrane: Min. 45 mil UltraPly TPO SA self-adhered with 1.5" wide heat weld at the 2" wide side laps.

Maximum Design Pressure:

-172.5 psf. (See General Limitation #9)



Vapor BarrierOne ply of MB Base, SBS Base, SBS Poly Base or SBS Premium base fully
adhered to the concrete deck with a full mopping of hot asphalt applied at a rate
of 20 - 25 lbs./square.

Membrane Type:	Single Ply, TPO, Reinforced
Deck Type 3I:	Concrete, Insulated
Deck Description:	2500 psi or greater structural concrete or concrete plank
System Type A(16):	One or more layers of insulation adhered with approved asphalt; membrane Fully adhered.

Base Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft ²
ISO 95+ GL, GenFlex ISO Insulation		·
Minimum 1.5" thick	N/A	N/A
Top Insulation Layer (Optional)	Insulation Fasteners	Fastener
	(Table 3)	Density/ft ²
Tapered ISO 95+ GL, Tapered GenFlex ISO Insulatio	n	
Minimum ¹ / ₂ " thick start with a ¹ / ₄ " per ft. taper	N/A	N/A

Note: Base insulation shall be adhered to the deck in full mopping of approved asphalt within the EVT range and at a rate of 20 to 40 lbs/100 ft². All subsequent layers of insulation shall be adhered to the previous layer of insulation in full mopping of approved asphalt within the EVT range and at a rate of 20 to 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.

Membrane:	Min. 45 mil UltraPly TPO SA self-adhered with 1.5" wide heat weld at the 2" wide side laps.
Maximum Design Pressure:	-180 psf. without cover board (See General Limitation #9)



Membrane Type:	Single Ply, TPO, Reinforced
Deck Type 3I:	Concrete, Insulated
Deck Description:	Min. 2500 psi structural concrete or concrete plank.
System Type A(17):	One or more layers of insulation adhered with approved adhesive; membrane Fully adhered.

Base Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft ²
ISO 95+ GL, RESISTA, GenFlex ISO Insulation,	Coated Glass Facer	
Minimum: 1" thick	N/A	N/A

Note: Base insulation shall be adhered to the deck with I.S.O. Stick applied in ³/₄" to 1 " wide ribbons spaced 12" o.c. Please refer to Roofing Application Standard RAS 117 for insulation attachment.

Middle Insulation Layer (Optional)	Insulation Fasteners (Table 3)	Fastener Density/ft ²
ISO 95+ GL, RESISTA, GenFlex ISO Insulation	, Coated Glass Facer	
Minimum 1" thick	N/A	N/A

Note: Optional middle insulation shall be adhered to the previous insulation layer with I.S.O. Stick applied in 3/4 to 1 " wide ribbons spaced 12" o.c. Please refer to Roofing Application Standard RAS 117 for insulation attachment.

Additional Middle Insulation Layer (Optional)	Insulation Fasteners	Fastener		
	(Table 3)	Density/ft ²		
ISO 95+ GL Tapered, ISO 95+ GL, RESISTA Tapered, RESISTA, GenFlex ISO Insulation,				
Tapered GenFlex ISO Insulation, Coated Glass Facer, Coated Glass Facer Tapered				
Minimum: 1" thick	NA	NA		

Note: Optional additional middle insulation shall be adhered to the previous insulation layer with I.S.O. Stick applied in 3/4 to 1 " wide ribbons spaced 12" o.c. Please refer to Roofing Application Standard RAS 117 for insulation attachment.

Top Insulation Layer	Insulation Fasteners	Fastener
	(Table 3)	Density/ft ²
ISOGARD HD, GenFlex HD ISO		
Minimum ¹ / ₂ " thick	N/A	N/A

Note: Top Insulation layer shall be adhered to the previous insulation layer with I.S.O. Stick applied in 3/4 to 1 " wide ribbons spaced 12" o.c. Please refer to Roofing Application Standard RAS 117 for insulation attachment.



Membrane:	Min. 45 mil UltraPly TPO SA self-adhered with 1.5" wide heat weld at the 3" wide side laps.
Maximum Design Pressure:	-187.5 psf (See General Limitation #9)



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Membrane Type:	Single Ply, TPO, Reinforced
Deck Type 3I:	Concrete, Insulated
Deck Description:	Min. 2500 psi structural concrete or concrete plank.
System Type A(18):	Vapor Barrier and insulation adhered with approved adhesive; membrane fully adhered.

Vapor Barrier: V-Force self-adhered to the primed concrete deck with 3" wide side lap.

Note: Concrete deck shall be primed with V-Force WB Primer at a rate of 0.25 gal/100 ft² and allowed to dry prior to application of Vapor Barrier.

Base Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft ²
ISO 95+ GL, GenFlex ISO Insulation		
Minimum: 1/2" thick	N/A	N/A

Note: Base insulation layer shall be adhered to the Vapor Barrier using I.S.O. Spray R ribbon adhesive, applied in ³/₄" to 1" wide ribbons spaced 12" on center. Please refer to Roofing Application Standard RAS 117 for insulation attachment.

Top Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft ²
DensDeck Prime		
Minimum ¼" thick	N/A	N/A

Note: Top insulation layer shall be adhered to the Base insulation layer using I.S.O. Spray R ribbon adhesive, applied in ³/₄" to 1" wide ribbons spaced 12" on center. Please refer to Roofing Application Standard RAS 117 for insulation attachment.

Membrane:	Min. 45 mil UltraPly TPO SA self-adhered with 1.5" wide heat weld at the 2" wide side laps.
Maximum Design Pressure:	-187.5 psf. (See General Limitation #9)



Membrane Type:	Single Ply, TPO, Reinforced
Deck Type 3I:	Concrete, Insulated
Deck Description:	Min. 2500 psi structural concrete or concrete plank.
System Type A(19):	One or more layers of insulation adhered with approved adhesive; membrane Fully adhered.

Base Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft ²
ISO 95+ GL, RESISTA, GenFlex ISO Insulation	n, Coated Glass Facer	·
Minimum: 1" thick	N/A	N/A

Note: Base insulation shall be adhered to the deck with I.S.O. Stick applied in ³/₄" to 1 " wide ribbons spaced 12" o.c. Please refer to Roofing Application Standard RAS 117 for insulation attachment.

Middle Insulation Layer (Optional)	Insulation Fasteners	Fastener
	(Table 3)	Density/ft ²
ISO 95+ GL, RESISTA, GenFlex ISO Insulat	ion, Coated Glass Facer	
Minimum: 1" thick	N/A	N/A

Note: Optional Middle insulation shall be adhered to the base insulation layer with I.S.O. Stick applied in 3/4 to 1 " wide ribbons spaced 12" o.c. Please refer to Roofing Application Standard RAS 117 for insulation attachment.

Additional Middle Insulation Layer (Optional)	Insulation Fasteners	Fastener
	(Table 3)	Density/ft ²
ISO 95+ GL, ISO 95+ GL Tapered, RESISTA, RESISTA Tapered, GenFlex ISO Insulation,		
Tapered, GenFlex ISO Insulation, Coated Glass Facer	, Coated Glass Facer Tapered	
Minimum: 1" thick with a ¼" per ft. taper	N/A	N/A

Note: Additional Optional Middle insulation shall be adhered to the base insulation layer with I.S.O. Stick applied in 3/4 to 1 " wide ribbons spaced 12" o.c. Please refer to Roofing Application Standard RAS 117 for insulation attachment.

Top Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft ²
DensDeck Prime		
Minimum: 1/4" thick	N/A	N/A

Note: Top insulation shall be adhered to the previous insulation layer with I.S.O. Stick applied in 3/4 to 1 " wide ribbons spaced 12" o.c. Please refer to Roofing Application Standard RAS 117 for insulation attachment.

Membrane:Min. 45 mil UltraPly TPO SA self-adhered with 1.5" wide heat weld at the 2"
wide side laps.Maximum Design
Pressure:-45 psf. (See General Limitation #9)

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Membrane Type:	Single Ply, TPO, Reinforced
Deck Type 3I:	Concrete, Insulated
Deck Description:	2500 psi or greater structural concrete or concrete plank
System Type A(20):	One or more layers of insulation adhered with approved adhesive; membrane Fully adhered.

Use Two (2) base insulation layers		
Base Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft ²
ISO 95+ GL, GenFlex ISO Insulation		·
Minimum 1.5" thick	N/A	N/A

Note: Base Insulation layer shall be adhered to the deck with I.S.O. Twin Pack Insulation Adhesive applied in ½" to ¾" wide ribbons spaced 8" o.c. Please refer to Roofing Application Standard RAS 117 for insulation attachment.

Top Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft ²
DensDeck Prime		
Minimum ¼" thick	N/A	N/A

Note: All subsequent layers of insulation shall be adhered to the previous layer of insulation using I.S.O. Twin Pack Insulation Adhesive applied in ½" to ¾" wide ribbons spaced 8" o.c. Please refer to Roofing Application Standard RAS 117 for insulation attachment. Insulations listed as the base layer shall only be used as the base layer with a second layer of approved top layer insulation installed as the final membrane substrate. Composite insulation boards used as a top layer shall be installed with the polyisocyanurate face down.

Membrane:	Min. 45 mil UltraPly TPO SA self-adhered with 1.5" wide heat weld at the 2" wide side laps.
Maximum Design Pressure:	-195 psf. (See General Limitation #9)



Membrane Type:	Single Ply, TPO, Reinforced
Deck Type 3I:	Concrete, Insulated
Deck Description:	Min. 2500 psi structural concrete or concrete plank.
System Type A(21):	Insulation adhered with approved adhesive; membrane fully adhered.

Base Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft ²
ISO 95+ GL, GenFlex ISO Insulation		
Minimum: 1.5" thick	N/A	N/A

Note: Base insulation shall be adhered using ISO Spray R ribbon, applied in ³/₄" to 1" wide ribbons spaced 12" on center. Please refer to Roofing Application Standard RAS 117 for insulation attachment.

Top Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft ²
DensDeck Prime		
Minimum 1/4" thick	N/A	N/A

Note: Top insulation shall be adhered using ISO Spray R ribbon, applied in ³/₄" to 1" wide ribbons spaced 12" on center. Please refer to Roofing Application Standard RAS 117 for insulation attachment.

Membrane: Min. 45 mil UltraPly TPO SA self-adhered with 1.5" wide heat weld at the 2" wide side laps.

Maximum Design Pressure:

-205 psf. (See General Limitation #9)



Membrane Type:	Single Ply, TPO, Reinforced
Deck Type 3I:	Concrete, Insulated
Deck Description:	Min. 2500 psi structural concrete or concrete plank.
System Type A(22):	Insulation adhered with approved adhesive; membrane fully adhered.

Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft ²
ISO 95+ GL, GenFlex ISO Insulation		
Minimum: 1.5" thick	N/A	N/A

Note: Base insulation shall be adhered using ISO Spray R ribbon, applied in ³/₄" to 1" wide ribbons spaced 12" on center. Please refer to Roofing Application Standard RAS 117 for insulation attachment.

Membrane:	Min. 45 mil UltraPly TPO SA self-adhered with 1.5" wide heat weld at the 2" wide side laps.
Maximum Design	

Pressure: -210 psf. (See General Limitation #9)



Membrane Type:	Single Ply, TPO, Reinforced
Deck Type 3I:	Concrete, Insulated
Deck Description:	Min. 2500 psi structural concrete or concrete plank.
System Type A(23):	One or more layers of insulation adhered with approved adhesive; membrane Fully adhered.

Base Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft ²
ISO 95+ GL, RESISTA, GenFlex ISO Insulation,	Coated Glass Facer	
Minimum: 1" thick	N/A	N/A

Note: Base insulation shall be adhered to the deck with I.S.O. Twin Pack Insulation Adhesive applied in ½ to ¾ " wide ribbons spaced 12" o.c. Please refer to Roofing Application Standard RAS 117 for insulation attachment.

Middle Insulation Layer (Optional)	Insulation Fasteners (Table 3)	Fastener Density/ft ²
ISO 95+ GL, GenFlex ISO Insulation		
Minimum: 1" thick	N/A	N/A

Note: Optional Middle insulation shall be adhered to the base insulation layer with I.S.O. Twin Pack Insulation Adhesive applied in ½ to ¾ " wide ribbons spaced 12" o.c. Please refer to Roofing Application Standard RAS 117 for insulation attachment.

One or two layers of the following:		
Additional Middle Insulation Layer (Optional)	Insulation Fasteners (Table 3)	Fastener Density/ft ²
ISO 95+ GL Tapered, ISO 95+ GL, RESISTA, GenF		v
Insulation, Coated Glass Facer		
Minimum: ¹ / ₂ " thick with a ¹ / ₄ " per ft. taper	N/A	N/A

Note: Additional Optional Middle insulation shall be adhered to the base insulation layer with I.S.O. Twin Pack Insulation Adhesive applied in ½ to ¾ " wide ribbons spaced 12" o.c. Please refer to Roofing Application Standard RAS 117 for insulation attachment.

Additional Second Middle Insulation Layer	Insulation Fasteners	Fastener
(Optional)	(Table 3)	Density/ft ²
ISO 95+ GL, ISO 95+ GL Tapered, RESISTA, RE	SISTA Tapered, GenFlex ISO	Insulation,
Tapered GenFlex ISO Insulation, Coated Glass Fa	cer, Coated Glass Facer Taper	ed
Minimum: ¹ / ₂ " thick with a ¹ / ₄ " per ft. taper	N/A	N/A



NOA-No.: 23-0613.32 Expiration Date: 06/13/24 Approval Date: 08/24/23 Page 31 of 93 Note: Optional Second Middle insulation shall be adhered to the previous insulation layer with I.S.O. Twin Pack Insulation Adhesive applied in ½ to ¾ " wide ribbons spaced 12" o.c. Please refer to Roofing Application Standard RAS 117 for insulation attachment.

Top Insulation layer	Insulation Fasteners (Table 3)	Fastener Density/ft ²
DensDeck Prime		
Minimum ¼" thick	N/A	N/A

Note: Top insulation of insulation shall be adhered to the previous layer of insulation using I.S.O. Twin Pack Insulation Adhesive applied in ½" to ¾" wide ribbons spaced 8" o.c. Please refer to Roofing Application Standard RAS 117 for insulation attachment.

Membrane:	Min. 45 mil UltraPly TPO SA self-adhered with 1.5" wide heat weld at the 2" wide side laps.
Maximum Design Pressure:	-240 psf. (See General Limitation #9)



Membrane Type:	Single Ply, TPO, Reinforced
Deck Type 3I:	Concrete, Insulated
Deck Description:	Min. 2500 psi structural concrete or concrete plank.
System Type A(24):	Vapor Barrier and insulation adhered with approved adhesive; membrane fully adhered.

Vapor Barrier: SBS Poly Torch Base or SBS Glass Torch Base membrane is torch adhered to the primed concrete deck.

Note: Concrete deck shall be primed with ASTM D 41 asphalt primer at a rate of 0.75 - 1 gal/100 ft² and allowed to dry prior to application of Vapor Barrier.

Base Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft ²
ISO 95+ GL, GenFlex ISO Insulation		
Minimum 1.5" thick	N/A	N/A

NOTE: Base insulation shall be adhered to the Vapor Barrier using ISO Twin Pack Insulation Adhesive, applied in ¹/₂" to ³/₄" wide ribbons spaced 12" on center. Please refer to Roofing Application Standard RAS 117 for insulation attachment.

Middle Insulation Layer (Optional)	Insulation Fasteners (Table 3)	Fastener Density/ft ²
ISO 95+ GL, GenFlex ISO Insulation		
Minimum: 1.5" thick	N/A	N/A
Top Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft ²
DensDeck Prime Minimum: ¼" thick	N/A	N/A

Note: All subsequent layers of insulation shall be adhered to the previous layer of insulation using I.S.O. Twin Pack Insulation Adhesive applied in ½" to ¾" wide ribbons spaced 12" o.c. Please refer to Roofing Application Standard RAS 117 for insulation attachment.

Membrane:	Min. 45 mil UltraPly TPO SA self-adhered with 1.5" wide heat weld at the 2" wide side laps.
Maximum Design Pressure:	-232.5 psf. (See General Limitation #9)



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Membrane Type:	Single Ply, TPO, Reinforced
Deck Type 3I:	Concrete, Insulated
Deck Description:	2500 psi or greater structural concrete or concrete plank
System Type A(25):	One or more layers of insulation adhered with approved adhesive; membrane fully adhered.

Base Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft ²
ISO 95+ GL, GenFlex ISO Insulation		
Minimum 1.5" thick	N/A	N/A
Top Insulation Layer	Insulation Fasteners	Fastener
	(Table 3)	Density/ft ²
DensDeck Prime		·
Minimum ¼" thick	N/A	N/A

Note: Base insulation shall be adhered to the deck, and top insulation shall be adhered to the base insulation, in full mopping of approved asphalt within the EVT range and at a rate of 20 to 25 lbs/sq. Please refer to Roofing Application Standard RAS 117 for insulation attachment.

Membrane:	Min. 45 mil UltraPly TPO SA self-adhered with 1.5" wide heat weld at the 2" wide side laps.
Maximum Design Pressure:	-247.5 psf. with coverboard (See General Limitation #9)



Membrane Type:	Single Ply, TPO, Reinforced
Deck Type 3I:	Concrete, Insulated
Deck Description:	Min. 2500 psi structural concrete or concrete plank.
System Type A(26):	One or more layers of insulation adhered with approved adhesive; membrane fully adhered.

Base Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft ²
ISO 95+ GL, GenFlex ISO Insulation		
Minimum: 1.5" thick	N/A	N/A
Middle Insulation Layer	Insulation Fasteners	Fastener
	(Table 3)	Density/ft ²
ISO 95+ GL, GenFlex ISO Insulation		
Minimum: 1.5" thick	N/A	N/A
Top Insulation Layer	Insulation Fasteners	Fastener
	(Table 3)	Density/ft ²
DensDeck Prime		
Minimum: ¼" thick	N/A	N/A

Note: (Optional) Concrete deck shall be optionally primed with ASTM D 41 asphalt primer at a rate of ³/₄ to 1 gal/sq. and allowed to dry prior to application of insulation. Insulation shall be adhered to the deck in full mopping of approved asphalt within the EVT range and at a rate of 20 to 25 lbs/sq. Please refer to Roofing Application Standard RAS 117 for insulation attachment.

Membrane:	Min. 45 mil UltraPly TPO SA self-adhered with 1.5" wide heat weld at the 2" wide side laps.
Maximum Design Pressure:	-247.5 psf. (See General Limitation #9)



Membrane Type:	Single Ply, TPO, Reinforced
Deck Type 3I:	Concrete, Insulated
Deck Description:	Min. 2500 psi structural concrete or concrete plank.
System Type A(27):	One or more layers of insulation adhered with approved adhesive; membrane fully adhered.

Insulation Fasteners

(Table 3)

N/A

Fastener Density/ft²

N/A

One or more layers of any of the following insulations. Base Insulation Layer

ISO 95+ GL, GenFlex ISO Insulation Minimum 1.5" thick

Note: Base Insulation layer shall be adhered to the deck with I.S.O. Twin Pack Insulation Adhesive applied in ½" to ¾" wide ribbons spaced 12" o.c. Please refer to Roofing Application Standard RAS 117 for insulation attachment.

Middle Insulation Layer (Optional)	Insulation Fasteners (Table 3)	Fastener Density/ft ²
ISO 95+ GL, GenFlex ISO Insulation		-
Minimum 1.5" thick	N/A	N/A
Top Insulation Layer	Insulation Fasteners	Fastener
Top Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft ²
Top Insulation Layer ISOGARD HD, GenFlex HD ISO		

Note: Optional Middle Insulation layer shall be adhered to the Base Insulation layer with I.S.O. Twin Pack Insulation Adhesive applied in ¹/₂" to ³/₄" wide ribbons spaced 12" o.c. Top Insulation layer shall be adhered to the previous layer with Twin Pack Insulation Adhesive applied in ¹/₂" to ³/₄" wide ribbons spaced 12" o.c Please refer to Roofing Application Standard RAS 117 for insulation attachment.

Membrane: Min. 45 mil UltraPly TPO SA self-adhered with 1.5" wide heat weld at the 3" wide side laps.

Maximum Design Pressure:

-247.5 psf. (See General Limitation #9)



Membrane Type:	Single Ply, Thermoplastic, TPO
Deck Type 3I:	Concrete, Insulated
Deck Description:	Min. 2500 psi structural concrete or concrete plank.
System Type A(28):	One or more layers of insulation adhered with approved adhesive; membrane fully adhered.

All General and System Limitations apply.

One or more layers of any of the following insulations.		
Base Insulation Layer	Insulation Fasteners	Fastener
·	(Table 3)	Density/ft ²
ISO 95+ GL, GenFlex ISO Insulation		
Minimum 1.5" thick	N/A	N/A

Note: Base Insulation Layer shall be adhered with I.S.O. Fix II, I.S.O. Stick applied in continuous ³/₄" to 1" wide ribbons spaced 12" o.c. Please refer to Roofing Application Standard RAS 117 for insulation attachment.

(Optional) Middle Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft ²
ISO 95+ GL, GenFlex ISO Insulation		
Minimum 1.5" thick	N/A	N/A

Note: Optional Middle Insulation Layer shall be adhered with I.S.O. Fix II or I.S.O. Stick applied in continuous 3/4 to 1 in. wide ribbons spaced 12" o.c. Please refer to Roofing Application Standard RAS 117 for insulation attachment.

Top Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft ²
ISOGARD HD, GenFlex HD ISO		
Minimum ¹ / ₂ " thick	N/A	N/A

Note: Top Insulation layer shall be adhered with I.S.O. Fix II or I.S.O. Stick applied in continuous 3/4 to 1 in. wide ribbons spaced 12" o.c. Please refer to Roofing Application Standard RAS 117 for insulation attachment. Insulation Adhesive

Membrane: Min. 45 mil UltraPly TPO SA self-adhered with 1.5" wide heat weld at the 2" wide side laps.

Maximum Design Pressure:

-300 psf (See General Limitation #9)



Membrane Type:	Single Ply, TPO, Reinforced
Deck Type 3I:	Concrete, Insulated
Deck Description:	Min. 2500 psi structural concrete or concrete plank.
System Type A(29):	One or more layers of insulation adhered with approved adhesive; membrane fully adhered.

One or more layers of any of the following insulation.

Insulation	Insulation Fasteners (Table 3)	Fastener Density/ft ²
ISOGARD HD, GenFlex HD ISO		
Minimum ¹ / ₂ " thick	N/A	N/A

Note: All insulation layers shall be adhered with I.S.O. Fix II applied in continuous ³/₄" to 1" wide ribbons spaced 4" o.c. or I.S.O. Stick applied in continuous ³/₄" to 1" wide ribbons spaced 12" o.c. Please refer to Roofing Application Standard RAS 117 for insulation attachment.

Membrane:	Min. 45 mil UltraPly TPO SA self-adhered with 1.5" wide heat weld at the 3" wide side laps.
Maximum Design	

Pressure: -300 psf. (See General Limitation #9)



Membrane Type:	Single Ply, TPO, Reinforced
Deck Type 3I:	Concrete, Insulated
Deck Description:	Min. 2500 psi structural concrete or concrete plank.
System Type A(30):	One or more layers of insulation adhered with approved adhesive; membrane fully adhered.

One or more layers of any of the following insulations.

Base Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft ²
RESISTA, Coated Glass Facer		
Minimum 1.5" thick	N/A	N/A

Note: Base insulation shall be adhered to the deck with I.S.O. Twin Pack Insulation Adhesive applied in ½ to ¾ in. wide ribbons spaced 6" o.c. or with I.S.O. Stick or I.S.O. Fix II applied in ¾" to 1" wide ribbons, spaced 6" o.c. Please refer to Roofing Application Standard RAS 117 for insulation attachment.

Middle Insulation Layer (Optional)	Insulation Fasteners (Table 3)	Fastener Density/ft ²
RESISTA, Coated Glass Facer		
Minimum 1.5" thick	N/A	N/A

Note: Optional middle insulation layer shall be adhered to the previous layer of insulation using the same method of adhesion as the base layer. Please refer to Roofing Application Standard RAS 117 for insulation attachment.

Top Insulation Layer (Optional)	Insulation Fasteners (Table 3)	Fastener Density/ft ²
ISOGARD HD, GenFlex HD ISO		
Minimum ¹ / ₂ " thick	N/A	N/A

Note: Optional top layer of insulation shall be adhered with I.S.O. Stick or I.S.O. Fix II applied in continuous ³/₄" to 1" wide ribbons spaced 6" o.c. Please refer to Roofing Application Standard RAS 117 for insulation attachment.

Membrane:	Min. 45 mil UltraPly TPO SA self-adhered with 1.5" wide heat weld at the 3"
	wide side laps.
Maximum Design	-360 psf. (See General Limitation #9) TPO SA adhered to RESISTA
Pressure:	-300 psf. (See General Limitation #9) TPO SA adhered to ISOGARD HD



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Membrane Type:	Single Ply, TPO, Reinforced
Deck Type 3I:	Concrete, Insulated
Deck Description:	Min. 2500 psi structural concrete or concrete plank.
System Type A(31):	One or more layers of insulation adhered with approved adhesive; membrane Fully adhered.

Base Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft ²
ISO 95+ GL, RESISTA, GenFlex ISO Insulation, Coated	Glass Facer	
Minimum: 1" thick	N/A	N/A

Note: Base insulation shall be adhered to the deck with I.S.O. Twin Pack Insulation Adhesive applied in ½ to ¾ " wide ribbons spaced 12" o.c. Please refer to Roofing Application Standard RAS 117 for insulation attachment.

Middle Insulation Layer (Optional)	Insulation Fasteners (Table 3)	Fastener Density/ft ²
ISO 95+ GL, GenFlex ISO Insulation		
Minimum 1" thick	N/A	N/A

Note: Optional middle insulation shall be adhered to the previous insulation layer with I.S.O. Twin Pack Insulation Adhesive applied in ½ to ¾ " wide ribbons spaced 12" o.c. Please refer to Roofing Application Standard RAS 117 for insulation attachment.

Additional Middle Insulation Layer (Optional)	Insulation Fasteners	Fastener
	(Table 3)	Density/ft ²
ISO 95+ GL Tapered, ISO 95+ GL, RESISTA, GenFlex	ISO Insulation Tapered, G	enFlex ISO
Insulation, Coated Glass Facer	_	
Minimum 1" thick	NA	NA

Note: Optional second additional middle insulation shall be adhered to the previous insulation layer with I.S.O. Twin Pack Insulation Adhesive applied in ½ to ¾ " wide ribbons spaced 12" o.c. Please refer to Roofing Application Standard RAS 117 for insulation attachment.

Additional Second Middle Insulation Layer (Optional)	Insulation Fasteners	Fastener
	(Table 3)	Density/ft ²
ISO 95+ GL Tapered, ISO 95+ GL, RESISTA, Tapered	RESISTA, GenFlex ISO	Insulation,
Tapered GenFlex ISO Insulation, Coated Glass Facer, C	Coated Glass Facer Taper	red
Minimum 1" thick	N/A	N/A



Top Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft ²
ISOGARD HD, GenFlex HD ISO		
Minimum ¹ / ₂ " thick	N/A	N/A

Note: Top Insulation layer shall be adhered to the previous insulation layer with I.S.O. Twin Pack Insulation Adhesive applied in ½ to ¾ " wide ribbons spaced 12" o.c. or with I.S.O. Spray R, I.S.O. Fix II or I.S.O. Stick applied in ¾ to 1" wide ribbons spaced 12" o.c. Please refer to Roofing Application Standard RAS 117 for insulation attachment.

Membrane:	Min. 45 mil UltraPly TPO SA self-adhered with 1.5" wide heat weld at the 2" wide side laps.
Maximum Design Pressure:	-82.5 psf (See General Limitation #9)



Membrane Type:	Single Ply, Thermoplastic, TPO
Deck Type 3I:	Concrete, Insulated
Deck Description:	Min. 2500 psi structural concrete or concrete plank.
System Type A(32):	One or more layers of insulation adhered with approved adhesive; membrane fully adhered.

All General and System Limitations apply.

One or more layers of any of the following insulations.

Insulation	Insulation Fasteners (Table 3)	Fastener Density/ft ²
ISOGARD HD, GenFlex HD ISO		
Minimum ¹ / ₂ " thick	N/A	N/A

Note: All insulation layers shall be adhered with I.S.O. Stick, applied in continuous ³/₄" to 1" wide ribbons spaced 4" o.c. Please refer to Roofing Application Standard RAS 117 for insulation attachment.

Membrane:	Min. 45 mil UltraPly TPO SA self-adhered with 1.5" wide heat weld at the 3" wide side laps.
Maximum Design Pressure:	-300 psf (See General Limitation #9)



Membrane Type:	Single Ply, Thermoplastic, TPO
Deck Type 3I:	Concrete, Insulated
Deck Description:	Min. 2500 psi structural concrete or concrete plank.
System Type A(33):	One or more layers of insulation adhered with approved adhesive; membrane fully adhered.

All General and System Limitations apply.

Base Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft ²
ISO 95+ GL, GenFlex ISO Insulation		
Minimum: 1.5" thick	N/A	N/A
Top Insulation Layer	Insulation Fasteners	Fastener
Top Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft ²
Top Insulation Layer DensDeck Prime		

Note: Optional – Concrete deck shall be primed with ASTM D 41 asphalt primer at a rate of ³/₄ to 1 gal/sq. and allowed to dry prior to application of insulation. Insulation shall be adhered to the deck in full mopping of approved asphalt within the EVT range and at a rate of 20-25 lbs/sq. Please refer to Roofing Application Standard RAS 117 for insulation attachment.

Membrane:	Min. 45 mil UltraPly TPO SA self-adhered with 1.5" wide heat weld at the 2" wide side laps.
Maximum Design Pressure:	-247.5 psf; (See General Limitation #9)



Membrane Type:	Single Ply, TPO, Reinforced
Deck Type 3I:	Concrete, Insulated
Deck Description:	Min. 2500 psi structural concrete or concrete plank.
System Type A(34):	Insulation adhered with approved adhesive; membrane fully adhered.

Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft ²
ISOGARD HD, GenFlex HD ISO		
Minimum: 1/2" thick	N/A	N/A

Note: Base insulation shall be adhered using I.S.O. Fix II, I.S.O. Stick, I.S.O. Twin Pack Insulation Adhesive or ISO Spray R ribbon, applied in ³/₄" to 1" wide ribbons spaced 12" on center. Please refer to Roofing Application Standard RAS 117 for insulation attachment.

Membrane:	Min. 45 mil UltraPly TPO SA self-adhered with 1.5" wide heat weld at the 2" wide side laps.
Maximum Design Pressure:	-445 psf. (See General Limitation #9)



Membrane Type:	Single Ply, TPO, Reinforced
Deck Type 3I:	Concrete, Insulated
Deck Description:	Min. 2500 psi structural concrete or concrete plank
System Type B(1):	Base layer of insulation mechanically fastened, optional top layer fully adhered with approved adhesive.

One or more layers of any of the following insulations.

Base Insulation Layer	Insulation Fasteners	Fastener
	(Table 3)	Density/ft ²
ISO 95+ GL, RESISTA, GenFlex ISO Insulation,	Coated Glass Facer	
Minimum 1.5" thick	1 or 2 with 3	1:2 ft ²
Top Insulation Layer (Optional)	Insulation Fasteners (Table 3)	Fastener Density/ft ²
ISO 95+ GL, GenFlex ISO Insulation		
Minimum 1.5" thick	N/A	N/A
Tapered ISO 95+ GL, Tapered GenFlex ISO Insu	lation	
Minimum ¹ / ₂ " thick with a ¹ / ₄ " per ft. taper	N/A	N/A

Note: Base layer shall be mechanically attached with fasteners and density described. All other layers of insulation shall be adhered to base insulations with I.S.O. Twin Pack Insulation Adhesive applied in ½" to ¾" wide ribbons spaced 12 in. o.c. 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:	Min. 45 mil UltraPly TPO SA self-adhered with 1.5" wide heat weld at the 2" wide side laps.
Maximum Design	

-45 psf. (See General Limitation #7)



Pressure:

Membrane Type:	Single Ply, TPO, Reinforced
Deck Type 3I:	Concrete, Insulated
Deck Description:	Min. 2500 psi structural concrete or concrete plank
System Type B(2):	Base layer of insulation mechanically fastened, optional top layer adhered with approved adhesive.

One or more layers of any of the following insulations. **Base Insulation Layer (Optional) Insulation Fasteners** Fastener Density/ft² (Table 3) ISO 95+ GL, GenFlex ISO Insulation Minimum 1" thick N/A N/A Tapered ISO 95+ GL, Tapered GenFlex ISO Insulation Minimum $\frac{1}{2}$ " thick with a $\frac{1}{4}$ " per ft. taper N/A N/A Middle Insulation Layer **Insulation Fasteners** Fastener Density/ft² (Table 3) ISO 95+ GL, RESISTA, GenFlex ISO Insulation, Coated Glass Facer Minimum 2-¹/₄" thick 1:4 ft² 1 or 2 with 3

Note: Optional Base layer shall be loose laid. Middle layer shall be simultaneously fastened with fasteners and density described. 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 (Optional)	Insulation Fasteners (Table 3)	Fastener Density/ft ²
ISO 95+ GL, GenFlex ISO Insulation		
Minimum 1.5" thick	N/A	N/A

Note: Optional top layer shall be adhered to top insulation with I.S.O. Twin Pack Insulation Adhesive in continuous ¹/₂" to ³/₄" wide beads spaced 12" o.c. or, I.S.O. Fix II or I.S.O. Stick applied in continuous ³/₄" to 1" wide ribbons spaced 12" o.c. Please refer to Roofing Application Standard RAS 117 for insulation attachment.

Membrane:	Min. 45 mil UltraPly TPO SA self-adhered with 1.5" wide heat weld at the 2" wide side laps.
Maximum Design Pressure:	-45 psf. (See General Limitation #9)



Membrane Type:	Single Ply, TPO, Reinforced
Deck Type 3I:	Concrete, Insulated
Deck Description:	Min. 2500 psi structural concrete or concrete plank
System Type B(3):	Base layer of insulation mechanically fastened, optional top layer adhered with approved adhesive.

One or more layers of any of the following insulations.

Base Insulation Layer (Optional)	Insulation Fasteners (Table 3)	Fastener Density/ft ²
ISO 95+ GL, RESISTA, GenFlex ISO Insulati	on, Coated Glass Facer	
Minimum 1" thick	N/A	N/A
Middle Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft ²
ISO 95+ GL, RESISTA, GenFlex ISO Insulati	on, Coated Glass Facer	
Minimum 1 ¹ / ₂ " thick	1 or 2 with 3	1:2 ft ²

Note: Optional Base layer shall be loose laid. Middle layer shall be simultaneously fastened with fasteners and density described. 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/ft ²
ISOGARD HD, GenFlex HD ISO		
Minimum ¹ / ₂ " thick	N/A	N/A

Note: Top layer shall be adhered to top insulation with I.S.O. Twin Pack Insulation Adhesive in continuous ¹/₂" to ³/₄" wide beads spaced 12" o.c. or, I.S.O. Fix II or I.S.O. Stick applied in continuous ³/₄" to 1" wide ribbons spaced 12" o.c. Please refer to Roofing Application Standard RAS 117 for insulation attachment.

Membrane:	Min. 45 mil UltraPly TPO SA self-adhered with 1.5" wide heat weld at the 2" wide side laps.
Maximum Design	
Pressure:	-45 psf. (See General Limitation #9)



Membrane Type:	Single Ply, TPO, Reinforced
Deck Type 3I:	Concrete, Insulated
Deck Description:	Min. 2500 psi structural concrete or concrete plank
System Type B(4):	Base layer of insulation mechanically fastened, optional top layer adhered with approved adhesive.

One or more layers of any of the following insulations. Base Insulation Layer Insulation Fasteners (Table 3) ISO 95+ GL, RESISTA, GenFlex ISO Insulation, Coated Glass Facer

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

1 or 2 with 3

Middle Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft ²
ISO 95+ GL, GenFlex ISO Insulation		
Minimum 1" thick	N/A	N/A
Additional Middle Insulation Layer (Optional)	Insulation Fasteners (Table 3)	Fastener Density/ft ²
ISO 95+ GL, GenFlex ISO Insulation	` ,	·
Minimum 1" thick	N/A	N/A
Tapered ISO 95+ GL, Tapered GenFlex ISO Insula	tion	
Minimum ¹ / ₂ " thick with a ¹ / ₄ " per ft. taper	N/A	N/A

Note: Middle insulation layers shall be adhered to base insulations with I.S.O. Twin Pack Insulation Adhesive in continuous ½" to ¾" wide beads spaced 12" o.c. I.S.O. Fix II or I.S.O. Stick applied in continuous ¾" to 1" wide ribbons spaced 12" o.c. See Roofing Application Standard RAS 117 for insulation attachment.

Top Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft ²
DensDeck Prime, SECUROCK Gypsum Fiber Roof I	Board	
Minimum ¹ / ₄ " thick	N/A	N/A



Minimum 1.5" thick

Fastener

1:2 ft²

Density/ft²

Note: Top layer of insulation shall be adhered to previous layer with I.S.O. Twin Pack Insulation Adhesive in continuous ¹/₂" to ³/₄" wide beads spaced 12" o.c. or I.S.O. Fix II or I.S.O. Stick applied in continuous ³/₄" to 1" wide ribbons spaced 12" o.c. See Roofing Application Standard RAS 117 for insulation attachment.

Membrane:	Min. 45 mil UltraPly TPO SA self-adhered with 1.5" wide heat weld at the 2" wide side laps.
Maximum Design Pressure:	-45 psf. (See General Limitation #9)



Membrane Type:	Single Ply, TPO, Reinforced
Deck Type 3I:	Concrete, Insulated
Deck Description:	Min. 2500 psi structural concrete or concrete plank
System Type B(5):	Base layer of insulation mechanically fastened, optional top layer adhered with approved adhesive.

One or more layers of any of the following insulations. Base Insulation Layer Insulation Fasteners (Table 3) ISO 95+ GL, RESISTA, GenFlex ISO Insulation, Coated Glass Facer

Minimum 1.5" thick1 or 2 with 31:2 ft2Note: Base layer shall be mechanically attached with fasteners and density described. Insulation
panels listed are minimum sizes and dimensions; if larger panels are used the number of fasteners
per board shall be increased maintaining the same fastener density. See Roofing Application

Standard RAS 117 for fastening details.

Middle Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft ²
ISO 95+ GL, GenFlex ISO Insulation		-
Minimum 1" thick	N/A	N/A
Additional Middle Insulation Layer (Optional)	Insulation Fasteners (Table 3)	Fastener Density/ft ²
ISO 95+ GL, GenFlex ISO Insulation	,	v
Minimum 1" thick	N/A	N/A
Tapered ISO 95+ GL, Tapered GenFlex ISO Insula	ntion	
Minimum ¹ / ₂ " thick with a ¹ / ₄ " per ft. taper	N/A	N/A

Note: Middle insulation layers shall be adhered to base insulations with I.S.O. Twin Pack Insulation Adhesive in continuous ¹/₂" to ³/₄" wide beads spaced 12" o.c. or I.S.O. Fix II or I.S.O. Stick applied in continuous ³/₄" to 1" wide ribbons spaced 12" o.c. See Roofing Application Standard RAS 117 for insulation attachment.

Top Insulation Layer	Insulation Fasteners	Fastener	
	(Table 3)	Density/ft ²	
DensDeck Prime, SECUROCK Gypsum Fiber Roof Board, ISOGARD HD, GenFlex HD ISO			
Minimum ¹ / ₂ " thick	N/A	N/A	



Fastener

Density/ft²

Note: Top layer of insulation shall be adhered to previous layer with I.S.O. Twin Pack Insulation Adhesive in continuous ¹/₂" to ³/₄" wide beads spaced 12" o.c. or I.S.O. Fix II or I.S.O. Stick applied in continuous ³/₄" to 1" wide ribbons spaced 12" o.c. See Roofing Application Standard RAS 117 for insulation attachment.

Membrane:	Min. 45 mil UltraPly TPO SA self-adhered with 1.5" wide heat weld at the 2" wide side laps.
Maximum Design Pressure:	-45 psf. (See General Limitation #9)



Membrane Type:	Single Ply, TPO, Reinforced
Deck Type 3I:	Concrete, Insulated
Deck Description:	Min. 2500 psi structural concrete or concrete plank
System Type B(6):	Base layer of insulation mechanically fastened, optional top layer adhered with approved adhesive.

One or more layers of any of the following insulations.

Base Insulation Layer	Insulation Fasteners	Fastener	
	(Table 3)	Density/ft ²	
ISO 95+ GL, RESISTA, GenFlex ISO Insulation, Coated Glass Facer			
Minimum 1.5" thick	1 or 2 with 3	1:1.6 ft ²	

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

Top Insulation Layer	Insulation Fasteners	Fastener
	(Table 3)	Density/ft ²
DensDeck Prime, SECUROCK Gypsum-Fib	er Roof Board, ISOGARD HD, G	enFlex HD ISO
Minimum ¹ / ₂ " thick	N/A	N/A
ISOGARD HD Composite, GenFlex HD Cor	nposite ISO	
Minimum 1 ¹ / ₂ " thick	N/A	N/A

Note: Top layer of insulation shall be adhered to base insulations with I.S.O. Twin Pack Insulation Adhesive in continuous ½" to ¾" wide beads spaced 6" o.c. or I.S.O. Fix II or I.S.O. Stick (not for ISOGARD HD (GenFlex HD ISO) or ISOGARD HD Composite (GenFlex HD Composite ISO)) applied in continuous ¾" to 1" wide ribbons spaced 6 o.c. 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: Min. 45 mil UltraPly TPO SA self-adhered with 1.5" wide heat weld at the 2" wide side laps.

Maximum Design Pressure:

-60 psf. (See General Limitation #7)



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Membrane Type:	Single Ply, TPO, Reinforced
Deck Type 3I:	Concrete, Insulated
Deck Description:	Min. 2500 psi structural concrete or concrete plank
System Type B(7):	Base layer of insulation mechanically fastened, optional top layer adhered with approved adhesive.

One or more layers of any of the following insulations. Base Insulation Layer

Base Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft ²
ISO 95+ GL, , GenFlex ISO Insulation, Minimum 1.5" thick	1 or 2 with 3	1:1.78 ft ²
	1 01 2 with 5	1.1./010

Note: Base layer shall be fastened with fasteners and density described. 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/ft ²
ISOGARD HD Comp	osite, GenFlex HD Composite I	SO	v
Minimum 1.5" thick		N/A	N/A
Spray R applied in co	be adhered to base insulation l ntinuous ¾" to 1" wide ribbons RAS 117 for insulation attach	spaced 12" o.c. Please refer	
Membrane:	Min. 45 mil UltraPly TPO SA wide side laps.	self-adhered with 1.5" wide he	at weld at the 2"
Maximum Design Pressure:	-60 psf. (See General Limitation	on #7)	



Membrane Type:	Single Ply, TPO, Reinforced
Deck Type 3I:	Concrete, Insulated
Deck Description:	Min. 2500 psi structural concrete or concrete plank
System Type B(8):	Base layer of insulation mechanically fastened, optional top layer adhered with approved adhesive.

One or more layers of any of the following insulations.

Base Insulation Layer	Insulation Fasteners	Fastener
	(Table 3)	Density/ft ²
ISO 95+ GL, RESISTA, GenFlex ISO Insulation,	, Coated Glass Facer	
Minimum 2" thick	1 or 2 with 3	1:1.78 ft ²

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

Middle Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft ²
ISO 95+ GL, RESISTA, GenFlex ISO Insulation,	Coated Glass Facer	
Minimum ¹ / ₂ " thick	N/A	N/A

Note: Middle Insulation shall be adhered with I.S.O. Twin Pack Insulation Adhesive in continuous ¹/₂" to ³/₄" wide ribbons spaced 6" o.c. or I.S.O. Spray R applied in continuous ³/₄" to 1" wide ribbons spaced 6" o.c. Please refer to Roofing Application Standard RAS 117 for insulation attachment.

Top Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft ²
ISOGARD HD, GenFlex HD ISO		
Minimum ¹ /2" thick	N/A	N/A

Note: Top layer of insulation shall be adhered to base insulations with I.S.O. Twin Pack Insulation Adhesive in continuous ¹/₂" to ³/₄" wide ribbons spaced 6" o.c. or I.S.O. Spray R, I.S.O. Fix II or I.S.O. Stick applied in continuous ³/₄" to 1" wide ribbons spaced 6" o.c. Please refer to Roofing Application Standard RAS 117 for insulation attachment.

Membrane: Min. 45 mil UltraPly TPO SA self-adhered with 1.5" wide heat weld at the 2" wide side laps.

Maximum Design Pressure:

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



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Membrane Type:	Single Ply, TPO, Reinforced
Deck Type 3I:	Concrete, Insulated
Deck Description:	Min. 2500 psi structural concrete or concrete plank
System Type B(9):	Base layer of insulation mechanically fastened, optional top layer adhered with approved adhesive.

One or more layers of any of the following insulations.

Base Insulation Layer	Insulation Fasteners	Fastener
	(Table 3)	Density/ft ²
ISO 95+ GL, RESISTA, GenFlex ISO Insulatio	on, Coated Glass Facer	
Minimum 2" thick	1 or 2 with 3	1:1.78 ft ²

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

Top Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft ²
ISOGARD HD, GenFlex HD ISO		
Minimum ¹ / ₂ " thick	N/A	N/A

Note: Top insulation layer shall be adhered to base insulations with I.S.O. Twin Pack Insulation Adhesive in continuous ¹/₂" to ³/₄" wide ribbons spaced 6" o.c. or I.S.O. Spray R, I.S.O. Fix II or I.S.O. Stick applied in continuous ³/₄" to 1" wide ribbons spaced 6" o.c. See Roofing Application Standard RAS 117 for insulation attachment.

Membrane:	Min. 45 mil UltraPly TPO SA self-adhered with 1.5" wide heat weld at the 2" wide side laps.
Maximum Design Pressure:	-67.5 psf. (See General Limitation #7)

Membrane Type:	Single Ply, TPO, Reinforced
Deck Type 3I:	Concrete, Insulated
Deck Description:	Min. 2500 psi structural concrete or concrete plank
System Type B(10):	Base layer of insulation mechanically fastened, optional top layer adhered with approved adhesive.

One or more layers of any of the following insulations. **Base Insulation Layer**

	(Table 3)	Density/ft ²
ISO 95+ GL, GenFlex ISO Insulation		
Minimum 2" thick	1 or 2 with 3	1:1.78 ft ²

Insulation Fasteners

Note: Base layer shall be fastened with fasteners and density described. 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/ft ²
SECUROCK Gypsum Fiber Roof Board		
Minimum ¼" thick	N/A	N/A

Note: Top layer shall be adhered to top insulation with I.S.O. Stick applied in continuous ³/₄" to 1" wide ribbons spaced 6" o.c. or I.S.O. Spray R applied in continuous ³/₄" to 1" wide ribbons spaced 6" o.c. Please refer to Roofing Application Standard RAS 117 for insulation attachment.

Membrane:	Min. 45 mil UltraPly TPO SA self-adhered with 1.5" wide heat weld at the 2"
	wide side laps.

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



Fastener

Membrane Type:	Single Ply, TPO, Reinforced
Deck Type 3I:	Concrete, Insulated
Deck Description:	Min. 2500 psi structural concrete or concrete plank
System Type B(11):	Base layer of insulation mechanically fastened, optional top layer adhered with approved adhesive.

One or more layers of any of the following insulations.

Base Insulation Layer	Insulation Fasteners	Fastener
	(Table 3)	Density/ft ²
ISO 95+ GL, RESISTA, GenFlex ISO Insulation, Coated Glass Facer		
Minimum 2" thick	1 or 2 with 3	1:1.6 ft ²

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

Top Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft ²
ISO 95+ GL, GenFlex ISO Insulation		
Minimum 1" thick	N/A	N/A

Note: Top layer of insulation shall be adhered to base insulations with I.S.O. Twin Pack Insulation Adhesive in continuous ¹/₂" to ³/₄" wide beads spaced 6" o.c., I.S.O. Fix II or I.S.O. Stick applied in continuous ³/₄" to 1" wide ribbons spaced 6" o.c. See Roofing Application Standard RAS 117 for insulation attachment.

Membrane: Min. 45 mil UltraPly TPO SA self-adhered with 1.5" wide heat weld at the 2" wide side laps.

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

Membrane Type:	Single Ply, TPO, Reinforced
Deck Type 7I:	Recover, Insulated
Deck Description:	Min. 2500 psi structural concrete or concrete plank.
System Type B(12):	Base layer of insulation mechanically fastened, optional top layer adhered with approved adhesive.

One or more layers of any of the following insulations.		
Base Insulation Layer (Optional)	Insulation Fasteners	Fastener
	(Table 3)	Density/ft ²
ISO 95+ GL, GenFlex ISO Insulation		
Minimum 1" thick	N/A	N/A
ISO 65 CI Transal Carelan ISO Iranladan Transa		
ISO 95+ GL Tapered, GenFlex ISO Insulation Tapere		
Minimum ¹ / ₂ " thick with a ¹ / ₄ " per ft. taper	N/A	N/A
Middle Insulation Layer	Insulation Fasteners	Fastener
	(Table 3)	Density/ft ²
ISO 95+ GL, RESISTA, GenFlex ISO Insulation, Coa		
Minimum 2" thick	1 or 2 with 3	1:1.6 ft ²

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

Top Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft ²
ISOGARD HD, GenFlex HD ISO		
Minimum 1/2" thick	N/A	N/A

Note: Top layer of insulation shall be adhered to middle insulation layer with I.S.O. Twin Pack Insulation Adhesive in continuous ¹/₂" to ³/₄" wide ribbons spaced 6" o.c. or I.S.O. Fix II or I.S.O. Stick applied in continuous ³/₄" to 1" wide ribbons spaced 6" o.c. See Roofing Application Standard RAS 117 for insulation attachment.

Membrane:	Min. 45 mil UltraPly TPO SA self-adhered with 1.5" wide heat weld at the 2"
	wide side laps.

Maximum Design	
Pressure:	-82

-82.5 psf. (See General Limitation #7)



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Membrane Type:	Single Ply, TPO, Reinforced
Deck Type 3I:	Concrete, Insulated
Deck Description:	Min. 2500 psi structural concrete or concrete plank
System Type B(13):	Base layer of insulation mechanically fastened, top layer adhered with approved adhesive.

One or more layers of any of the following insulations:

Base Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft ²
RESISTA, Coated Glass Facer		-
Minimum 1.5" thick	1 or 2 with 3	1:1 ft ²
Top Insulation Layer	Insulation Fasteners	Fastener
Top Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft ²
Top Insulation Layer RESISTA, Coated Glass Facer		

Note: Base layer shall be mechanically attached with fasteners and density described. Top layer of insulation shall be adhered to base insulations with I.S.O. Twin Pack Insulation Adhesive in continuous ¹/₂" to ³/₄" wide beads spaced 12" o.c. or I.S.O. Stick, I.S.O. Fix II applied in continuous ³/₄" to 1" wide ribbons spaced 12" o.c. 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: Min. 45 mil UltraPly TPO SA self-adhered with 1.5" wide heat weld at the 2" wide side laps.

Maximum Design	
Pressure:	-120 psf. (See General Limitation #7)

Membrane Type:	Single Ply, TPO, Reinforced
Deck Type 3I:	Concrete, Insulated
Deck Description:	Min. 2500 psi structural concrete or concrete plank
System Type B(14):	Base layer of insulation mechanically fastened, optional top layer adhered with approved adhesive.

One or more layers of any of the following insulations.Insulation FastenersFastenerBase Insulation LayerInsulation FastenersFastener(Table 3)Density/ft²ISO 95+ GL, RESISTA, GenFlex ISO Insulation, Coated Glass Facer1 or 2 with 3Minimum 2" thick1 or 2 with 31:1 ft²

Note: Base layer shall be fastened with fasteners and density described. 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/ft ²
ISO 95+ GL, GenFlex ISO Insulation		
Minimum 1" thick	N/A	N/A

Note: Top layer shall be adhered to top insulation with I.S.O. Twin Pack Insulation Adhesive in continuous ¹/₂" to ³/₄" wide beads spaced 4" o.c. or, I.S.O. Fix II or I.S.O. Stick applied in continuous ³/₄" to 1" wide ribbons spaced 4" o.c. Please refer to Roofing Application Standard RAS 117 for insulation attachment.

Membrane: Min. 45 mil UltraPly TPO SA self-adhered with 1.5" wide heat weld at the 2" wide side laps.

Maximum DesignPressure:-127.5 psf. (See General Limitation #7)

Membrane Type:	Single Ply, TPO, Reinforced
Deck Type 3I:	Concrete, Insulated
Deck Description:	Min. 2500 psi structural concrete or concrete plank
System Type B(15):	Base layer of insulation mechanically fastened, optional top layer adhered with approved adhesive.

One or more layers of any of the following insulations.

Base Insulation Layer	Insulation Fasteners	Fastener
	(Table 3)	Density/ft ²
ISO 95+ GL, RESISTA, GenFlex ISO Insulation, Co	ated Glass Facer	
Minimum 2" thick	1 or 2 with 3	1:1 ft ²
Top Insulation Layer	Insulation Fasteners	Fastener
	(Table 3)	Density/ft ²
DensDeck Prime, ISOGARD HD, GenFlex HD ISO		
Minimum ¹ / ₂ " thick	N/A	N/A
ISOGARD HD Composite, GenFlex HD Composite I	SO	
Minimum 1 ¹ / ₂ " thick	N/A	N/A

Note: Base layer shall be mechanically attached with fasteners and density described. Top layer of insulation shall be adhered to base insulations with I.S.O. Twin Pack Insulation Adhesive in continuous ¹/₂" to ³/₄" wide beads spaced 4" o.c., I.S.O. Fix II or I.S.O. Stick (not for ISOGARD HD (GenFlex HD ISO) (or ISOGARD HD Composite (GenFlex HD Composite ISO)) applied in continuous ³/₄" to 1" wide ribbons spaced 4" o.c. 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:	Min. 45 mil UltraPly TPO SA self-adhered with 1.5" wide heat weld at the 2" wide side laps.
Maximum Design Pressure:	-127.5 psf. (See General Limitation #7)



Membrane Type:	Single Ply, TPO, Reinforced
Deck Type 3I:	Concrete, Insulated
Deck Description:	Min. 2500 psi structural concrete or concrete plank
System Type B(16):	Base layer of insulation mechanically fastened, optional top layer adhered with approved adhesive

One or more layers of any of the following insulations.

Base Insulation Layer (Optional)	Insulation Fasteners (Table 3)	Fastener Density/ft ²
ISO 95+ GL, RESISTA, GenFlex ISO Insu		
Minimum 1" thick	N/A	N/A
Middle Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft ²
ISO 95+ GL, RESISTA, GenFlex ISO Insu	llation, Coated Glass Facer	
Minimum 2" thick	1 or 2 with 3	1:1 ft ²

Note: Base layer shall be loose laid. Middle layer shall be simultaneously fastened with fasteners and density described. 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/ft ²
ISOGARD HD, GenFlex HD ISO		
Minimum 1/2" thick	N/A	N/A
Note: Ton layer shall be adhered to ton insulation with LS.O. Twin Pack Insulation Adhesive in		

Note: Top layer shall be adhered to top insulation with I.S.O. Twin Pack Insulation Adhesive in continuous ¹/₂" to ³/₄" wide ribbons spaced 4" o.c. or, I.S.O. Fix II or I.S.O. Stick applied in continuous ³/₄" to 1" wide ribbons spaced 4" o.c. Please refer to Roofing Application Standard RAS 117 for insulation attachment.

Membrane:	Min. 45 mil UltraPly TPO SA self-adhered with 1.5" wide heat weld at the 2" wide side laps.
Maximum Design Pressure:	-135 psf. (See General Limitation #7)

Membrane Type:	Single Ply, TPO, Reinforced
Deck Type 3I:	Concrete, Insulated
Deck Description:	Min. 2500 psi structural concrete or concrete plank
System Type B(17):	Base layer of insulation mechanically fastened, optional top layer adhered with approved adhesive

One or more layers of any of the following insula	tions.	
Base Insulation Layer (Optional)	Insulation Fasteners	Fastener Density/ft ²
	(Table 3)	
ISO 95+ GL, RESISTA, GenFlex ISO Insulation, Coated Glass Facer		
Minimum 1" thick	N/A	N/A
Middle Insulation Layer	Insulation Fasteners	Fastener Density/ft ²
e e e e e e e e e e e e e e e e e e e	(Table 3)	e/
ISO 95+ GL, RESISTA, GenFlex ISO Insulation, Coated Glass Facer		
Minimum 2" thick	1 or 2 with 3	1:1 ft ²

Note: Base layer shall be loose laid. Middle layer shall be simultaneously fastened with fasteners and density described. 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/ft ²
ISOGARD HD, GenFlex HD ISO		
Minimum ¹ / ₂ " thick	N/A	N/A

Note: Top layer shall be adhered to top insulation with I.S.O. Twin Pack Insulation Adhesive in continuous ¹/₂" to ³/₄" wide ribbons spaced 4" o.c. or, I.S.O. Fix II or I.S.O. Stick applied in continuous ³/₄" to 1" wide ribbons spaced 4" o.c. Please refer to Roofing Application Standard RAS 117 for insulation attachment.

Membrane:	Min. 45 mil. UltraPly TPO SA self-adhered with 1.5" wide heat weld at the 2" wide side laps.
Maximum Design	-
Pressure:	-135 psf. (See General Limitation #7)



Membrane Type:	Single Ply, TPO, Reinforced
Deck Type 3I:	Concrete, Insulated
Deck Description:	Min. 2500 psi structural concrete or concrete plank.
System Type C(1):	All layers of insulation simultaneously attached; membrane fully adhered.

One or more layers of any of the following insulations.

Base Insulation Layer (Optional)	Insulation Fasteners (Table 3)	Fastener Density/ft ²
ISO 95+ GL, GenFlex ISO Insulation	(Table 5)	Density/It
Minimum 1" thick	N/A	N/A
ISO 95+ GL Tapered, GenFlex ISO Insulation Tape	red	
Minimum ¹ / ₂ " thick with a ¹ / ₄ " per ft. taper	N/A	N/A
Middle Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft ²
ISO 95+ GL, GenFlex ISO Insulation	(
Minimum 1-1/2" thick	N/A	N/A
Top Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft ²
ISOGARD HD, GenFlex HD ISO	(Table 5)	Density/It
Minimum ½" thick	1 or 2 with 3	1:2.1 ft ²
ISO 95+ GL, RESISTA, GenFlex ISO Insulation, Co	oated Glass Facer	
Minimum 1" thick	1 or 2 with 3	1:2.1 ft ²
DensDeck Prime, SECUROCK Gypsum-Fiber Roof	Board	
Minimum 1/4" thick	1 or 2 with 3	1:2.1 ft ²
ISOGARD HD Composite, GenFlex HD Composite	ISO	
Minimum 1-1/2" thick	1 or 2 with 3	1:2.1 ft ²

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.**

Membrane: Min. 45 mil UltraPly TPO SA self-adhered with 1.5" wide heat weld at the 2" wide side laps. Maximum Design

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



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Membrane Type:	Single Ply, TPO, Reinforced
Deck Type 3I:	Concrete, Insulated
Deck Description:	Min. 2500 psi structural concrete or concrete plank.

System Type C(2): All layers of insulation simultaneously attached; membrane fully 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 any of the following insulations:

Base Insulation Layer	Insulation Fasteners	Fastener
	(Table 3)	Density/ft ²
ISO 95+ GL, RESISTA, GenFlex ISO Insulation	, Coated Glass Facer	
Minimum 1" thick	N/A	N/A
Top Insulation Layer	Insulation Fasteners	Fastener
	(Table 3)	Density/ft ²
SECUROCK Gypsum-Fiber Roof Board		
Minimum ¼" thick	1 or 2 with 3	1:1.78 ft ²
RESISTA, Coated Glass Facer		
Minimum 1" thick	1 or 2 with 3	1:1.78 ft ²
ISO 95+ GL, ISOGARD HD Composite, GenFle	x ISO Insulation, GenFlex HD	Composite ISO
Minimum 1.5" thick	1 or 2 with 3	1:1.78 ft ²
DensDeck Prime		
Minimum ¹ / ₂ " thick	1 or 2 with 3	1:1.78 ft ²
Note: All layers shall be simultaneously fastened Insulation panels listed are minimum sizes and o		

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 using the same fastener density. Please refer to Roofing Application Standard RAS 117 for insulation attachment.

Membrane:	Min. 45 mil UltraPly TPO SA self-adhered with 1.5" wide heat weld at the 2"
	wide side laps.

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



Membrane Type:	Single Ply, TPO, Reinforced
Deck Type 3I:	Concrete, Insulated
Deck Description:	Min. 2500 psi structural concrete or concrete plank.
System Type C(3):	All layers of insulation simultaneously attached; membrane fully adhered.

One or more layers of any of the following insulations:

Base Insulation Layer (Optional)	Insulation Fasteners (Table 3)	Fastener Density/ft ²
ISO 95+ GL, RESISTA, GenFlex ISO Insulatio		2011.5103,110
Minimum 1.5" thick	N/A	N/A
Top Insulation Layer	Insulation Fasteners	Fastener
	(Table 3)	Density/ft ²
ISO 95+ GL, RESISTA, GenFlex ISO Insulatio	n, Coated Glass Facer	
Minimum 2" thick	1 or 2 with 3	1:2.67 ft ²
DensDeck Prime, SECUROCK Gypsum-Fiber	Roof Board	
Minimum 1/2" thick	1 or 2 with 3	1:2.67 ft ²
ISOGARD HD Composite, GenFlex HD Compo	osite ISO	
Minimum 1-1/2" thick	1 or 2 with 3	1:2.67 ft ²

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 using the same fastener density. Please refer to Roofing Application Standard RAS 117 for insulation attachment.

Membrane:	Min. 45 mil UltraPly TPO SA self-adhered with 1.5" wide heat weld at the 2" wide side laps.
Maximum Design Pressure:	-45 psf. (See General Limitation #7)



Membrane Type:	Single Ply, TPO, Reinforced
Deck Type 3I:	Concrete, Insulated
Deck Description:	Min. 2500 psi structural concrete or concrete plank.
System Type C(4):	Membrane bonded over mechanically fastened insulation.

One or more layers of any of the following insulations.

Base Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft ²
ISO 95+ GL, RESISTA, GenFlex ISO Insulation	, Coated Glass Facer	U
Minimum 1.5" thick	N/A	N/A
Middle Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft ²
ISO 95+ GL, RESISTA, GenFlex ISO Insulation		2
Minimum 1/2" thick	N/A	N/A
Top Insulation Layer	Insulation Fasteners	Fastener
	(Table 3)	Density/ft ²
ISO 95+ GL, RESISTA, GenFlex ISO Insulation		
Minimum 1" thick	1 or 2 with 3	1:5.3 ft^2
ISOGARD HD, GenFlex HD ISO		
Minimum ¹ / ₂ " thick	1 or 2 with 3	1:5.3 ft ²
DensDeck Prime, SECUROCK Gypsum Fiber R	loof Board	
Minimum ¼" thick	1 or 2 with 3	1:5.3 ft ²
ISOGARD HD Composite, GenFlex HD Composite	site ISO	
Minimum 1-1/2" thick	1 or 2 with 3	1:5.3 ft ²
Plywood		
Minimum 19/32" thick	1 or 2 with 3	1:5.3 ft^2

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 per board shall be increased maintaining the same fastener density. See Roofing Application Standard RAS 117 for fastening details.

Membrane:	Min. 45 mil UltraPly TPO SA self-adhered with 1.5" wide heat weld at the 2"
	wide side laps.

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



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Membrane Type:	Single Ply, TPO, Reinforced
Deck Type 3I:	Concrete, Insulated
Deck Description:	Min. 2500 psi structural concrete or concrete plank.
System Type C(5):	Membrane fully adhered over mechanically fastened insulation.

Insulation Fasteners (Table 3)	Fastener Density/ft ²
oated Glass Facer	v
N/A	N/A
Insulation Fasteners	Fastener
(Table 3)	Density/ft ²
1 or 2 with 3	1:2.7ft ²
Coated Glass Facer	
1 or 2 with 3	1:2.7 ft ²
f Board	
1 or 2 with 3	1:2.7 ft ²
oosite	
1 or 2 with 3	1:2.7 ft ²
	(Table 3) Coated Glass Facer N/A Insulation Fasteners (Table 3) 1 or 2 with 3 Coated Glass Facer 1 or 2 with 3 f Board 1 or 2 with 3

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 per board shall be increased maintaining the same fastener density. See Roofing Application Standard RAS 117 for fastening details.

Membrane:	Min. 45 mil. UltraPly TPO SA self-adhered with 1.5" wide heat weld at the 2" wide side laps.
Maximum Design Pressure:	-45 psf. (See General Limitation #9)



Membrane Type:	Single Ply, TPO, Reinforced
Deck Type 3I:	Concrete, Insulated
Deck Description:	Min. 2500 psi structural concrete or concrete plank.
System Type C(6):	Membrane fully adhered over mechanically fastened insulation.

One or more layers of any of the following insulations.

Base Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft ²
ISO 95+ GL, RESISTA, GenFlex ISO Insulation, C	oated Glass Facer	
Minimum 1.5" thick	N/A	N/A
Top Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft ²
ISOGARD HD, GenFlex HD ISO		
Minimum 1" thick	1 or 2 with 3	1: 1.78 ft ²
ISO 95 + GL, RESISTA, GenFlex ISO Insulation, G	Coated Glass Facer	
Minimum 1" thick	1 or 2 with 3	1: 1.78 ft ²
DensDeck Prime, SECUROCK Gypsum-Fiber Boa	rds	
Minimum 1/4" thick	1 or 2 with 3	1: 1.78 ft ²
ISOGARD HD Composite, GenFlex HD Composite	ISO	
Minimum 1-1/2" thick	1 or 2 with 3	1:1.78 ft ²

Note: All layers shall be simultaneously fastened; see top layer for fasteners and density. 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:	Min. 45 mil UltraPly TPO SA self-adhered with 1.5" wide heat weld at the 2" wide side laps.
Maximum Design Pressure:	-45 psf. (See General Limitation #7)



Membrane Type:	Single Ply, TPO, Reinforced
Deck Type 3I	Concrete, Insulated
Deck Description:	Min. 2500 psi structural concrete or concrete plank.
System Type C(7):	Base layer of insulation mechanically fastened, optional top layer adhered with approved adhesive

One or more layers of any of the following insulations.

Base Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft ²
ISO 95+ GL, GenFlex ISO Insulation		
Minimum 1-1/2" thick	N/A	N/A
Middle Insulation Layer (Optional)	Insulation Fasteners (Table 3)	Fastener Density/ft ²
ISO 95+ GL Tapered, GenFlex ISO Insulation	n Tapered	
Minimum 1/2" thick	N/A	N/A

Note: Base layer shall be loose laid. Middle layer shall be preliminary fastened. 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 fastening details.

Top Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft ²
DensDeck Prime, SECUROCK Gypsum Fiber Roof Board		
Minimum 1/4" thick	1 or 2 with 3	1:2 ft^2

ISOGARD HD Composite, ISO 95+ GL, GenFlex HD Composite ISO, GenFlex ISO Insulation Minimum 1-1/2" thick 1 or 2 with 3 1:2 ft²

RESISTA, Coated Glass Facer		
Minimum 1" thick	1 or 2 with 3	1:2 ft ²
Plywood Minimum 19/32" thick	1 or 2 with 3	1:2 ft ²

Note: All layers shall be simultaneously fastened; see top layer for fasteners and density. 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:	Min. 45 mil UltraPly TPO SA self-adhered with 1.5" wide heat weld at the 2" wide side laps.
Maximum Design Pressure:	-45 psf. (See General Limitation #9)



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Membrane Type:	Single Ply, TPO, Reinforced
Deck Type 3I:	Concrete, Insulated
Deck Description:	Min. 2500 psi structural concrete or concrete plank.
System Type C(8):	All layers of insulation simultaneously attached; membrane fully adhered.

One or more layers of any of the following insulations.

Base Insulation Layer (Optional)	Insulation Fasteners (Table 3)	Fastener Density/ft ²
ISO 95+ GL, RESISTA, GenFlex ISO Insulation, Co	ated Glass Facer	e
Minimum ¹ / ₂ " thick	N/A	N/A
Top Insulation Layer	Insulation Fasteners	Fastener
	(Table 3)	Density/ft ²
ISO 95+ GL, RESISTA, GenFlex ISO Insulation, Co	ated Glass Facer	
Minimum 1¼" thick	1 or 2 with 3	1:2.7 ft ²
DensDeck Prime, SECUROCK Gypsum-Fiber Roof	Board	
Minimum 1/2" thick	1 or 2 with 3	1:2.7 ft ²
ISOGARD HD Composite, GenFlex HD Composite I	SO	
Minimum 1-1/2" thick	1 or 2 with 3	1:2.7 ft ²

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.

Membrane:	Min. 45 mil UltraPly TPO SA self-adhered with 1.5" wide heat weld at the 2"
	wide side laps.

Maximum Design Pressure:

-45 psf. (See General Limitation #9)



Membrane Type:	Single Ply, TPO, Reinforced
Deck Type 3I:	Concrete, Insulated
Deck Description:	Min. 2500 psi structural concrete or concrete plank
System Type C(9):	All layers of insulation simultaneously attached; membrane fully adhered.

One or more layers of any of the following insulations.

Die of more layers of any of the following ins		Esster or
Base Insulation Layer (Optional)	Insulation Fasteners	Fastener
	(Table 3)	Density/ft ²
ISO 95+ GL, RESISTA, GenFlex ISO Insula	ation, Coated Glass Facer	
Minimum ¹ /2" thick	N/A	N/A
Top Insulation Layer	Insulation Fasteners	Fastener
	(Table 3)	Density/ft ²
RESISTA, Coated Glass Facer		
Minimum 1" thick	1 or 2 with 3	1:1.6 ft ²
ISO 95 + GL, ISOGARD HD Composite, Go	enFlex ISO Insulation, GenFlex HD C	omposite ISO
Minimum 1-1/2" thick	1 or 2 with 3	1:1.6 ft ²
SECUROCK Gypsum Fiber Roof Board, D	ansNack Prima	
•		11(0)
Minimum ¹ / ₂ " thick	1 or 2 with 3	1:1.6 ft ²

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 using the same fastener density. Please refer to Roofing Application Standard RAS 117 for insulation attachment.

Membrane:	Min. 45 mil UltraPly TPO SA self-adhered with 1.5" wide heat weld at the 2" wide side laps.
Maximum Design Pressure:	-52.5 psf. (See General Limitation #7)

Membrane Type:	Single Ply, TPO, Reinforced
Deck Type 3I:	Concrete, Insulated
Deck Description:	Min. 2500 psi structural concrete or concrete plank.
System Type C(10):	Membrane fully adhered over mechanically fastened insulation.

One or more layers of any of the following insulations.		
Base Insulation Layer (Optional)	Insulation Fasteners	Fastener
	(Table 3)	Density/ft ²
ISO 95+ GL, RESISTA, GenFlex ISO Insulation, Coa	ted Glass Facer	
Minimum ½"thick	N/A	N/A
Top Insulation Layer	Insulation Fasteners	Fastener
	(Table 3)	Density/ft ²
DensDeck Prime, SECUROCK Gypsum Fiber Roof B	board	-
Minimum ¹ / ₂ " thick	1 or 2 with 3	1:.1.78 ft ²
RESISTA, Coated Glass Facer		
Minimum 2" thick	1 or 2 with 3	1:.1.78 ft ²
ISOGARD HD Composite, GenFlex HD Composite IS	50	
Minimum 1.5" thick	1 or 2 with 3	1:.1.78 ft ²

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 per board shall be increased maintaining the same fastener density. See Roofing Application Standard RAS 117 for fastening details.

Membrane:	Min. 45 mil UltraPly TPO SA self-adhered with 1.5" wide heat weld at the 2" wide side laps.
Maximum Design Pressure:	-52.5 psf. (See General Limitation #7)



Membrane Type:	Single Ply, Thermoplastic, TPO
Deck Type 3I:	Concrete, Insulated
Deck Description:	Min. 2500 psi structural concrete or concrete plank
System Type C(11):	All layers of insulation simultaneously attached; membrane fully adhered.

All General and System Limitations apply.

One or more layers of any of the following insulations.			
Base Insulation Layer (Optional)	Insulation Fasteners	Fastener	
	(Table 3)	Density/ft ²	
ISO 95+ GL, RESISTA, GenFlex ISO Insulation, Co			
Minimum ¹ / ₂ "thick	N/A	N/A	
Top Insulation Layer	Insulation Fasteners	Fastener	
ι v	(Table 3)	Density/ft ²	
ISO 95+ GL, ISOGARD HD Composite, RESISTA, GenFlex ISO Insulation, Coated Glass Facer,			
GenFlex HD Composite ISO			
Minimum 1-1/2" thick	1 or 2 with 3	1: 1.78 ft ²	
DensDeck Prime, SECUROCK Gypsum Fiber Roof Board			
Minimum ¹ / ₂ " thick	1 or 2 with 3	1: 1.78 ft ²	
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 using the same fastener density. Please refer to Roofing Application Standard RAS 117 for insulation attachment.			

Membrane: Min. 45 mil UltraPly TPO SA self-adhered with 1.5" wide heat weld at the 2" wide side laps.

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



Membrane Type:	Single Ply, TPO, Reinforced
Deck Type 3I:	Concrete, Insulated
Deck Description:	Min. 2500 psi structural concrete or concrete plank.
System Type C(12):	Membrane fully adhered over mechanically fastened insulation.

One or more layers of any of the following insulations.		
Base Insulation Layer (Optional)	Insulation Fasteners	Fastener
	(Table 3)	Density/ft ²
ISO 95+ GL, RESISTA, GenFlex ISO Insulation, Coa	ted Glass Facer	
Minimum ½"thick	N/A	N/A
Top Insulation Layer	Insulation Fasteners	Fastener
	(Table 3)	Density/ft ²
SECUROCK Gypsum-Fiber Roof Board		
Minimum 1/2" thick	1 or 2 with 3	1: 2.13 ft ²
ISOGARD HD Composite, GenFlex HD Composite IS	50	
Minimum 1-1/2" thick	1 or 2 with 3	1: 2.13 ft ²

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 per board shall be increased maintaining the same fastener density. See Roofing Application Standard RAS 117 for fastening details.

Membrane: Min. 45 mil UltraPly TPO SA self-adhered with 1.5" wide heat weld at the 2" wide side laps.

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



Membrane Type:	Single Ply, TPO, Reinforced
Deck Type 3I:	Concrete, Insulated
Deck Description:	Min. 2500 psi structural concrete or concrete plank.
System Type C(13):	Membrane fully adhered over mechanically fastened insulation.

One or more layers of any of the following insulati	ons.			
Base Insulation Layer (Optional)	Insulation Fasteners	Fastener		
	(Table 3)	Density/ft ²		
ISO 95+ GL, RESISTA, GenFlex ISO Insulation	ISO 95+ GL, RESISTA, GenFlex ISO Insulation, Coated Glass Facer			
Minimum ¹ / ₂ " thick	N/A	N/A		
Top Insulation Layer	Insulation Fasteners	Fastener		
	(Table 3)	Density/ft ²		
ISOGARD HD Composite, GenFlex HD Compo	site ISO			
Minimum 1" thick	1 or 2 with 3	1: 1.33 ft ²		

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 per board shall be increased maintaining the same fastener density. See Roofing Application Standard RAS 117 for fastening details.

Membrane:	Min. 45 mil UltraPly TPO SA self-adhered with 1.5" wide heat weld at the 2" wide side laps.
Maximum Design Pressure:	-60 psf. (See General Limitation #7)



Membrane Type:	Single Ply, TPO, Reinforced
Deck Type 3I:	Concrete, Insulated
Deck Description:	Min. 2500 psi structural concrete or concrete plank.
System Type C(14):	Membrane bonded over mechanically fastened insulation.

One or more layers of any of the following insulations.

Base Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft ²
ISO 95+ GL, RESISTA, GenFlex ISO Insulation		
Minimum 1.5" thick	N/A	N/A
Top Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft ²
ISOGARD HD, GenFlex HD ISO	× ,	U
Minimum ¹ / ₂ " thick	1 or 2 with 3	1:4 ft ²
ISO 95+ GL, RESISTA, GenFlex ISO Insulation	1, Coated Glass Facer	
Minimum 1" thick	1 or 2 with 3	1:4 ft ²
SECUROCK Gypsum Fiber Roof Board Minimum 1/2" thick	1 or 2 with 3	1:4 ft ²
Dara Daale Deima		
DensDeck Prime Minimum ¼" thick	1 or 2 with 3	1:4 ft ²
ISOGARD HD Composite, GenFlex HD Compo	site ISO	
Minimum 1-1/2" thick	1 or 2 with 3	1:4 ft ²
Plywood		
Minimum 19/32" thick	1 or 2 with 3	1:4 ft ²

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 per board shall be increased maintaining the same fastener density. See Roofing Application Standard RAS 117 for fastening details.

Membrane:	Min. 45 mil UltraPly TPO SA self-adhered with 1.5" wide heat weld at the 2" wide side laps.
Maximum Design Pressure:	-60 psf. (See General Limitation #7)



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Membrane Type:	Single Ply, TPO, Reinforced
Deck Type 3I:	Concrete, Insulated
Deck Description:	Min. 2500 psi structural concrete or concrete plank.

System Type C(15): Membrane fully adhered over mechanically 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 any of the following insulations.

Base Insulation Layer	Insulation Fasteners	Fastener
	(Table 3)	Density/ft ²
ISO 95+ GL, RESISTA, GenFlex ISO Insulation, Coat	ted Glass Facer	
Minimum 1" thick	N/A	N/A
Top Insulation Layer	Insulation Fasteners	Fastener
1 0	(Table 3)	Density/ft ²
SECUROCK Gypsum-Fiber Roof Board		
Minimum 1/2" thick	1 or 2 with 3	1: 4.0 ft ²
ISOCADD UD Composito ConFloy UD Composito IS	0	
ISOGARD HD Composite, GenFlex HD Composite IS		1 40 62
Minimum 1-1/2" thick	1 or 2 with 3	1: 4.0 ft ²

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 per board shall be increased maintaining the same fastener density. See Roofing Application Standard RAS 117 for fastening details.

Membrane: Min. 45 mil UltraPly TPO SA self-adhered with 1.5" wide heat weld at the 2" wide side laps.

Maximum Design Pressure:

-62.5 psf. (See General Limitation #9)



Membrane Type:	Single Ply, TPO, Reinforced
Deck Type 3I:	Concrete, Insulated
Deck Description:	Min. 2500 psi structural concrete or concrete plank.
System Type C(16):	All layers of insulation simultaneously attached; membrane fully adhered.

One or more layers of any of the following insulations.

Base Insulation Layer (Optional)	Insulation Fasteners	Fastener
	(Table 3)	Density/ft ²
ISO 95+ GL, RESISTA, GenFlex ISO Insulation, Coa	ted Glass Facer	
Minimum 1/2" thick	N/A	N/A
Top Insulation Layer	Insulation Fasteners (Table	Fastener
	3)	Density/ft ²
SECUROCK Gypsum-Fiber Roof Board		
Minimum ¹ / ₂ " thick	1 or 2 with 3	1:1.6 ft ²
ISOGARD HD Composite, GenFlex HD Composite IS	80	
Minimum 1-1/2" thick	1 or 2 with 3	1:1.6 ft ²

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 per board shall be increased maintaining the same fastener density. See Roofing Application Standard RAS 117 for fastening details.

Membrane:Min. 45 mil UltraPly TPO SA self-adhered with 1.5" wide heat weld at the 2"
wide side laps.Maximum Design
Pressure:-67.5 psf. (See General Limitation #7)



Membrane Type:	Single Ply, TPO, Reinforced
Deck Type 3I:	Concrete, Insulated
Deck Description:	Min. 2500 psi structural concrete or concrete plank.
System Type C(17):	Membrane bonded over mechanically fastened insulation.

One or more layers of any of the following insulations.

Base Insulation Layer	Insulation Fasteners	Fastener
	(Table 3)	Density/ft ²
ISO 95+ GL, RESISTA, GenFlex ISO Insul	ation, Coated Glass Facer	
Minimum 1.5" thick	N/A	N/A
Top Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft ²
Plywood		
Minimum 19/32" thick	1 or 2 with 4	1:2.7 ft ²
ISOGARD HD, GenFlex HD ISO		
Minimum ¹ / ₂ " thick	1 or 2 with 4	1:2.7 ft ²
DensDeck Prime, SECUROCK Gypsum Fil	ber Roof Board	
Minimum ¹ /4" thick	1 or 2 with 4	1:2.7 ft ²

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 per board shall be increased maintaining the same fastener density. See Roofing Application Standard RAS 117 for fastening details.

Membrane: Min. 45 mil UltraPly TPO SA self-adhered with 1.5" wide heat weld at the 6" wide side laps.

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

Membrane Type:	Single Ply, TPO, Reinforced
Deck Type 3I:	Concrete, Insulated
Deck Description:	Min. 2500 psi structural concrete or concrete plank.
System Type C(18):	All layers of insulation simultaneously attached; membrane fully adhered.

One or more layers of any of the following insulations:

Base Insulation Layer (Optional)	Insulation Fasteners	Fastener
	(Table 3)	Density/ft ²
ISO 95+ GL, RESISTA, GenFlex ISO Insulation	, Coated Glass Facer	·
Minimum ¹ / ₂ " thick	N/A	N/A
Top Insulation Layer	Insulation Fasteners	Fastener
x v	(Table 3)	Density/ft ²
RESISTA, ISOGARD HD Composite, Coated G	lass Facer, GenFlex HD Comp	osite ISO
Minimum 1-1/2" thick	1 or 2 with 3	1:1.6 ft ²
ISO 95 + GL, GenFlex ISO Insulation		
Minimum 2" thick	1 or 2 with 3	1:1.6 ft ²
DensDeck Prime, SECUROCK Gypsum-Fiber F	Roof Board	
Minimum 1/2" thick	1 or 2 with 3	1:1.6 ft ²

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 using the same fastener density. Please refer to Roofing Application Standard RAS 117 for insulation attachment.

Membrane: Min. 45 mil UltraPly TPO SA self-adhered with 1.5" wide heat weld at the 2" wide side laps.

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



Membrane Type:	Single Ply, TPO, Reinforced
Deck Type 3I:	Concrete, Insulated
Deck Description:	Min. 2500 psi structural concrete or concrete plank.
System Type C(19):	All layers of insulation simultaneously attached; membrane bonded.

One or more layers of any of the following insulations.Insulation FastenersBase Insulation Layer (Optional)Insulation Fasteners

Dase insulation Layer (Optional)	insulation rasteners	rastener
	(Table 3)	Density/ft ²
ISO 95+ GL, RESISTA, GenFlex ISO Insulation,	Coated Glass Facer	
Minimum 1/2" thick	N/A	N/A
Top Insulation Layer	Insulation Fasteners	Fastener
	(Table 3)	Density/ft ²
SECUROCK Gypsum Fiber Roof Board	``´´	·
Minimum ¹ /2" thick	1 or 2 with 3	1:1.78 ft ²
ISOGARD HD Composite, GenFlex HD Compos	ite ISO	
Minimum 1-1/2" thick	1 or 2 with 3	1:1.78 ft ²

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 per board shall be increased maintaining the same fastener density. See Roofing Application Standard RAS 117 for fastening details.

Membrane:Min. 45 mil UltraPly TPO SA self-adhered with 1.5" wide heat weld at the 2"
wide side laps.Maximum Design
Pressure:-82.5 psf. (See General Limitation #7)



Fastener

Membrane Type:	Single Ply, TPO, Reinforced
Deck Type 3I:	Concrete, Insulated
Deck Description:	Min. 2500 psi structural concrete or concrete plank.
System Type C(20):	Membrane adhered over mechanically fastened insulation.

One or more layers of any of the following insulations.

System Type C(20):

Base Insulation Layer (Optional)	Insulation Fasteners (Table 3)	Fastener Density/ft ²
ISO 95+ GL, RESISTA, GenFlex ISO Insulatio	n, Coated Glass Facer	v
Minimum ¹ /2" thick	N/A	N/A
Top Insulation Layer	Insulation Fasteners	Fastener
	(Table 3)	Density/ft ²
ISO 95+ GL, RESISTA, GenFlex ISO Insulation	on, Coated Glass Facer	·
Minimum 2" thick	1 or 2 with 3	1:1.6 ft ²
DensDeck Prime, SECUROCK Gypsum-Fiber	Roof Board	
Minimum ¹ / ₂ " thick	1 or 2 with 3	1:1.6 ft ²
ISOGARD HD Composite, GenFlex HD Comp	osite ISO	
Minimum 1-1/2" thick	1 or 2 with 3	1:1.6 ft ²

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 per board shall be increased maintaining the same fastener density. See Roofing Application Standard RAS 117 for fastening details.

Membrane:	Min. 45 mil UltraPly TPO SA self-adhered with 1.5" wide heat weld at the 2" wide side laps.
Maximum Design Pressure:	-82.5 psf. (See General Limitation #7)

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Membrane Type:	Single Ply, TPO, Reinforced
Deck Type 3I:	Concrete, Insulated
Deck Description:	Min. 2500 psi structural concrete or concrete plank.
System Type C(21):	All layers of insulation simultaneously attached; membrane fully adhered.

One or more layers of any of the following insulations:

Base Insulation Layer (Optional)	Insulation Fasteners	Fastener
	(Table 3)	Density/ft ²
ISO 95+ GL, RESISTA, GenFlex ISO Insulation,	Coated Glass Facer	·
Minimum ¹ /2" thick	N/A	N/A
Top Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft ²
RESISTA, Coated Glass Facer		
Minimum 2" thick	1 or 2 with 3	1:1.33 ft ²
SECUROCK Gypsum-Fiber Roof Board		
Minimum 1/2" thick	1 or 2 with 3	1:1.33 ft ²
ISOGARD HD Composite, GenFlex HD Composi	ite ISO	
Minimum 1-1/2" thick	1 or 2 with 3	1:1.33 ft ²

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 using the same fastener density. Please refer to Roofing Application Standard RAS 117 for insulation attachment.

Membrane:	Min. 45 mil UltraPly TPO SA self-adhered with 1.5" wide heat weld at the 2" wide side laps.
Maximum Design Pressure:	-105 psf. (See General Limitation #7)

Membrane Type:	Single Ply, TPO, Reinforced
Deck Type 3I:	Concrete, Insulated
Deck Description:	Min. 2500 psi structural concrete or concrete plank.
System Type C(22):	Membrane fully adhered over mechanically fastened insulation.

One or more layers of any of the following insulations. **Base Insulation Layer (Optional) Insulation Fasteners** Fastener Density/ft² (Table 3) ISO 95+ GL, RESISTA, GenFlex ISO Insulation, Coated Glass Facer Minimum $\frac{1}{2}$ " thick N/A N/A **Top Insulation Layer Insulation Fasteners** Fastener (Table 3) Density/ft² **RESISTA, ISO 95+ GL, GenFlex ISO Insulation, Coated Glass Facer** 1:1 ft² Minimum 2" thick 1 or 2 with 3 **SECUROCK Gypsum-Fiber Roof Board, DensDeck Prime** Minimum $\frac{1}{2}$ " thick 1 or 2 with 3 1:1 ft² **ISOGARD HD Composite, GenFlex HD Composite ISO** $1:1 \text{ ft}^2$ Minimum 1-1/2" thick 1 or 2 with 3

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 per board shall be increased maintaining the same fastener density. See Roofing Application Standard RAS 117 for fastening details.

Membrane: Min. 45 mil UltraPly TPO SA self-adhered with 1.5" wide heat weld at the 2" wide side laps.

Maximum Design
Pressures:-150 psf. (See General Limitation #7)



Membrane Type:	Single Ply, TPO, Reinforced
Deck Type 3I:	Concrete, Insulated
Deck Description:	Min. 2500 psi structural concrete or concrete plank.
System Type C(23):	Membrane fully adhered over mechanically fastened insulation.

One or more layers of any of the following insulati	ons.	
Base Insulation Layer (Optional)	Insulation Fasteners	Fastener
	(Table 3)	Density/ft ²
ISO 95+ GL, RESISTA, GenFlex ISO Insulation, Coated Glass Facer		
Minimum ¹ / ₂ " thick	N/A	N/A
Top Insulation Layer	Insulation Fasteners	Fastener
	(Table 3)	Density/ft ²
ISOGARD HD Composite, GenFlex HD Compo	osite ISO	
Minimum 1.5" thick	1 or 2 with 3	1: 1.33 ft ²

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 per board shall be increased maintaining the same fastener density. See Roofing Application Standard RAS 117 for fastening details.

Membrane: Min. 45 mil UltraPly TPO SA self-adhered with 1.5" wide heat weld at the 2" wide side laps.

Maximum	Design
Pressure:	

-112.5 psf. (See General Limitation #7)



Membrane Type:	Single Ply, TPO, Reinforced
Deck Type 3I:	Concrete, Insulated
Deck Description:	Min. 2500 psi structural concrete or concrete plank.
System Type C(24):	Membrane fully adhered over mechanically fastened insulation.

One or more layers of any of the following insulations. **Base Insulation Layer (Optional) Insulation Fasteners** Fastener Density/ft² (Table 3) ISO 95+ GL, RESISTA, GenFlex ISO Insulation, Coated Glass Facer Minimum ¹/₂" thick N/A N/A **Top Insulation Layer Insulation Fasteners** Fastener Density/ft² (Table 3) **ISOGARD HD Composite, GenFlex HD Composite ISO** Minimum 2" thick 1 or 2 with 3 1: 1.33 ft²

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 per board shall be increased maintaining the same fastener density. See Roofing Application Standard RAS 117 for fastening details.

Membrane: Min. 45 mil UltraPly TPO SA self-adhered with 1.5" wide heat weld at the 2" wide side laps.

Maximum	Design
Pressure:	

-120 psf. (See General Limitation #7)



Membrane Type:	Single Ply, TPO, Reinforced
Deck Type 3I:	Concrete, Insulated
Deck Description:	Min. 2500 psi structural concrete or concrete plank.
System Type C(25):	Membrane adhered over mechanically fastened insulation.

One or more layers of any of the following insulations. Base Insulation Layer (Optional)

Base Insulation Layer (Optional)	Insulation Fasteners	Fastener
	(Table 3)	Density/ft ²
ISO 95+ GL, RESISTA, GenFlex ISO Insula	tion, Coated Glass Facer	·
Minimum ¹ /2" thick	N/A	N/A
Top Insulation Layer	Insulation Fasteners	Fastener
	(Table 3)	Density/ft ²
ISO 95+ GL, RESISTA, GenFlex ISO Insula	tion, Coated Glass Facer	U
Minimum 2" thick	1 or 2 with 3	1:1 ft ²
DensDeck Prime, SECUROCK Gypsum-Fib	er Roof Board	
Minimum 1/2" thick	1 or 2 with 3	1:1 ft ²
ISOGARD HD Composite, GenFlex HD Cor	nposite ISO	
Minimum 1-1/2" thick	1 or 2 with 3	1:1 ft ²

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 per board shall be increased maintaining the same fastener density. See Roofing Application Standard RAS 117 for fastening details.

Membrane:	Min. 45 mil UltraPly TPO SA self-adhered with 1.5" wide heat weld at the 2" wide side laps.
Maximum Design	
Pressure:	-142.5 psf. with ISO 95+ GL, RESISTA, DensDeck Prime, or ISOAGRD HD
	Composite (See General Limitation #7)
	-112.5 psf. with SECUROCK Gypsum Fiber Roof Board (See General
	Limitation #7)

Membrane Type:	Single Ply, TPO, Reinforced
Deck Type 3I:	Concrete, Insulated
Deck Description:	Min. 2500 psi structural concrete or concrete plank.
System Type C(26):	All layers of insulation simultaneously attached; membrane fully adhered.

(Optional) Vapor Retarder	Polyethylene Sheet 4-6 mil thick	Min. 2" wide laps sealed with duct tape
One or more layers of any of th	e following insulations.	
Base Insulation Layer	Insulation Fa	steners Fastener
	(Table 3)	Density/ft ²
ISO 95+ GL, ISO 95 + GL Tapered, RESISTA, RESISTA Tapered, GenFlex ISO Insulation,		
Tapered GenFlex ISO Insulat	tion, Coated Glass Facer, Coated Glass	s Facer Tapered
Minimum 1-1/2" thick	N/A	N/A
Top Insulation Layer	Insulation Fa	asteners Fastener
_ •	(Table 3)	Density/ft ²
SECUROCK Gypsum-Fiber	Roof Board	
• •		-

ISOGARD HD Composite, GenFlex HD Com	posite ISO	
Minimum 1-1/2" thick	1 or 2 with 3	1: 4 ft ²

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 per board shall be increased maintaining the same fastener density. See Roofing Application Standard RAS 117 for fastening details.

1 or 2 with 3

Membrane:	Min. 45 mil UltraPly TPO SA self-adhered with 1.5" wide heat weld at the 2" wide side laps.
Maximum Design Pressure:	-45 psf. (See General Limitation #9)



Minimum 1/2" thick

1:4 ft^2

Membrane Type:	Single Ply, TPO, Reinforced
Deck Type 3I	Steel, Insulated
Deck Description:	Min. 2500 psi structural concrete or concrete plank.
System Type C(27):	Membrane fully adhered over mechanically fastened insulation.

One or more layers of any of the following insulations.				
Base Insulation Layer (Optional)	Insulation Fasteners	Fastener		
	(Table 3)	Density/ft ²		
ISO 95+ GL, RESISTA, DensDeck Prime, GenFlex ISO Insulation, Coated Glass Facer				
Minimum ¹ / ₂ " thick	N/A	N/A		
Top Insulation Layer	Insulation Fasteners	Fastener		
	(Table 3)	Density/ft ²		
ISOGARD HD Composite, GenFlex HD Composite ISO				
Minimum 1 ¹ / ₂ " thick	1 or 2 with 3	1:2.13 ft ²		

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 per board shall be increased maintaining the same fastener density. See Roofing Application Standard RAS 117 for fastening details.

Membrane:Min. 45 mil UltraPly TPO SA self-adhered with 1.5" wide heat weld at the 2"
wide side laps.Maximum Design-67.5 psf. (See General Limitation #7)

Pressure:



Membrane Type:	Single Ply, TPO, Reinforced
Deck Type 3I:	Steel, Insulated
Deck Description:	Min. 2500 psi structural concrete or concrete plank
System Type C(28):	Membrane fully adhered over mechanically fastened insulation.

One or more layers of any of the following insulations. Base Insulation Layer (Optional)	Insulation Fasteners (Table 3)	Fastener Density/ft ²		
ISO 95+ GL, RESISTA, DensDeck Prime, GenFlex ISO Insulation, Coated Glass Facer				
Minimum ¹ / ₂ " thick	N/A	N/A		
Top Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft ²		
ISOGARD HD Composite, GenFlex HD Composite ISO				
Minimum 1 ¹ / ₂ " thick	1 or 2 with 3	1:1.78 ft ²		

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 per board shall be increased maintaining the same fastener density. See Roofing Application Standard RAS 117 for fastening details.

Membrane:Min. 45 mil UltraPly TPO SA self-adhered with 1.5" wide heat weld at the 2"
wide side laps.Maximum Design
Pressure:-75 psf. (See General Limitation #7)



CONCRETE 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.

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 side lap 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 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 to 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 9N-3 of the Florida Administrative Code.

END OF THIS ACCEPTANCE



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