

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

MIAMI-DADE COUNTY PRODUCT CONTROL SECTION 11805 SW 26 Street, Room 208 Miami, Florida 33175-2474 T (786)315-2590 F (786) 315-2599 www.miamidade.gov/economy

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: Elevate 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.

06/12/25

This NOA renews and revises NOA-No. 24-0430.08 and consists of pages 1 through 76. The submitted documentation was reviewed by Jorge L. Acebo. AW



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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:

		<u>Test</u>	
<b>Product</b>	<b>Dimensions</b>	<b>Specifications</b>	<b>Product Description</b>
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.

TABLE 1



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

	<b>D</b>	<u>Test</u>	
<b>Product</b>	<b>Dimensions</b>	<b>Specifications</b>	<b>Product Description</b>
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. Spray R	15 gal pail & 55 gal drum	Proprietary	A two-part polyurethane adhesive
SA Primer	5 gal.	Proprietary	Polymer based primer

## **APPROVED INSULATIONS:**

#### TABLE 2 **Product Name Product Description** Manufacturer (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 SECUROCK Gypsum-Fiber Roof Rigid, gypsum-based board stock United States Gypsum Corp. Board Holcim Solutions and GenFlex ISO Insulation Polyisocyanurate foam insulation GenFlex ISO Insulation Tapered Products US, LLC GenFlex HD ISO Holcim Solutions and Polyisocyanurate with a coated fiberglass facer Products US, LLC

## **APPROVED FASTENERS:**

		TABLE 3		
Fastener <u>Number</u>	Product <u>Name</u>	Product <u>Description</u>	<b>Dimensions</b>	Manufacturer <u>(With Current NOA)</u>
1.	Elevate 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

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# **EVIDENCE SUBMITTED:**

Test Agency	<b>Test Identifier</b>	<b>Description</b>	<u>Date</u>
FM Approvals	3014031	FM 4470	07/22/02
	3030650	FM 4470	07/10/09
	3033218	FM 4470	08/12/08
	3036642	FM 4470	10/09/09
	3039133	FM 4470	04/07/11
	3036747	FM 4470	02/12/10
	3035017	FM 4470	08/22/12
	3038191	FM 4470	08/04/11
	3035560	FM 4470	01/11/10
	3042666	FM 4470	08/14/12
	3041939	FM 4470	08/14/12
	3042665	FM 4470	05/04/12
	797-07096-267	FM 4470	08/22/12
	797-05604-267	FM 4470	06/07/10
	797-08513-267	FM 4470	06/18/13
PRI Construction Materials	FBP-054-02-04, Rev 1	FM 4474 B/TAS 114 D	02/07/13
Technologies, LLC	FBP-085-02-01, R1	FM 4474 D/TAS 114 J	10/04/12
	FBP-149-02-01	FM 4474 D	12/18/13
	FBP-154-02-02	FM 4474 D	12/18/13
	FBP-165-02-01	FM 4474/TAS 114 J	04/28/14
	FBP-175-02-01	FM 4474 D/TAS 114 J	04/28/14
	FBP-178-02-03	FM 4474 B/TAS 114 D	07/23/14
	FBP-185-02-02	FM 4474 B/TAS 114 D	07/31/14
	FBP-206-02-01	FM 4474 D/TAS 114 J	02/02/15
	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-260-02-02	FM 4474 B	10/09/15
	FBP-282-02-01	FM 4474 B/TAS 114 D	06/22/16
NEMO ETC, LLC.	4q-HSP-23-SSMBB-01.A	ASTM D4601	03/29/24
	4q-HSP-23-SSMBB-02.D	ASTM D6164	05/23/24
	4q-HSP-23-SSMBB-02.F	ASTM D6509	08/29/24
	4q-FBP-22-SSMBB-01.A	ASTM D6163	09/09/22
	4q-HSP-23-SSMBB-02.M	ASTM D6163	05/29/25

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### **APPROVED ASSEMBLIES**

Membrane Type:	Single Ply, TPO, Reinforced
Deck Type 3I:	Concrete, Insulated
<b>Deck Description:</b>	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 <sup>2</sup>
ISO 95+ GL, GenFlex ISO Insulation		
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 <sup>2</sup>
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)	<b>Insulation Fasteners</b>	Fastener
	(Table 3)	Density/ft <sup>2</sup>
ISO 95+ GL Tapered, ISO 95+ GL, GenFlex ISO	Insulation Tapered, GenFlex I	ISO Insulation
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 <sup>2</sup>
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
<b>Deck Description:</b>	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 ft<sup>2</sup>/gal and allowed to dry prior to application of Vapor Barrier.

Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft <sup>2</sup>
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 <sup>3</sup>/<sub>4</sub>" 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:	<ul> <li>-57.5 psf. using I.S.O. Stick in ribbons <sup>3</sup>/<sub>4</sub>" – 1" wide spaced 12" o.c. (See General Limitation #9)</li> <li>-97.5 psf using I.S.O. Twin Pack Adhesive in ribbons <sup>3</sup>/<sub>4</sub>" – 1" wide spaced 12" o.c. (See General Limitation #9)</li> </ul>



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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(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				
<b>Base Insulation Layer</b>		Insulation Fasteners (Table 3)	Fastener Density/ft <sup>2</sup>	
ISO 95+ GL, GenFlex ISO Insulation				
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 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.

Top Insulation Layer		Insulation Fasteners (Table 3)	Fastener Density/ft <sup>2</sup>	
ISOGARD HD, GenF	lex HD ISO		v	
Minimum <sup>1</sup> / <sub>2</sub> " thick		N/A	N/A	
ISOGARD HD Comp	osite			
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 <sup>1</sup> / <sub>2</sub> " to <sup>3</sup> / <sub>4</sub> " wide beads spaced 12" o.c. or I.S.O. Stick applied in continuous <sup>3</sup> / <sub>4</sub> " to 1" wide ribbons spaced 12" o.c. See Roofing Application Standard RAS 117 for fastening details.				
Membrane:	Min. 45 mil UltraPly TPO S wide side laps.	A self-adhered with 1.5" wide	heat weld at the 3"	
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.

Dase insulation Layer	(Table 3)	Density/ft <sup>2</sup>
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 <sup>1</sup>/<sub>2</sub> to <sup>3</sup>/<sub>4</sub> " 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 <sup>2</sup>
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:	<ul> <li>-127.5 psf. using I.S.O Twin Pack Insulation Adhesive in ribbons spaced 12" o.c. (See General Limitation #9)</li> <li>-187.5 psf. using I.S.O Twin Pack Insulation Adhesive in ribbons spaced 8" o.c. (See General Limitation #9)</li> <li>-247.5 psf. using I.S.O Twin Pack Insulation Adhesive in ribbons spaced 4" o.c. (See General Limitation #9)</li> </ul>



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Membrane Type:	Single Ply, TPO, Reinforced
Deck Type 3I:	Concrete, Insulated
<b>Deck Description:</b>	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 <sup>2</sup>
ISO 95+ GL, GenFlex ISO Insulation		
Minimum: 1- <sup>1</sup> / <sub>2</sub> " thick	N/A	N/A

Note: Base insulation shall be adhered to the vapor barrier 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 <sup>2</sup>
ISO 95+ GL, GenFlex ISO Insulation		
Minimum: 1- <sup>1</sup> / <sub>2</sub> " 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 <sup>1</sup>/<sub>2</sub> to <sup>3</sup>/<sub>4</sub> " wide ribbons spaced 12" o.c. Please refer to Roofing Application Standard RAS 117 for insulation attachment.

Top Insulation Layer (Optional)	<b>Insulation Fasteners</b>	Fastener
	(Table 3)	Density/ft <sup>2</sup>
ISO 95+ GL Tapered, GenFlex ISO Insulation T	apered	
Minimum: <sup>1</sup> / <sub>2</sub> " thick with a <sup>1</sup> / <sub>4</sub> " 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
<b>Deck Description:</b>	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 <sup>2</sup>
ISO 95+ GL, GenFlex ISO Insulation		
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 <sup>1</sup>/<sub>2</sub> to <sup>3</sup>/<sub>4</sub> " 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 <sup>2</sup>
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)	<b>Insulation Fasteners</b>	Fastener
	(Table 3)	Density/ft <sup>2</sup>
ISO 95+ GL Tapered, GenFlex ISO Insulation T	apered	
Minimum: <sup>1</sup> / <sub>2</sub> " thick with a <sup>1</sup> / <sub>4</sub> " 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 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)
I I CSSUI C.	1 12.5 psi. (See General Emination #5)



Membrane Type:	Single Ply, TPO, Reinforced
Deck Type 3I:	Concrete, Insulated
<b>Deck Description:</b>	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 <sup>2</sup>
ISO 95+ GL, GenFlex ISO Insulation		
Minimum: 1" thick	N/A	N/A

Note: Base insulation shall be adhered to the deck with I.S.O. Stick applied in <sup>3</sup>/<sub>4</sub>" 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 <sup>2</sup>
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 <sup>3</sup>/<sub>4</sub>" to 1" wide ribbons spaced 12" o.cPlease refer to Roofing Application Standard RAS 117 for insulation attachment.

Top Insulation Layer (Optional)	<b>Insulation Fasteners</b>	Fastener
	(Table 3)	Density/ft <sup>2</sup>
ISO 95+ GL, ISO 95+ GL Tapered, GenFlex IS	O Insulation, GenFlex ISO Insu	lation 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 <sup>3</sup>/<sub>4</sub>" 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.		
Base Insulation Layer	Insulation Fasteners	Fastener
	(Table 3)	Density/ft <sup>2</sup>
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 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 <sup>2</sup>
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 <sup>1</sup>/<sub>2</sub>" to <sup>3</sup>/<sub>4</sub>" 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 <sup>2</sup>
ISOGARD HD, GenFlex HD ISO		
Minimum <sup>1</sup> /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)



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Membrane Type:	Single Ply, TPO, Reinforced
Deck Type 3I:	Concrete, Insulated
<b>Deck Description:</b>	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 <sup>2</sup>
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.

Insulation Fasteners Fastener

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

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

Note: Base insulation shall be adhered to the deck with I.S.O. Spray R or I.S.O. Stick applied in <sup>3</sup>/<sub>4</sub>" to 1" wide ribbons, spaced 12" o.c. or I.S.O. Twin Pack Insulation Adhesive applied in continuous <sup>1</sup>/<sub>2</sub>" to <sup>3</sup>/<sub>4</sub>" 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.		
Base Insulation Layer (Optional)	Insulation Fasteners (Table 3)	Fastener Density/ft <sup>2</sup>
ISO 95+ GL, GenFlex ISO Insulation	(Table 5)	Density/It
Minimum 1" thick	N/A	N/A

Note: Optional Base layer of insulation shall be adhered to the deck with I.S.O. Spray R or I.S.O. Stick applied in <sup>3</sup>/<sub>4</sub> to 1" wide ribbons, spaced 12" o.c. or I.S.O. Twin Pack Insulation Adhesive applied in <sup>1</sup>/<sub>2</sub> to <sup>3</sup>/<sub>4</sub>" 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 <sup>2</sup>
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 <sup>3</sup>/<sub>4</sub> 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:	-160 psf. (See General Limitation #9)



Membrane Type:	Single Ply, TPO, Reinforced
Deck Type 3I:	Concrete, Insulated
<b>Deck Description:</b>	Min. 2500 psi structural concrete or concrete plank.
System Type A(12):	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 <sup>2</sup>
ISO 95+ GL, GenFlex ISO Insulation		
Minimum 1" thick	N/A	N/A
Middle Insulation Layer (Optional)	Insulation Fasteners (Table 3)	Fastener Density/ft <sup>2</sup>
Tapered ISO 95+ GL, Tapered GenFlex ISO Insulation		
Minimum <sup>1</sup> / <sub>2</sub> " thick with a <sup>1</sup> / <sub>4</sub> " per ft. taper	N/A	N/A
Top Insulation Layer (Optional)	Insulation Fasteners (Table 3)	Fastener Density/ft <sup>2</sup>
ISOGARD HD, GenFlex HD ISO		
Minimum <sup>1</sup> / <sub>2</sub> " thick	N/A	N/A
Plywood		
Minimum 19/32" 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 <sup>1</sup>/<sub>2</sub>" to <sup>3</sup>/<sub>4</sub>" wide beads spaced 12" o.c. or I.S.O. Stick applied in continuous <sup>3</sup>/<sub>4</sub>" 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
<b>Deck Description:</b>	Min. 2500 psi structural concrete or concrete plank.
System Type A(13):	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<br/>adhered to the concrete deck with a full mopping of hot asphalt applied at a<br/>rate of 20 - 25 lbs./square.

One or more layers of any of the following insulations.

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

Note: Base Insulation shall be adhered using I.S.O. Twin Pack Insulation Adhesive in continuous <sup>1</sup>/<sub>2</sub>" to <sup>3</sup>/<sub>4</sub>" 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 <sup>2</sup>
Tapered ISO 95+ GL, ISO 95+ GL, GenFlex ISO Insula	tion, Tapered GenFlex ISC	) Insulation
Minimum: 1" thick	N/A	N/A
Top Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft <sup>2</sup>
DensDeck Prime		
Minimum: ¼" 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 ½" to ¾" 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



Membrane Type:	Single Ply, TPO, Reinforced
Deck Type 3I:	Concrete, Insulated
<b>Deck Description:</b>	Min. 2500 psi structural concrete or concrete plank.
System Type A(14):	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 <sup>2</sup>
ISOGARD HD, GenFlex HD ISO		
Minimum: <sup>1</sup> / <sub>2</sub> " 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 <sup>1</sup>/<sub>2</sub>" to <sup>3</sup>/<sub>4</sub>" wide beads spaced 12" o.c. or I.S.O. Stick applied in continuous <sup>3</sup>/<sub>4</sub>" 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 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:	2500 psi or greater structural concrete or concrete plank
System Type A(15):	One or more layers of insulation adhered with approved asphalt; membrane Fully adhered.

Base Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft <sup>2</sup>
ISO 95+ GL, GenFlex ISO Insulation Minimum 1.5" thick	N/A	N/A
Top Insulation Layer (Optional)	Insulation Fasteners (Table 3)	Fastener Density/ft <sup>2</sup>
Tapered ISO 95+ GL, Tapered GenFlex ISO Insulati	( )	20110109,10
Minimum <sup>1</sup> / <sub>2</sub> " thick start with a <sup>1</sup> / <sub>4</sub> " 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 ft<sup>2</sup>. 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 ft<sup>2</sup>. 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
<b>Deck Description:</b>	Min. 2500 psi structural concrete or concrete plank.
System Type A(16):	One or more layers of insulation adhered with approved adhesive; membrane Fully adhered.

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

Note: Base insulation shall be adhered to the deck with I.S.O. Stick applied in <sup>3</sup>/<sub>4</sub>" 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 Densitv/ft <sup>2</sup>
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. 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 (Table 3)	Fastener Density/ft <sup>2</sup>
ISO 95+ GL Tapered, ISO 95+ GL, GenFlex ISO I	nsulation, Tapered GenFlex I	SO Insulation
Minimum: 1" thick	NA	NA
Note: Optional additional middle insulation shall l with I.S.O. Stick applied in 3/4 to 1 " wide ribbons Application Standard RAS 117 for insulation attac	spaced 12" o.c. Please refer t	v
Top Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft <sup>2</sup>
ISOGARD HD, GenFlex HD ISO		

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.

N/A

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)



Minimum  $\frac{1}{2}$ " thick

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N/A

Membrane Type:	Single Ply, TPO, Reinforced
Deck Type 3I:	Concrete, Insulated
<b>Deck Description:</b>	Min. 2500 psi structural concrete or concrete plank.
System Type A(17):	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 ft<sup>2</sup> and allowed to dry prior to application of Vapor Barrier.

Base Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft <sup>2</sup>
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 <sup>3</sup>/<sub>4</sub>" 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 <sup>2</sup>
DensDeck Prime		
Minimum <sup>1</sup> /4" 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 <sup>3</sup>/<sub>4</sub>" 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)



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Membrane Type:	Single Ply, TPO, Reinforced
Deck Type 3I:	Concrete, Insulated
<b>Deck Description:</b>	Min. 2500 psi structural concrete or concrete plank.
System Type A(18):	One or more layers of insulation adhered with approved adhesive; membrane Fully adhered.

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

Note: Base insulation shall be adhered to the deck with I.S.O. Stick applied in <sup>3</sup>/<sub>4</sub>" 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 <sup>2</sup>
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 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)	<b>Insulation Fasteners</b>	Fastener
	(Table 3)	Density/ft <sup>2</sup>
ISO 95+ GL, ISO 95+ GL Tapered, GenFlex ISO	Insulation, Tapered, GenFl	ex ISO Insulation
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 <sup>2</sup>
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)



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(19):	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 <sup>2</sup>
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 <sup>2</sup>
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
<b>Deck Description:</b>	Min. 2500 psi structural concrete or concrete plank.
System Type A(20):	Insulation adhered with approved adhesive; membrane fully adhered.

Base Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft <sup>2</sup>
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 <sup>3</sup>/<sub>4</sub>" 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 <sup>2</sup>
DensDeck Prime		
Minimum 1/4" thick	N/A	N/A

Note: Top insulation shall be adhered using ISO Spray R ribbon, applied in <sup>3</sup>/<sub>4</sub>" 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
<b>Deck Description:</b>	Min. 2500 psi structural concrete or concrete plank.
System Type A(21):	Insulation adhered with approved adhesive; membrane fully adhered.

Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft <sup>2</sup>
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 <sup>3</sup>/<sub>4</sub>" 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"<br/>wide side laps.Maximum Design

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



Membrane Type:	Single Ply, TPO, Reinforced
Deck Type 3I:	Concrete, Insulated
<b>Deck Description:</b>	Min. 2500 psi structural concrete or concrete plank.
System Type A(22):	One or more layers of insulation adhered with approved adhesive; membrane Fully adhered.

Base Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft²
ISO 95+ GL, GenFlex ISO Insulation		
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 <sup>1</sup>/<sub>2</sub> to <sup>3</sup>/<sub>4</sub> " 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 <sup>2</sup>
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)	<b>Insulation Fasteners</b>	Fastener
	(Table 3)	Density/ft <sup>2</sup>
ISO 95+ GL Tapered, ISO 95+ GL, GenFlex ISO I	nsulation, Tapered GenFlex l	<b>ISO Insulation</b>
Minimum: <sup>1</sup> / <sub>2</sub> " thick with a <sup>1</sup> / <sub>4</sub> " 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	<b>Insulation Fasteners</b>	Fastener
(Optional)	(Table 3)	Density/ft <sup>2</sup>
ISO 95+ GL, ISO 95+ GL Tapered, GenFlex ISO Insulation, Tapered GenFlex ISO Insulation		
Minimum: <sup>1</sup> / <sub>2</sub> " thick with a <sup>1</sup> / <sub>4</sub> " per ft. taper	N/A	N/A



NOA No.: 25-0321.13 Expiration Date: 06/13/30 Approval Date: 06/12/25 Page 28 of 76 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 <sup>2</sup>
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)



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Membrane Type:	Single Ply, TPO, Reinforced
Deck Type 3I:	Concrete, Insulated
<b>Deck Description:</b>	Min. 2500 psi structural concrete or concrete plank.
System Type A(23):	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 ft<sup>2</sup> and allowed to dry prior to application of Vapor Barrier.

Base Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft <sup>2</sup>
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 ½" to ¾" 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 <sup>2</sup>
ISO 95+ GL, GenFlex ISO Insulation		
Minimum: 1.5" thick	N/A	N/A
Top Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft <sup>2</sup>
DensDeck Prime		
Minimum: <sup>1</sup> /4" 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:	Min. 2500 psi structural concrete or concrete plank.
System Type A(24):	One or more layers of insulation adhered with approved adhesive; membrane fully adhered.

One or more layers of any of the following insulations.Insulation Fasteners<br/>(Table 3)Fastener<br/>Density/ft2ISO 95+ GL, GenFlex ISO InsulationN/AN/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 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 <sup>2</sup>
ISO 95+ GL, GenFlex ISO Insulation		·
Minimum 1.5" thick	N/A	N/A
Top Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft <sup>2</sup>

Note: Optional Middle Insulation layer 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. Top Insulation layer shall be adhered to the previous layer with 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 3" wide side laps.
Maximum Design Pressure:	-247.5 psf. (See General Limitation #9)



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

All General and System Limitations apply.

One or more layers of any of the following insulations.		
Base Insulation Layer	Insulation Fasteners	Fastener
·	(Table 3)	Density/ft <sup>2</sup>
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. Stick applied in continuous <sup>3</sup>/<sub>4</sub>" 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 <sup>2</sup>
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. 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 <sup>2</sup>
ISOGARD HD, GenFlex HD ISO		
Minimum <sup>1</sup> / <sub>2</sub> " thick	N/A	N/A

Note: Top Insulation layer shall be adhered with 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)



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Membrane Type:	Single Ply, TPO, Reinforced
Deck Type 3I:	Concrete, Insulated
<b>Deck Description:</b>	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 <sup>2</sup>
ISO 95+ GL, GenFlex ISO Insulation		-
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 <sup>1</sup>/<sub>2</sub> to <sup>3</sup>/<sub>4</sub> " 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 <sup>2</sup>
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 (Table 3)	Fastener Density/ft <sup>2</sup>
ISO 95+ GL Tapered, ISO 95+ GL, GenFlex ISO Insulation Tapered, GenFlex ISO Insulation		
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 <sup>2</sup>
ISO 95+ GL Tapered, ISO 95+ GL, Tapered GenFlex ISO Insulation, Tapered GenFlex ISO		
Insulation		
Minimum 1" thick	N/A	N/A



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Top Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft <sup>2</sup>
ISOGARD HD, GenFlex HD ISO		
Minimum <sup>1</sup> / <sub>2</sub> " 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 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)



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Membrane Type:	Single Ply, TPO, Reinforced
Deck Type 3I:	Concrete, Insulated
<b>Deck Description:</b>	Min. 2500 psi structural concrete or concrete plank.
System Type A(27):	Insulation adhered with approved adhesive; membrane fully adhered.

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

Note: Base insulation shall be adhered using I.S.O. Stick, I.S.O. Twin Pack Insulation Adhesive or ISO Spray R ribbon, applied in <sup>3</sup>/<sub>4</sub>" 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"<br/>wide side laps.Maximum Design

**Pressure:** -445 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 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 Laver** 

Base Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft <sup>2</sup>
ISO 95+ GL, GenFlex ISO Insulation		·
Minimum 1.5" thick	1 or 2 with 3	1:2 ft <sup>2</sup>
Top Insulation Layer (Optional)	Insulation Fasteners	Fastener
ISO 95+ GL, GenFlex ISO Insulation	(Table 3)	Density/ft <sup>2</sup>
Minimum 1.5" thick	N/A	N/A
Tapered ISO 95+ GL, Tapered GenFlex ISO Insulation		
Minimum <sup>1</sup> / <sub>2</sub> " thick with a <sup>1</sup> / <sub>4</sub> " 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 1/2" to 3/4" 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 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 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 (Table 3) Density/ft<sup>2</sup> 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/ft<sup>2</sup> (Table 3) ISO 95+ GL, GenFlex ISO Insulation Minimum 2-<sup>1</sup>/<sub>4</sub>" thick 1 or 2 with 3 1:4 ft<sup>2</sup>

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 <sup>2</sup>
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 <sup>1</sup>/<sub>2</sub>" to <sup>3</sup>/<sub>4</sub>" wide beads spaced 12" o.c. or I.S.O. Stick applied in continuous <sup>3</sup>/<sub>4</sub>" 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 <sup>2</sup>
ISO 95+ GL, GenFlex ISO Insulation Minimum 1" thick	N/A	N/A
Middle Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft <sup>2</sup>
ISO 95+ GL, GenFlex ISO Insulation Minimum 1½" thick	1 or 2 with 3	1:2 ft <sup>2</sup>

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 <sup>2</sup>
ISOGARD HD, GenFlex HD ISO		
Minimum <sup>1</sup> / <sub>2</sub> " thick	N/A	N/A

Note: Top layer shall be adhered to top insulation with I.S.O. Twin Pack Insulation Adhesive in continuous <sup>1</sup>/<sub>2</sub>" to <sup>3</sup>/<sub>4</sub>" wide beads spaced 12" o.c. or I.S.O. Stick applied in continuous <sup>3</sup>/<sub>4</sub>" 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:	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.

Insulation Fasteners Fastener

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

	(Table 3)	Density/ft <sup>2</sup>
ISO 95+ GL, GenFlex ISO Insulation		
Minimum 1.5" thick	1 or 2 with 3	1:2 ft <sup>2</sup>

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 <sup>2</sup>
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 <sup>2</sup>
ISO 95+ GL, GenFlex ISO Insulation		•
Minimum 1" thick	N/A	N/A
Tapered ISO 95+ GL, Tapered GenFlex ISO Insulation		
Minimum <sup>1</sup> / <sub>2</sub> " thick with a <sup>1</sup> / <sub>4</sub> " 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 <sup>1</sup>/<sub>2</sub>" to <sup>3</sup>/<sub>4</sub>" wide beads spaced 12" o.c. or I.S.O. Stick applied in continuous <sup>3</sup>/<sub>4</sub>" 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 <sup>2</sup>
DensDeck Prime, SECUROCK Gypsum Fiber Roof Board Minimum ¼" thick	( )	N/A



NOA No.: 25-0321.13 Expiration Date: 06/13/30 Approval Date: 06/12/25 Page 39 of 76 Note: Top layer of insulation shall be adhered to previous layer with I.S.O. Twin Pack Insulation Adhesive in continuous ½" to ¾" wide beads spaced 12" o.c. 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.

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 B(5):	Base layer of insulation mechanically fastened, optional top layer adhered with approved adhesive.

**Insulation Fasteners** 

Fastener Density/ft<sup>2</sup>

1:2 ft<sup>2</sup>

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

	(Table 3)
ISO 95+ GL, GenFlex ISO Insulation	
Minimum 1.5" thick	1 or 2 with 3

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

Middle Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft <sup>2</sup>
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 <sup>2</sup>
ISO 95+ GL, GenFlex ISO Insulation		•
Minimum 1" thick	N/A	N/A
Tapered ISO 95+ GL, Tapered GenFlex ISO Insulation Minimum ½" thick with a ¼" 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 <sup>1</sup>/<sub>2</sub>" to <sup>3</sup>/<sub>4</sub>" wide beads spaced 12" o.c. or I.S.O. Stick applied in continuous <sup>3</sup>/<sub>4</sub>" to 1" wide ribbons spaced 12" o.c. See Roofing Application Standard RAS 117 for insulation attachment.

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

Note: Top layer of insulation shall be adhered to previous layer with I.S.O. Twin Pack Insulation Adhesive in continuous ½" to ¾" wide beads spaced 12" o.c. 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.

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 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 <sup>2</sup>
ISO 95+ GL, , GenFlex ISO Insulation,		
Minimum 1.5" thick	1 or 2 with 3	1:1.78 ft <sup>2</sup>

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 <sup>2</sup>
ISOGARD HD Composite Minimum 1.5" thick	N/A	N/A

Note: Top layer shall be adhered to base insulation layer with I.S.O. Stick or I.S.O. Spray R applied in continuous <sup>3</sup>/<sub>4</sub>" 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:	-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 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	Fastener
	(Table 3)	Density/ft <sup>2</sup>
ISO 95+ GL, GenFlex ISO Insulation		
Minimum 2" thick	1 or 2 with 3	1:1.78 ft <sup>2</sup>

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 <sup>2</sup>
ISO 95+ GL, GenFlex ISO Insulation		
Minimum <sup>1</sup> /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 <sup>2</sup>
ISOGARD HD, GenFlex HD ISO		
Minimum <sup>1</sup> / <sub>2</sub> " 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 ribbons spaced 6" o.c. or I.S.O. Spray R or I.S.O. Stick applied in continuous ¾" 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(8):	Base layer of insulation mechanically fastened, optional top layer adhered with approved adhesive.

One or more layers of any of the following insulations.Insulation Fasteners<br/>(Table 3)Fastener<br/>Density/ft2ISO 95+ GL, GenFlex ISO Insulation1 or 2 with 31:1.78 ft2

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 <sup>2</sup>
ISOGARD HD, GenFlex HD ISO		
Minimum <sup>1</sup> / <sub>2</sub> " 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 <sup>1</sup>/<sub>2</sub>" to <sup>3</sup>/<sub>4</sub>" wide ribbons spaced 6" o.c. or I.S.O. Spray R or I.S.O. Stick applied in continuous <sup>3</sup>/<sub>4</sub>" 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(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** 

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

**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 <sup>2</sup>
SECUROCK Gypsum Fiber Roof Board Minimum ¼" thick	N/A	N/A
Willing /4 Unick		

Note: Top layer shall be adhered to top insulation with I.S.O. Stick applied in continuous <sup>3</sup>/<sub>4</sub>" to 1" wide ribbons spaced 6" o.c. or I.S.O. Spray R applied in continuous <sup>3</sup>/<sub>4</sub>" 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:	-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(10):	Base layer of insulation mechanically fastened, optional top layer adhered with approved adhesive.

**Insulation Fasteners** 

Fastener

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

·	(Table 3)	Density/ft <sup>2</sup>
ISO 95+ GL, GenFlex ISO Insulation		
Minimum 2" thick	1 or 2 with 3	1:1.6 ft <sup>2</sup>

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 <sup>2</sup>
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 ½" to ¾" wide beads spaced 6" o.c. or I.S.O. Stick applied in continuous ¾" 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(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 (Optional)	Insulation Fasteners	Fastener
	(Table 3)	Density/ft <sup>2</sup>
ISO 95+ GL, GenFlex ISO Insulation		
Minimum 1" thick	N/A	N/A
ISO 95+ GL Tapered, GenFlex ISO Insulation Tapered		
Minimum <sup>1</sup> / <sub>2</sub> " thick with a <sup>1</sup> / <sub>4</sub> " per ft. taper	N/A	N/A
Middle Insulation Layer	<b>Insulation Fasteners</b>	Fastener
·	(Table 3)	Density/ft <sup>2</sup>
ISO 95+ GL, GenFlex ISO Insulation		
Minimum 2" thick	1 or 2 with 3	1:1.6 ft <sup>2</sup>

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 <sup>2</sup>
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 ½"to ¾" wide ribbons spaced 6" o.c. or I.S.O. Stick applied in continuous ¾" 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:	-82.5 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(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 Insulation Fasteners (Table 3)

ISO 95+ GL, GenFlex ISO Insulation	(1.0
Minimum 2" thick	1 or 2 with 3

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 <sup>2</sup>
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 <sup>1</sup>/<sub>2</sub>" to <sup>3</sup>/<sub>4</sub>" wide beads spaced 4" o.c. or I.S.O. Stick applied in continuous <sup>3</sup>/<sub>4</sub>" 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:	-127.5 psf. (See General Limitation #7)

Fastener

1:1 ft<sup>2</sup>

Density/ft<sup>2</sup>

Membrane Type:	Single Ply, TPO, Reinforced
Deck Type 3I:	Concrete, Insulated
<b>Deck Description:</b>	Min. 2500 psi structural concrete or concrete plank
System Type B(13):	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 <sup>2</sup>
ISO 95+ GL, GenFlex ISO Insulation		
Minimum 1" thick	N/A	N/A
Middle Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft <sup>2</sup>
ISO 95+ GL, GenFlex ISO Insulation		
Minimum 2" thick	1 or 2 with 3	1:1 ft <sup>2</sup>

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 <sup>2</sup>
ISOGARD HD, GenFlex HD ISO		
Minimum 1/2" thick	N/A	N/A
Notes The last shall be allowed to the	ulation with ISO Twin Deals I	

Note: Top layer shall be adhered to top insulation with I.S.O. Twin Pack Insulation Adhesive in continuous <sup>1</sup>/<sub>2</sub>" to <sup>3</sup>/<sub>4</sub>" wide ribbons spaced 4" o.c. or I.S.O. Stick applied in continuous <sup>3</sup>/<sub>4</sub>" 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.

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.			
<b>Base Insulation Layer (Optional)</b>	Insulation Fasteners	Fastener	
ISO 95+ GL, GenFlex ISO Insulation	(Table 3)	Density/ft <sup>2</sup>	
Minimum 1" thick	N/A	N/A	
ISO 95+ GL Tapered, GenFlex ISO Insulation Tapere	h		
Minimum <sup>1</sup> / <sub>2</sub> " thick with a <sup>1</sup> / <sub>4</sub> " per ft. taper	N/A	N/A	
Middle Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft <sup>2</sup>	
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 <sup>2</sup>	
ISOGARD HD, GenFlex HD ISO	(		
Minimum <sup>1</sup> / <sub>2</sub> " thick	1 or 2 with 3	1:2.1 ft <sup>2</sup>	
ISO 95+ GL, GenFlex ISO Insulation			
Minimum 1" thick	1 or 2 with 3	1:2.1 ft <sup>2</sup>	
DensDeck Prime, SECUROCK Gypsum-Fiber Roof Board			
Minimum 1/4" thick	1 or 2 with 3	1:2.1 ft <sup>2</sup>	
ISOGARD HD Composite			
ISOGARD HD Composite Minimum 1-1/2" thick	1 or 2 with 3	1:2.1 ft <sup>2</sup>	

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



Membrane Type:	Single Ply, TPO, Reinforced
Deck Type 3I:	Concrete, Insulated
<b>Deck Description:</b>	Min. 2500 psi structural concrete or concrete plank.
System Type C(2):	All layers of insulation simultaneously attached; membrane fully adhered.

One or more layers of any of the following insulations: **Base Insulation Layer Insulation Fasteners** Fastener (Table 3) Density/ft<sup>2</sup> ISO 95+ GL, GenFlex ISO Insulation Minimum 1" thick N/A N/A **Top Insulation Layer Insulation Fasteners** Fastener (Table 3) Density/ft<sup>2</sup> **SECUROCK Gypsum-Fiber Roof Board** Minimum <sup>1</sup>/<sub>4</sub>" thick 1 or 2 with 3 1:1.78 ft<sup>2</sup> ISO 95+ GL, ISOGARD HD Composite, GenFlex ISO Insulation Minimum 1.5" thick 1:1.78 ft<sup>2</sup> 1 or 2 with 3 **DensDeck Prime** Minimum  $\frac{1}{2}$ " thick 1 or 2 with 3 1:1.78 ft<sup>2</sup>

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	Fastener
ISO 95+ GL, GenFlex ISO Insulation	(Table 3)	Density/ft <sup>2</sup>
Minimum 1.5" thick	N/A	N/A
Top Insulation Layer	<b>Insulation Fasteners</b>	Fastener
	(Table 3)	Density/ft <sup>2</sup>
ISO 95+ GL, GenFlex ISO Insulation	, , ,	·
Minimum 2" thick	1 or 2 with 3	1:2.67 ft <sup>2</sup>
DensDeck Prime, SECUROCK Gypsum-Fiber Roof Bo	ard	
Minimum 1/2" thick	1 or 2 with 3	1:2.67 ft <sup>2</sup>
ISOGARD HD Composite		
Minimum 1-1/2" thick	1 or 2 with 3	1:2.67 ft <sup>2</sup>

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 <sup>2</sup>
ISO 95+ GL, GenFlex ISO Insulation		-
Minimum 1.5" thick	N/A	N/A
Middle Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft <sup>2</sup>
ISO 95+ GL, GenFlex ISO Insulation		v
Minimum 1/2" thick	N/A	N/A
Top Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft <sup>2</sup>
ISO 95+ GL, GenFlex ISO Insulation	(Table 5)	Density/It
Minimum 1" thick	1 or 2 with 3	1:5.3 ft <sup>2</sup>
ISOGARD HD, GenFlex HD ISO		
Minimum ½" thick	1 or 2 with 3	1:5.3 ft <sup>2</sup>
DensDeck Prime, SECUROCK Gypsum Fiber Roof Bo	ard	
Minimum <sup>1</sup> / <sub>4</sub> " thick	1 or 2 with 3	1:5.3 ft <sup>2</sup>
ISOGARD HD Composite		
Minimum 1-1/2" thick	1 or 2 with 3	1:5.3 ft <sup>2</sup>
Plywood		
Minimum 19/32" thick	1 or 2 with 3	1:5.3 ft <sup>2</sup>

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
<b>Deck Description:</b>	Min. 2500 psi structural concrete or concrete plank.
System Type C(5):	Membrane fully adhered over mechanically fastened insulation.

Base Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft <sup>2</sup>
ISO 95+ GL, GenFlex ISO Insulation		·
Minimum 1.5" thick	N/A	N/A
Top Insulation Layer	<b>Insulation Fasteners</b>	Fastener
	(Table 3)	Density/ft <sup>2</sup>
ISOGARD HD, GenFlex HD ISO		
Minimum <sup>1</sup> /2" thick	1 or 2 with 3	1:2.7ft <sup>2</sup>
ISO 95 + GL, GenFlex ISO Insulation		
Minimum 1" thick	1 or 2 with 3	1:2.7 ft <sup>2</sup>
DensDeck Prime, SECUROCK Gypsum-Fiber Roof B	oard	
Minimum ¼" thick	1 or 2 with 3	1:2.7 ft <sup>2</sup>
ISOGARD HD Composite, GenFlex HD ISO Composi	ite	
Minimum 1.5" thick	1 or 2 with 3	1:2.7 ft <sup>2</sup>

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 <sup>2</sup>
ISO 95+ GL, GenFlex ISO Insulation		-
Minimum 1.5" thick	N/A	N/A
Top Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft <sup>2</sup>
ISOGARD HD, GenFlex HD ISO	· · · · ·	v
Minimum 1" thick	1 or 2 with 3	1: 1.78 ft <sup>2</sup>
ISO 95 + GL, GenFlex ISO Insulation		
Minimum 1" thick	1 or 2 with 3	1: 1.78 ft <sup>2</sup>
DensDeck Prime, SECUROCK Gypsum-Fiber Boards		
Minimum 1/4" thick	1 or 2 with 3	1: 1.78 ft <sup>2</sup>
ISOGARD HD Composite		
Minimum 1-1/2" thick	1 or 2 with 3	1:1.78 ft <sup>2</sup>

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 <sup>2</sup>
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 <sup>2</sup>
ISO 95+ GL Tapered, GenFlex ISO Insulatio	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 DensDeck Prime, SECUROCK Gypsum Fiber	Insulation Fasteners (Table 3) Roof Board	Fastener Density/ft <sup>2</sup>
Minimum 1/4" thick	1 or 2 with 3	1:2 ft <sup>2</sup>
ISOGARD HD Composite, ISO 95+ GL, GenF	lex ISO Insulation	
Minimum 1-1/2" thick	1 or 2 with 3	1:2 ft <sup>2</sup>
Plywood		
Minimum 19/32" thick	1 or 2 with 3	1:2 ft <sup>2</sup>

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 Laver (Ontional)** 

Base Insulation Layer (Optional)	Insulation Fasteners (Table 3)	Fastener Density/ft <sup>2</sup>
ISO 95+ GL, GenFlex ISO Insulation		v
Minimum <sup>1</sup> /2" thick	N/A	N/A
Top Insulation Layer	<b>Insulation Fasteners</b>	Fastener
	(Table 3)	Density/ft <sup>2</sup>
ISO 95+ GL, GenFlex ISO Insulation		·
Minimum 1 <sup>1</sup> / <sub>4</sub> " thick	1 or 2 with 3	1:2.7 ft <sup>2</sup>
DensDeck Prime, SECUROCK Gypsum-Fiber	Roof Board	
Minimum 1/2" thick	1 or 2 with 3	1:2.7 ft <sup>2</sup>
ISOGARD HD Composite		
Minimum 1-1/2" thick	1 or 2 with 3	1:2.7 ft <sup>2</sup>

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.		
<b>Base Insulation Layer (Optional)</b>	Insulation Fasteners	Fastener
	(Table 3)	Density/ft <sup>2</sup>
ISO 95+ GL, GenFlex ISO Insulation		
Minimum <sup>1</sup> / <sub>2</sub> " thick	N/A	N/A
Top Insulation Layer	<b>Insulation Fasteners</b>	Fastener
	(Table 3)	Density/ft <sup>2</sup>
ISO 95 + GL, ISOGARD HD Composite, GenFlex ISC	) Insulation	·
Minimum 1-1/2" thick	1 or 2 with 3	1:1.6 ft <sup>2</sup>
SECUROCK Gypsum Fiber Roof Board, DensDeck P	rime	
Minimum <sup>1</sup> / <sub>2</sub> " thick	1 or 2 with 3	1:1.6 ft <sup>2</sup>

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)	<b>Insulation Fasteners</b>	Fastener
	(Table 3)	Density/ft <sup>2</sup>
ISO 95+ GL, GenFlex ISO Insulation		
Minimum <sup>1</sup> / <sub>2</sub> "thick	N/A	N/A
Top Insulation Layer	<b>Insulation Fasteners</b>	Fastener
Top Insulation Layer		
	(Table 3)	Density/ft <sup>2</sup>
DensDeck Prime, SECUROCK Gypsum Fiber Roof Boa		
Minimum <sup>1</sup> / <sub>2</sub> " thick	1 or 2 with 3	1:.1.78 ft <sup>2</sup>
ISOCADD UD Composito		
ISOGARD HD Composite		
Minimum 1.5" thick	1 or 2 with 3	1:.1.78 ft <sup>2</sup>

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.		
<b>Base Insulation Layer (Optional)</b>	Insulation Fasteners	Fastener
	(Table 3)	Density/ft <sup>2</sup>
ISO 95+ GL, GenFlex ISO Insulation		·
Minimum ½"thick	N/A	N/A
Top Insulation Layer	Insulation Fasteners	Fastener
Top Insulation Layer	(Table 3)	Density/ft <sup>2</sup>
ISO 95+ GL, ISOGARD HD Composite, GenFlex ISO	Insulation	·
Minimum 1-1/2" thick	1 or 2 with 3	1: 1.78 ft <sup>2</sup>
DensDeck Prime, SECUROCK Gypsum Fiber Roof B	oard	
Minimum ½" thick	1 or 2 with 3	1: 1.78 ft <sup>2</sup>

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:	-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(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<sup>2</sup> ISO 95+ GL, GenFlex ISO Insulation Minimum <sup>1</sup>/<sub>2</sub>"thick N/A N/A **Top Insulation Layer Insulation Fasteners** Fastener Density/ft<sup>2</sup> (Table 3) **SECUROCK Gypsum-Fiber Roof Board** Minimum 1/2" thick 1 or 2 with 3 1: 2.13 ft<sup>2</sup> **ISOGARD HD Composite** Minimum 1-1/2" thick 1 or 2 with 3 1: 2.13 ft<sup>2</sup>

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(13):	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<sup>2</sup> ISO 95+ GL, GenFlex ISO Insulation Minimum  $\frac{1}{2}$ " thick N/A N/A **Top Insulation Layer Insulation Fasteners** Fastener Density/ft<sup>2</sup> (Table 3) **ISOGARD HD Composite** Minimum 1" thick 1 or 2 with 3 1: 1.33 ft<sup>2</sup>

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(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 <sup>2</sup>
ISO 95+ GL, GenFlex ISO Insulation	· · ·	·
Minimum 1.5" thick	N/A	N/A
Top Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft <sup>2</sup>
ISOGARD HD, GenFlex HD ISO		
Minimum <sup>1</sup> / <sub>2</sub> " thick	1 or 2 with 3	1:4 ft <sup>2</sup>
ISO 95+ GL, GenFlex ISO Insulation Minimum 1" thick	1 or 2 with 3	1:4 ft <sup>2</sup>
SECUROCK Gypsum Fiber Roof Board Minimum ½" thick	1 or 2 with 3	1:4 ft <sup>2</sup>
DensDeck Prime Minimum ¼" thick	1 or 2 with 3	1:4 ft <sup>2</sup>
ISOGARD HD Composite Minimum 1-1/2" thick	1 or 2 with 3	1:4 ft <sup>2</sup>
Plywood Minimum 19/32" thick	1 or 2 with 3	1:4 ft <sup>2</sup>

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

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

Base Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft <sup>2</sup>
ISO 95+ GL, GenFlex ISO Insulation		
Minimum 1" thick	N/A	N/A
Top Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft <sup>2</sup>
SECUROCK Gypsum-Fiber Roof Board		·
Minimum 1/2" thick	1 or 2 with 3	1: 4.0 ft <sup>2</sup>
ISOGARD HD Composite	1 2 34 2	1 40 6/2
Minimum 1-1/2" thick	1 or 2 with 3	1: 4.0 ft <sup>2</sup>

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.

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

Maximum Design	
Pressure:	-6

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.

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 (Optional) Insulation Fasteners** Fastener (Table 3) Density/ft<sup>2</sup> ISO 95+ GL, GenFlex ISO Insulation Minimum 1/2" thick N/A N/A **Insulation Fasteners** (Table Fastener **Top Insulation Layer** Density/ft<sup>2</sup> 3) **SECUROCK Gypsum-Fiber Roof Board** 1:1.6 ft<sup>2</sup> Minimum  $\frac{1}{2}$ " thick 1 or 2 with 3 **ISOGARD HD Composite** Minimum 1-1/2" thick 1 or 2 with 3 1:1.6 ft<sup>2</sup>

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"<br/>wide side laps.Maximum Design<br/>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.

one of more layers of any of the following insulations.		
Base Insulation Layer	Insulation Fasteners	Fastener
·	(Table 3)	Density/ft <sup>2</sup>
ISO 95+ GL, GenFlex ISO Insulation	(10000)	2 0110109710
Minimum 1.5" thick	N/A	N/A
Top Insulation Layer	<b>Insulation Fasteners</b>	Fastener
1 5	(Table 3)	Density/ft <sup>2</sup>
Plywood	(	j,
Minimum 19/32" thick	1 or 2 with 4	1:2.7 ft <sup>2</sup>
ISOGARD HD, GenFlex HD ISO		
Minimum <sup>1</sup> / <sub>2</sub> " thick	1 or 2 with 4	1:2.7 ft <sup>2</sup>
DensDeck Prime, SECUROCK Gypsum Fiber Roof Bo	ard	
	1 or 2 with 4	1:2.7 ft <sup>2</sup>
Minimum ¼" thick	1 or 2 with 4	1:2./ It <sup>-</sup>

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 Laver (Ontional)** 

Base Insulation Layer (Optional)	<b>Insulation Fasteners</b>	Fastener
	(Table 3)	Density/ft <sup>2</sup>
ISO 95+ GL, GenFlex ISO Insulation	· · · · ·	·
Minimum <sup>1</sup> /2" thick	N/A	N/A
Top Insulation Layer	<b>Insulation Fasteners</b>	Fastener
1 0	(Table 3)	Density/ft <sup>2</sup>
ISOGARD HD Composite	,	·
Minimum 1-1/2" thick	1 or 2 with 3	1:1.6 ft <sup>2</sup>
ISO 95 + GL, GenFlex ISO Insulation		
Minimum 2" thick	1 or 2 with 3	1:1.6 ft <sup>2</sup>
DensDeck Prime, SECUROCK Gypsum-Fiber F	Roof Board	
Minimum 1/2" thick	1 or 2 with 3	1:1.6 ft <sup>2</sup>

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. **Base Insulation Layer (Optional) Insulation Fasteners** Fastener Density/ft<sup>2</sup> (Table 3) ISO 95+ GL, GenFlex ISO Insulation Minimum 1/2" thick N/A N/A **Insulation Fasteners Top Insulation Layer** Fastener Density/ft<sup>2</sup> (Table 3) **SECUROCK Gypsum Fiber Roof Board** Minimum  $\frac{1}{2}$ " thick 1 or 2 with 3 1:1.78 ft<sup>2</sup> **ISOGARD HD Composite** Minimum 1-1/2" thick 1:1.78 ft<sup>2</sup> 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:	-82.5 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(20):	Membrane adhered over mechanically fastened insulation.

One or more layers of any of the following insulations.

Base Insulation Layer (Optional)	<b>Insulation Fasteners</b>	Fastener
	(Table 3)	Density/ft <sup>2</sup>
ISO 95+ GL, GenFlex ISO Insulation		
Minimum ½" thick	N/A	N/A
Top Insulation Layer	<b>Insulation</b> Fasteners	Fastener
	(Table 3)	Density/ft <sup>2</sup>
ISO 95+ GL, GenFlex ISO Insulation		·
Minimum 2 <sup>°</sup> thick	1 or 2 with 3	1:1.6 ft <sup>2</sup>
DensDeck Prime, SECUROCK Gypsum-Fiber Roof Be	oard	
Minimum <sup>1</sup> / <sub>2</sub> " thick	1 or 2 with 3	1:1.6 ft <sup>2</sup>
ISOGARD HD Composite		
Minimum 1-1/2" thick	1 or 2 with 3	1:1.6 ft <sup>2</sup>

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)

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):	Membrane fully adhered over mechanically fastened insulation.

One or more layers of any of the following insulations.

<b>Base Insulation Layer (Optional)</b>	<b>Insulation Fasteners</b>	Fastener
	(Table 3)	Density/ft <sup>2</sup>
ISO 95+ GL, GenFlex ISO Insulation		
Minimum ½" thick	N/A	N/A
Top Insulation Layer	<b>Insulation Fasteners</b>	Fastener
	(Table 3)	Density/ft <sup>2</sup>
ISO 95+ GL, GenFlex ISO Insulation		
Minimum 2" thick	1 or 2 with 3	1:1 ft <sup>2</sup>
SECUROCK Gypsum-Fiber Roof Board, DensI	Deck Prime	
Minimum <sup>1</sup> / <sub>2</sub> " thick	1 or 2 with 3	1:1 ft <sup>2</sup>
ISOGARD HD Composite		
Minimum 1-1/2" thick	1 or 2 with 3	1:1 ft <sup>2</sup>

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(22):	Membrane fully adhered over mechanically fastened insulation.

One or more layers of any of the following insulations. Base Insulation Laver (Ontion

Base Insulation Layer (Optional)	Insulation Fasteners (Table 3)	Fastener Density/ft <sup>2</sup>
ISO 95+ GL, GenFlex ISO Insulation		
Minimum <sup>1</sup> / <sub>2</sub> " thick	N/A	N/A
Top Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft <sup>2</sup>
ISOGARD HD Composite		1: 1.33 ft <sup>2</sup>

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)



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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(23):	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 <sup>2</sup>
ISO 95+ GL, GenFlex ISO Insulation		
Minimum ½" thick	N/A	N/A
Top Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft <sup>2</sup>
ISOGARD HD Composite	, , , , , , , , , , , , , , , , , , ,	1: 1.33 ft <sup>2</sup>

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)



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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(24):	All layers of insulation simultaneously attached; membrane fully adhered.

(Optional) Vapor Retarder	Polyethylene Sheet 4-6 mil th		Min. 2" wide laps sealed with duct tape	
One or more layers of any of the	e following insulations.			
Base Insulation Layer	Insu	llation Fasteners ble 3)	Fastener Density/ft <sup>2</sup>	
	pered, GenFlex ISO Insulation,	,	ISO Insulation	
Minimum 1-1/2" thick	N/A		N/A	
Top Insulation Layer		llation Fasteners ble 3)	Fastener Density/ft <sup>2</sup>	
SECUROCK Gypsum-Fiber F		,	v	
Minimum 1/2" thick	1 or	2 with 3	1:4 ft <sup>2</sup>	
ISOGARD HD Composite Minimum 1-1/2" thick	1 or	2 with 3	1: 4 ft <sup>2</sup>	

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	Steel, Insulated
Deck Description:	Min. 2500 psi structural concrete or concrete plank.
System Type C(25):	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<sup>2</sup> ISO 95+ GL, DensDeck Prime, GenFlex ISO Insulation Minimum  $\frac{1}{2}$ " thick N/A N/A **Top Insulation Layer Insulation Fasteners** Fastener (Table 3) Density/ft<sup>2</sup> **ISOGARD HD Composite** Minimum  $1\frac{1}{2}$ " thick 1 or 2 with 3 1:2.13 ft<sup>2</sup>

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:	Steel, Insulated
Deck Description:	Min. 2500 psi structural concrete or concrete plank
System Type C(26):	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 <sup>2</sup>
ISO 95+ GL, DensDeck Prime, GenFlex ISO Insulation		
Minimum <sup>1</sup> /2" thick	N/A	N/A
Ton Inculation Lower	Insulation Fasteners	Fastener
Top Insulation Layer		
	(Table 3)	Density/ft <sup>2</sup>
ISOGARD HD Composite		
Minimum 1 <sup>1</sup> / <sub>2</sub> " thick	1 or 2 with 3	1:1.78 ft <sup>2</sup>

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 Engineer, Architect, or Registered Roof Consultant may be submitted. Said revised fastener spacing shall utilize the withdrawal resistance value taken from Testing Application Standards TAS 105 and calculations in compliance with Roofing Application Standard RAS 117.
- 7. Perimeter and corner areas shall comply with the enhanced uplift pressure requirements of these areas. Fastener densities shall be increased for both insulation and base sheet as calculated in compliance with Roofing Application Standard RAS 117 and/or RAS 137. Calculations prepared, signed and sealed by a Florida registered Professional Engineer, Registered Architect, or Registered Roof Consultant (When this limitation is specifically referred within this NOA, General Limitation #9 will not be applicable.)
- 8. All attachment and sizing of perimeter nailers, metal profile, and/or flashing termination designs shall conform 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 61G20-3 of the Florida Administrative Code.

## END OF THIS ACCEPTANCE



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