



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

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

NOTICE OF ACCEPTANCE (NOA)

Mule-Hide Products Co, Inc.
1195 Prince Hall Drive
Beloit, WI 53511

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: Mule-Hide Modified Bitumen Roof System Over Recover Decks

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

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

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

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

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

This NOA revises NOA #19-0617.10 and consists of pages 1 through 51.
The submitted documentation was reviewed by Alex Tigera.



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ROOFING ASSEMBLY APPROVAL

Category:	Roofing
Sub-Category:	Modified Bitumen
Materials	SBS/APP
Deck Type:	Recover
Maximum Design Pressure	See specific system assemblies.

TRADE NAMES OF PRODUCTS MANUFACTURED OR LABELED BY APPLICANT:

TABLE 1

Product	Dimensions	Test Specification	Product Description
G2 Base Sheet	108' x 36"	ASTM D 4601 Type II	Asphalt-coated fiberglass reinforced base sheet
Nail Base	65' 8" x 3' 3-3/8"	ASTM D 6163	SBS modified asphalt coated fiberglass reinforced base sheet.
SA Base Sheet	66' 8" x 3' 3-3/8"	ASTM D 6163	Self-adhered, fiberglass reinforced, SBS modified bitumen membrane with a self-adhering back face and a smooth top surface.
SA Base Sheet FR	66' 8" x 3' 3-3/8"	ASTM D 6163	Self-adhered, fire-rated, fiberglass reinforced, SBS modified bitumen membrane with a self-adhering back face and a smooth top surface.
Nail Base P	65' 8" x 3' 3-3/8"	ASTM D 6164	SBS modified asphalt coated polyester reinforced base sheet.
APP Torch Base/Cap	32' 10" x 3' 3-3/8"	ASTM D 6222	Torch applied, polyester reinforced, APP modified bitumen membrane with a burn off polyethylene back face and a smooth or sanded top surface.
APP Torch G	32' 10" x 3' 3-3/8"	ASTM D 6222	Torch applied, polyester reinforced, APP modified bitumen membrane with a burn off polyethylene back face and granule top surface.
APP Torch S Premier	32' 10" x 3' 3-3/8"	ASTM D 6222	Torch applied, polyester reinforced, APP modified bitumen membrane with a burn off polyethylene back face and a smooth or sanded top surface.
APP Torch G Premier	32' 10" x 3' 3-3/8"	ASTM D 6222	Torch applied, polyester reinforced, APP modified bitumen membrane with a burn off polyethylene back face and a granule top surface.
APP Torch G FR Premier	32' 10" x 3' 3-3/8"	ASTM D 6222	Torch applied, fire-rated, polyester reinforced, APP modified bitumen membrane with a burn off polyethylene back face and a granule top surface and fire retardant chemistry.
APP Torch G KoolCap	32' 10" x 3' 3-3/8"	ASTM D 6222	Torch applied, polyester reinforced, APP modified bitumen membrane with a burn off polyethylene back face and a granule top surface.



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TRADE NAMES OF PRODUCTS MANUFACTURED OR LABELED BY APPLICANT:

TABLE 1

<u>Product</u>	<u>Dimensions</u>	<u>Test Specification</u>	<u>Product Description</u>
APP Torch G FR KoolCap	32' 10" x 3' 3-3/8"	ASTM D 6222	Torch applied, fire-rated, polyester reinforced, APP modified bitumen membrane with a burn off polyethylene back face and a granule top surface and fire retardant chemistry.
APP Torch Base Premier	65' 8" x 3' 3-3/8"	ASTM D 6509	APP modified bitumen, fiberglass reinforced, base/ply sheet.

APPROVED INSULATIONS:

TABLE 2

<u>Product Name</u>	<u>Product Description</u>	<u>Manufacturer (With Current NOA)</u>
Poly ISO 2	Polyisocyanurate foam insulation	Mule-Hide Products Co, Inc.
Mule-Hide Poly ISO 1	Polyisocyanurate foam insulation	Mule-Hide Products Co, Inc.
ACFoam-II	Polyisocyanurate foam insulation	Atlas Roofing Corporation
ACFoam-III	Polyisocyanurate foam insulation	Atlas Roofing Corporation
ACFoam Composite	Polyisocyanurate/perlite composite insulation	Atlas Roofing Corporation
Poly ISO 2 Composite	Polyisocyanurate/perlite composite insulation	Mule-Hide Products Co, Inc
DensDeck	Gypsum insulation board	Georgia-Pacific
DensDeck Prime	Gypsum insulation board	Georgia-Pacific
ENRGY 3	Polyisocyanurate foam insulation	Johns Manville Corp.
FescoBoard	Expanded mineral fiber	Johns Manville Corp.
Structodek High Density Fiberboard Roof Insulation	Wood fiber board	Blue Ridge Fiberboard, Inc.
SECUROCK Gypsum-Fiber Roof Board	Fiber reinforced Coverboard	USG Corporation
H-Shield	Polyisocyanurate foam insulation	Hunter Panels, a division of Carlisle Construction Materials, LLC
H-Shield CG	Polyisocyanurate/perlite composite insulation	Hunter Panels, a division of Carlisle Construction Materials, LLC
Multi-Max FA-3	Polyisocyanurate foam insulation	Rmax Operating, LLC
Thermarroof Composite-3	Polyisocyanurate foam insulation	Rmax Operating, LLC
EnergyGuard Polyiso Insulation	Polyisocyanurate foam insulation	GAF
Insulfoam EPS	Expanded polystyrene board	Insulfoam, a Div. of Carlisle Const. Materials



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APPROVED FASTENERS/ADHESIVES:

TABLE 3

<u>Fastener Number</u>	<u>Product Name</u>	<u>Product Description</u>	<u>Dimensions</u>	<u>Manufacturer (With Current NOA)</u>
1.	Dekfast DF-#14-PH3	Insulation fastener for wood, steel and concrete decks	Various	SFS Group USA, Inc.
2.	Dekfast DF-#15-PH3	Insulation fastener for wood, steel and concrete decks	Various	SFS Group USA, Inc.
3.	Dekfast PLT-H-2-7/8	Galvalume hex stress plate.	2 7/8" x 3 1/4"	SFS Group USA, Inc.
4.	#14 Roofgrip	Insulation fastener for wood, steel and concrete decks.	Various	OMG, Inc.
5.	#15 Roofgrip	Insulation fastener for wood, steel and concrete decks.	Various	OMG, Inc.
6.	3 in. Round Metal Plate	Galvalume stress plate.	3" round 3" square	OMG, Inc.
7.	<i>isofast</i> PLT-R-2-3/8-BL	Galvalume AZ55 steel plate	2.37" round	SFS Group USA, Inc.
8.	Trufast FM-90 Base Sheet Fastener	Pre-assembled Galvalume Base Sheet Fastener and stress plate	Various	Altenloh, Brinck & Co. U.S., Inc.
9.	Flat Bottom Metal Plate	Steel plate used with OMG roofgrip fasteners	Various	OMG, Inc.
10.	OMG 3" Galvalume Steel Plate	Galvalume coated steel plate	3" round	OMG, Inc.
11.	AccuTrac Flat Bottom	Aluminized steel plate	3" square	OMG, Inc.
12.	OMG Heavy Duty	Truss head, self-drilling, pinch point fastener	Various	OMG, Inc.
13.	Mule-Hide HDP Fastener	Insulation fastener for steel and wood decks	Various	Mule-Hide Products Co, Inc.
14.	Mule-Hide 3" Insulation Plate	Galvalume steel plate	3" round	Mule-Hide Products Co, Inc.
15.	Mule-Hide EHD Fastener	Insulation fastener for wood, steel and concrete decks		Mule-Hide Products Co, Inc.
16.	Trufast 2.4" Scoop Seam Plate	Galvalume steel stress plate.	2.4" round	Altenloh, Brinck & Co. U.S. Inc.
17.	Trufast 2-3/4" Barbed Metal Seam Plate	Galvalume steel stress plate.	2.75" round	Altenloh, Brinck & Co. U.S. Inc.
18.	Millennium One Step Foamable Insulation Adhesive	A two component, low rise, polyurethane foam adhesive		H.B. Fuller Company



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APPROVED FASTENERS/ADHESIVES:

TABLE 3

<u>Fastener Number</u>	<u>Product Name</u>	<u>Product Description</u>	<u>Dimensions</u>	<u>Manufacturer (With Current NOA)</u>
19.	Millennium One Step Green Foamable Insulation Adhesive	A two component, low rise, polyurethane foam adhesive		H.B. Fuller Company
20.	Millennium PG-1 Pump Grade Adhesive	A two component, low rise, polyurethane foam adhesive		H.B. Fuller Company
21.	OMG OlyBond 500	A two component polyurethane foam adhesive		OMG, Inc.
22.	OMG OlyBond 500 Green	A two component, low rise, polyurethane foam adhesive		OMG, Inc.
23.	Insta Stick Quik Set Insulation Adhesive	A single component urethane foam adhesive		The Dow Chemical Co.
24.	PG 100	A penetrating solution of solvent and a blend of selected asphalts used to promote adhesion.	1, 3, 5, 50, 55 gal, tube or 17 oz. spray can	Polyglass USA, Inc.
25.	PG 350	A fibered rubberized adhesive designed for use with modified bitumen membranes.	1, 3, 5, 50, 55 gal. or tube	Polyglass USA, Inc.
26.	POLYPLUS 35	A fibered rubberized adhesive designed for use with modified bitumen membranes.	1, 3, 5, 50, 55 gal. or tube	Polyglass USA, Inc.
27.	PG 450	A thick, fibered, rubberized flashing cement.	1, 3, 5, 50, 55 gal. or tube	Polyglass USA, Inc.
28.	PG 500	A thick, fibered, rubberized flashing cement for use with modified bitumen membranes.	1, 3, 5, 50, 55 gal. or tube	Polyglass USA, Inc.
29.	POLYPLUS 45	A thick, fibered, rubberized flashing cement.	1, 3, 5, 50, 55 gal. or tube	Polyglass USA, Inc.
30.	POLYPLUS 50	A thick, fibered, rubberized flashing cement for use with modified bitumen membranes.	1, 3, 5, 50, 55 gal. or tube	Polyglass USA, Inc.
31.	PG 400	A thick, fibered, rubberized flashing cement for use in dry or damp conditions.	1, 3, 5, 50, 55 gal. or tube	Polyglass USA, Inc.



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APPROVED FASTENERS/ADHESIVES:

TABLE 3

<u>Fastener Number</u>	<u>Product Name</u>	<u>Product Description</u>	<u>Dimensions</u>	<u>Manufacturer (With Current NOA)</u>
32.	PG 425	A thick, fibered, rubberized flashing cement for use in dry or damp conditions.	1, 3, 5, 50, 55 gal. or tube	Polyglass USA, Inc.
33.	WB-3000	A low-VOC, water-based acrylic primer to enhance adhesion of self-adhered membranes.	5 gallon pail	Polyglass USA, Inc.

APPROVED SURFACING:

TABLE 4

Chosen components must be applied according to manufacturer’s application instructions.

<u>Number</u>	<u>Product Name</u>	<u>Product Description</u>	<u>Application Rate</u>	<u>Specification</u>	<u>Manufacturer</u>
1.	Gravel	To be installed in a flood coat of approved asphalt at 60 lbs/sq	400 lbs/sq	N/A	Generic
2.	Slag	To be installed in a flood coat of approved asphalt at 60 lbs/sq	300 lbs/sq	N/A	Generic
3.	KM Acryl 15	A premium white or tinted elastomeric acrylic based roof coating (water-based). A polyester fabric may be used for reinforcement with this coating.	1-1½ gal/sq	ASTM D6083	Polyglass USA, Inc.
4.	KM Acryl 15 QS	A premium white or tinted quick setting, elastomeric acrylic based roof coating (water-based). A polyester fabric may be used for reinforcement with this coating.	1-1½ gal/sq	ASTM D6083	Polyglass USA, Inc.
5.	KM Acryl 25	A premium white or tinted elastomeric acrylic based roof coating (water-based). A polyester fabric may be used for reinforcement with this coating.	1-1½ gal/sq	ASTM D6083	Polyglass USA, Inc.
6.	KM Acryl 25 QS	A premium white or tinted quick setting, elastomeric acrylic based roof coating (water-based). A polyester fabric may be used for reinforcement with this coating.	1-1½ gal/sq	ASTM D6083	Polyglass USA, Inc.



APPROVED SURFACING:

TABLE 4

Chosen components must be applied according to manufacturer’s application instructions.

<u>Number</u>	<u>Product Name</u>	<u>Product Description</u>	<u>Application Rate</u>	<u>Specification</u>	<u>Manufacturer</u>
7.	KM-PS #220	A single component, white or tinted, solvent, moisture cure silicone coating.	1.25 gal/sq	ASTM D6694	Polyglass USA, Inc.
8.	KM-PS #250	A premium grade high solids, white or tinted, single component, moisture cure, fluid applied silicone coating	1.25 gal/sq	ASTM D6694	Polyglass USA, Inc.
9.	PG 300	An asphalt cutback fibered roof coating. May be applied by brush or spray equipment to rejuvenate aged BUR	1½-2 gal/sq	ASTM D4479	Polyglass USA, Inc.
10.	PG 600	Non-fibered aluminum roof coating.	½-1 gal/sq	ASTM D2824 Type I	Polyglass USA, Inc.
11.	PG 650	Fibered aluminum roof coating.	1½-2 gal/sq	ASTM D2824 Type III	Polyglass USA, Inc.
12.	PG 700	A premium white or tinted elastomeric acrylic based roof coating (water-based). A polyester fabric may be used for reinforcement with this coating.	1-1½ gal/sq	ASTM D6083	Polyglass USA, Inc.
13.	PG 700 QS	A premium white or tinted quick setting, elastomeric acrylic based roof coating (water-based). A polyester fabric may be used for reinforcement with this coating.	1-1½ gal/sq	ASTM D6083	Polyglass USA, Inc.
14.	PG 800	An asphalt based, non-fibered clay emulsion	3 gal/sq in two coats	ASTM D1227	Polyglass USA, Inc.
15.	PolyBrite 70	A premium white or tinted elastomeric acrylic based roof coating (water-based). A polyester fabric may be used for reinforcement with this coating.	1-1½ gal/sq	ASTM D6083	Polyglass USA, Inc.
16.	PolyBrite 70 QS	A premium white or tinted quick setting, elastomeric acrylic based roof coating (water-based). A polyester fabric may be used for reinforcement with this coating.	1-1½ gal/sq	ASTM D6083	Polyglass USA, Inc.



APPROVED SURFACING:

TABLE 4

Chosen components must be applied according to manufacturer’s application instructions.

<u>Number</u>	<u>Product Name</u>	<u>Product Description</u>	<u>Application Rate</u>	<u>Specification</u>	<u>Manufacturer</u>
17.	PolyBrite 90	A premium grade high solids, white or tinted, single component, moisture cure, fluid applied silicone coating	1.25 gal/sq	ASTM D6694	Polyglass USA, Inc.
18.	PolyBrite 95	A single component, white or tinted, solvent, moisture cure silicone coating.	1.25 gal/sq	ASTM D6694	Polyglass USA, Inc.
19.	POLYPLUS 60	Non-fibered aluminum roof coating.	½-1 gal/sq	ASTM D2824 Type I	Polyglass USA, Inc.
20.	POLYPLUS 65	Fibered aluminum roof coating.	1½-2 gal/sq	ASTM D2824 Type III	Polyglass USA, Inc.



EVIDENCE SUBMITTED:

<u>Test Agency</u>	<u>Test Name/Report</u>	<u>Report No.</u>	<u>Date</u>
Factory Mutual Research Corporation	4470	2W7A7.AM	08.04.94
	4470	3000857	01.12.00
	4470	3004091	01.12.00
	4470	3001334	02.15.00
	4470	3024311	11.01.06
	4470	3031350	09.27.07
	4470	3036182	07.31.09
	4470	RR202591	10.22.15
	4470	3057029	02.02.17
Underwriters Laboratory	TAS 114	00NK20869	06.08.00
	UL 790	R14571	06.30.15
Trintiy ERD	TAS 114	11776.06.02	01.16.03
	TAS 114 & FM 4470	P1730.06.06	06.19.06
	TAS 117(B)-ASTM D6862	C8500SC.11.07	11.30.07
	ASTM D 6164 / D 6222	P10490.10.08-R1	10.03.08
	ASTM D6163 & D4601	P33960.03.11	03.15.11
	TAS 117 (B) & TAS 114	P39680.03.13	03.04.13
	ASTM D6164	P37590.03.13-3A	03.06.13
	TAS 114	11757.04.01-1-R1	04.30.13
	ASTM D6509	P37590.03.13-1-R1	06.26.13
	ASTM D6222	P37590.07.13-2	07.01.13
	ASTM D6222	P37590.03.13-5-R1	07.01.13
	ASTM D6163	P37590.03.13-2-R1	07.01.13
	ASTM D6164	P37590.07.13-1	07.02.13
	TAS 114 & FM 4474	P41630.08.13	08.06.13
	ASTM D4601 / TAS 117	P45940.09.13	09.04.13
	ASTM D4601	P44370.10.13	10/04/13
	ASTM D4601 / TAS 117	P45970.05.14	05.12.14
	FM 4470 & TAS 114	SC6160.11.14	11.10.14
	ASTM D6162	SC5170.05.15	05.08.15
	ASTM D6162	SC5170.12.15-1	12/29/15
	ASTM D6163	PLYG-P45440SC.03.15-2-R1	12.29.15
	ASTM D6163	PLYG-P45440SC.03.15-1-R1	02.19.16
	TAS 114 & FM 4474	PLYG-SC8905.05.16-1	05.17.16
	TAS 114 & FM 4474	PLYG-SC8905.05.16-2	05.17.16
	TAS 114 & FM 4470	P1739.01.07-R1	07.19.16
	TAS 114	P1734.07.06-R2	08.24.16
	TAS 114 & FM 4474	PLYG-SC10815.07.16-R1	09/23/16
TAS 114 & FM 4474	PLYG-SC13235.01.17	01/17/17	
FM 4470 & ASTM D1876	PLYG-SC9455.03.17	03/08/17	
TAS 114	11757.12.00-1-R2	04/05/17	
TAS 114 & FM 4474	CTL13945.05.17-1	05/30/17	



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EVIDENCE SUBMITTED:

<u>Test Agency</u>	<u>Test Name/Report</u>	<u>Report No.</u>	<u>Date</u>
	TAS 114 & FM 4474	CTL13945.05.17-3	05/30/17
	TAS 114 & FM 4474	PLYG-SC13920.05.17-R1	07/17/17
PRI Asphalt Technologies	ASTM D6222	PUSA-062-02-01	12.04.07
	ASTM D6163	PUSA-064-02-02	02.27.08
	ASTM D6694	PUSA-134-02-01	05.16.14
	ASTM D6694	PUSA-135-02-01	05.16.14
	Physical Properties	PUSA-213-02-01	05.02.17

DECK STRESS ANALYSIS CALCULATIONS/REPORTS

<u>Engineer/Agency</u>	<u>Identifier</u>	<u>Assemblies</u>	<u>Date</u>
Robert Nieminen, P.E.	Signed/Sealed Calculations	D(3), E(2), E(3), E(5)	08/30/16
Robert Nieminen, P.E.	Signed/Sealed Calculations	C(2), C(4), C(5)	10/20/17



APPROVED ASSEMBLIES:

- Membrane Type:** SBS
- Deck Type 7I:** Recover, Insulated
- Deck Description:** 2500 psi structural concrete or concrete plank
- System Type A(1):** One or more layers of insulation adhered with approved adhesive. Membranes subsequently adhered to insulation

All General and System limitations apply.

One or more layers of any of the following insulations:

<u>Insulation Layer</u>	<u>Insulation Fasteners</u> <u>(Table 3)</u>	<u>Fastener</u> <u>Density/ft²</u>
SECUROCK Gypsum-Fiber Roof Board, DensDeck Prime, DEXcell FA Glass Mat Roof Board Minimum 1/4" thick	N/A	N/A

Note: All insulation shall be adhered with Insta-Stick Quik Set Insulation Adhesive, OMG OlyBond 500, OMG OlyBond 500 Green Adhesive, Millennium One Step Foamable Insulation Adhesive, Millennium One Step Green Foamable Insulation Adhesive, Millennium PG-1 Pump Grade Adhesive, in beads/ribbons spaced 12" o.c. Please refer to Roofing Application Standard RAS 117 for insulation attachment.

- Base Sheet:** One ply of Nail Base or Nail Base P, adhered to deck with PG 350 adhesive at a rate of 2.0 gal/sq.
- Ply Sheet: (Optional)** One or more plies of Nail Base or Nail Base P, adhered to deck with PG 350 adhesive at a rate of 2.0 gal/sq.
Or
One or more plies of Nail Base, Nail Base P, APP Torch Base/Cap, APP Torch S Premier or APP Torch Base Premier* torch applied.
*Requires torch-applied cap sheet.
- Membrane:** One ply of APP Torch Base/Cap, APP Torch G, APP Torch S Premier, APP Torch G Premier, APP Torch G FR Premier, APP Torch G KoolCap or APP Torch G FR KoolCap, applied.
- Surfacing: (Optional)** Install one of the approved surfacing products listed in Table 4 to obtain desired coating or required fire classification.
- Maximum Design Pressure:** -45.0 psf; (See General Limitation #9.)



Membrane Type: SBS/APP

Deck Type 7I: Recover, Insulated

Deck Description: Min ¹⁵/₃₂" plywood or wood plank attached to structural supports spaced at a maximum of 24" o.c. with 8d ring shank nails at 6" o.c.

The deck should record a Minimum Characteristic Resistance Force (MCRF) of 58 lbf. when tested with fasteners, listed in this assembly, installed through to the deck in accordance with TAS 105.

System Type A(2): All insulation layers are adhered to a mechanically attached anchor sheet. Membranes subsequently adhered to insulation

All General and System Limitations apply.

Anchor Sheet: One ply of G2 Base Sheet fastened to the deck as described fastened as below:

Fastening: Fastened to deck using Dekfast DF-#14-PH3 fasteners with Dekfast PLT-H-2-7/8 plates or OMG Heavy-Duty with OMG 3" Galvalume Steel Plates or OMG #14 Roofgrip fasteners with Flat Bottom Plates or AccuTrac Flat Bottom Plates or Mule-Hide HDP Fastener with Mule-Hide 3" Insulation Plates spaced 10" o.c. in 4" lap and 10" o.c. in three equally spaced staggered center rows.

One or more layers of the following:

<u>Base Insulation Layer</u>	<u>Insulation Fasteners</u> <u>(Table 3)</u>	<u>Fastener</u> <u>Density/ft²</u>
ACFoam-II, Poly ISO 2, ACFoam-III, H-Shield, Mule-Hide Poly ISO 1, ENRGY 3, Multi-Max FA-3 Minimum 1.5" thick	N/A	N/A
<u>Top Insulation Layer</u>	<u>Insulation Fasteners</u> <u>(Table 3)</u>	<u>Fastener</u> <u>Density/ft²</u>
DensDeck Prime, SECUROCK Gypsum-Fiber Roof Board Minimum 1/4" thick	N/A	N/A

Note: All insulation shall be adhered in a full mopping of approved asphalt within the EVT range and at a rate of 20-40 lbs/100 ft². Please refer to Roofing Application Standard RAS 117 for insulation attachment. Insulation listed as Base Layer only shall be used only as base layers with a second layer of approved top layer insulation installed as the final membrane substrate.

Primer: (For self-adhering base sheets only) Top insulation is primed with WB-3000.
(Optional)



- Base Sheet:** One ply of Nail Base, Nail Base P, APP Torch Base/Cap, APP Torch S Premier or APP Torch Base Premier torch applied.
- Or
- One ply of Nail Base or Nail Base P, adhered in full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs./sq.
- Or
- One ply of SA Base Sheet* or SA Base Sheet FR*, self-adhered.
*Requires torch-applied ply or cap sheet.
- Ply Sheet:
(Optional)** One or more plies of Nail Base, Nail Base P, APP Torch Base/Cap, APP Torch S Premier or APP Torch Base Premier torch applied.
- Or
- One or more plies of Nail Base or Nail Base P, adhered in full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs./sq.
- Membrane:** One ply of APP Torch Base/Cap, APP Torch G, APP Torch S Premier, APP Torch G Premier, APP Torch G FR Premier, APP Torch G KoolCap or APP Torch G FR KoolCap, torch applied.
- Surfacing:
(Optional)** Install one of the approved surfacing products listed in Table 4 to obtain desired coating or required fire classification.
- Maximum Design
Pressure:** -52.5 psf; (See General Limitation #7)



- Membrane Type:** SBS/APP
- Deck Type 7I:** Recover, Insulated
- Deck Description:** Min ¹⁵/₃₂" plywood or wood plank attached to structural supports spaced at a maximum of 24" o.c. with #10 wood screws at 6" o.c. at edges and intermediate supports.
The deck should record a Minimum Characteristic Resistance Force (MCRF) of 66 lbf. when tested with fasteners, listed in this assembly, installed through to the deck in accordance with TAS 105.
- System Type A(3):** All insulation layers are adhered to a mechanically attached anchor sheet. Membranes subsequently adhered to insulation

All General and System Limitations apply.

- Anchor Sheet:** One ply of G2 Base Sheet fastened to the deck as described fastened as below:
- Fastening:** Fastened to deck using Dekfast DF-#14-PH3 fasteners with Dekfast PLT-H-2-7/8 plates or OMG Heavy-Duty with OMG 3" Galvalume Steel Plates or OMG #14 Roofgrip fasteners with Flat Bottom Plates or AccuTrac Flat Bottom Plates or Mule-Hide HDP Fastener with Mule-Hide 3" Insulation Plates spaced 9" o.c. in 4" lap and 9" o.c. in four equally spaced staggered center rows.

One or more layers of the following:

<u>Base Insulation Layer</u>	<u>Insulation Fasteners (Table 3)</u>	<u>Fastener Density/ft²</u>
ACFoam-II, Poly ISO 2, ACFoam-III, H-Shield, Mule-Hide Poly ISO 1, ENRGY 3, Multi-Max FA-3 Minimum 1.5" thick	N/A	N/A
<u>Top Insulation Layer</u>	<u>Insulation Fasteners (Table 3)</u>	<u>Fastener Density/ft²</u>
DensDeck Prime Minimum 1/4" thick	N/A	N/A

Note: All insulation shall be adhered in a full mopping of approved asphalt within the EVT range and at a rate of 20-40 lbs/100 ft². Please refer to Roofing Application Standard RAS 117 for insulation attachment. Insulation listed as Base Layer only shall be used only as base layers with a second layer of approved top layer insulation installed as the final membrane substrate.

- Primer:** (For self-adhering base sheets only) Top insulation is primed with WB-3000.
- (Optional)**



- Base Sheet:** One ply of Nail Base, Nail Base P, APP Torch Base/Cap, APP Torch S Premier or APP Torch Base Premier torch applied.
- Or
- One ply of Nail Base or Nail Base P, adhered in full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs./sq.
- Or
- One ply of SA Base Sheet* or SA Base Sheet FR*, self-adhered.
*Requires torch-applied ply or cap sheet.
- Ply Sheet:
(Optional)** One ply of Nail Base, Nail Base P, APP Torch Base/Cap, APP Torch S Premier or APP Torch Base Premier torch applied.
- Or
- One ply of Nail Base or Nail Base P, adhered in full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs./sq.
- Membrane:** One ply of APP Torch Base/Cap, APP Torch G, APP Torch S Premier, APP Torch G Premier, APP Torch G FR Premier, APP Torch G KoolCap or APP Torch G FR KoolCap, torch applied.
- Surfacing:
(Optional)** Install one of the approved surfacing products listed in Table 4 to obtain desired coating or required fire classification.
- Maximum Design
Pressure:** -82.5 psf; (See General Limitation #7)



Membrane Type: SBS/APP
Deck Type 7I: Recover over existing asphalt BUR
Deck Description: 2500 psi structural concrete or concrete plank
System Type A(4): One or more layers of insulation adhered with approved adhesive. Membranes subsequently adhered to insulation

All General and System limitations apply.

One or more layers of any of the following insulations:

<u>Base Insulation Layer</u>	<u>Insulation Fasteners</u> <u>(Table 3)</u>	<u>Fastener</u> <u>Density/ft²</u>
ACFoam-II, Poly ISO 2, ENRGY 3, H-Shield, Mule-Hide Poly ISO 1, Insulfoam EPS (min 2.0 pcf) Minimum 1.5” thick	N/A	N/A
<u>Top Insulation Layer</u>	<u>Insulation Fasteners</u> <u>(Table 3)</u>	<u>Fastener</u> <u>Density/ft²</u>
SECUROCK Gypsum-Fiber Roof Board Minimum ¼” thick	N/A	N/A

Note: Apply insulation in OMG OlyBond 500 or OMG OlyBond 500 Green Adhesive (SpotShot application) in ¾” to 1” continuous beads/ribbons spaced 12” o.c. Please refer to Roofing Application Standard RAS 117 for insulation attachment. Additional layers of insulation should be adhered in OMG OlyBond 500 or OMG OlyBond 500 Green Adhesive (SpotShot application) in ¾” to 1” continuous beads/ribbons spaced 12” o.c.

Primer: (For self-adhering base sheets only) Top insulation is primed with WB-3000
(Optional)

Base Sheet: One ply of Nail Base, Nail Base P, APP Torch Base/Cap or APP Torch S Premier, torch applied.
 Or
 One ply of Nail Base or Nail Base P, adhered in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs./sq.
 Or
 One ply of SA Base Sheet* or SA Base Sheet FR*, self-adhered.
 *Requires torch-applied ply or cap sheet.

Ply Sheet: One or more plies of Nail Base, Nail Base P, APP Torch Base/Cap or APP Torch S Premier, applied.
(Optional)
 Or
 One or more plies of Nail Base or Nail Base P, adhered in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs./sq.



Membrane: One ply of APP Torch Base/Cap, APP Torch G, APP Torch S Premier, APP Torch G Premier, APP Torch G FR Premier, APP Torch G KoolCap or APP Torch G FR KoolCap, torch applied.

**Surfacing:
(Optional)** Install one of the approved surfacing products listed in Table 4 to obtain desired coating or required fire classification.

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



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Membrane Type: SBS/APP
Deck Type 7I: Recover over existing asphalt BUR
Deck Description: 2500 psi structural concrete or concrete plank
System Type A(5): One or more layers of insulation adhered with approved adhesive. Membranes subsequently adhered to insulation.

All General and System limitations apply.

One or more layers of any of the following insulations:

<u>Insulation Layer</u>	<u>Insulation Fasteners</u> <u>(Table 3)</u>	<u>Fastener</u> <u>Density/ft²</u>
ACFoam-II, Poly ISO 2, ENRGY 3, H-Shield, Mule-Hide Poly ISO 1, Multi-Max FA-3 Minimum 2” thick	N/A	N/A

Note: Apply insulation in Millennium One Step Foamable Adhesive, Millennium One Step Green Foamable Insulation Adhesive or Millennium PG-1 Pump Grade Adhesive in ½” to ¾” continuous beads/ribbons spaced 12” o.c. Please refer to Roofing Application Standard RAS 117 for insulation attachment. Additional layers of insulation should be adhered in Millennium One-Step Foamable Adhesive, Millennium One Step Green Foamable Insulation Adhesive or Millennium PG-1 Pump Grade Adhesive in ½” to ¾” continuous beads/ribbons spaced 12” o.c.

Primer: (For self-adhering base sheets only) Top insulation is primed with WB-3000.

(Optional)

Base Sheet: (Optional if using ply sheet in hot asphalt)
 One ply of Nail Base, adhered to the insulation in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs./sq.

Or

One ply of SA Base Sheet* or SA Base Sheet FR*, self-adhered.
 *Requires torch-applied ply or cap sheet.

Ply Sheet: (Optional if using base sheet in hot asphalt)

One or more plies of APP Torch Base/Cap or APP Torch S Premier torch applied.

Or

One or more plies of Nail Base, Nail Base P or one or more plies of Type IV or VI ply sheet adhered in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs./sq.



Membrane: One ply of APP Torch Base/Cap, APP Torch G, APP Torch S Premier, APP Torch G Premier, APP Torch G FR Premier, APP Torch G KoolCap or APP Torch G FR KoolCap, torch applied.

**Surfacing:
(Optional)** Install one of the approved surfacing products listed in Table 4 to obtain desired coating or required fire classification.

**Maximum Design
Pressure:** -157.5psf, (See General Limitation #9)



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Membrane Type: SBS/APP
Deck Type 7I: Recover over existing asphalt BUR
Deck Description: 2500 psi structural concrete or concrete plank / 18-22 ga. Steel, 33ksi.
System Type A(6): One or more layers of insulation adhered with approved adhesive. Membranes subsequently adhered to insulation

All General and System limitations apply.

One or more layers of any of the following insulations:

<u>Base Insulation Layer</u>	<u>Insulation Fasteners (Table 3)</u>	<u>Fastener Density/ft²</u>
ACFoam-II, Poly ISO 2, ENRGY 3, H-Shield, Mule-Hide Poly ISO 1 Minimum 2” thick	N/A	N/A
<u>Top Insulation Layer</u>	<u>Insulation Fasteners (Table 3)</u>	<u>Fastener Density/ft²</u>
SECUROCK Gypsum-Fiber Roof Board Minimum ¼” thick	N/A	N/A

Note: Apply insulation in Millennium One Step Foamable Adhesive, Millennium One Step Green Foamable Insulation Adhesive or Millennium PG-1 Pump Grade Adhesive in ½” to ¾” continuous beads/ribbons spaced 12” o.c. Please refer to Roofing Application Standard RAS 117 for insulation attachment. Additional layers of insulation should be adhered in Millennium One-Step Foamable Adhesive, Millennium One Step Green Foamable Insulation Adhesive or Millennium PG-1 Pump Grade Adhesive in ½” to ¾” continuous beads/ribbons spaced 12” o.c.

Primer: (For self-adhering base sheets only) Top insulation is primed with WB-3000.
(Optional)
Base Sheet: One ply of Nail Base, Nail Base P, APP Torch Base/Cap or APP Torch S Premier, torch applied.

Or

One ply of Nail Base or Nail Base P, adhered in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs./sq.

Or

One ply of SA Base Sheet* or SA Base Sheet FR*, self-adhered.

*Requires torch-applied ply or cap sheet.



- Ply Sheet:
(Optional)** One or more plies of Nail Base, Nail Base P, APP Torch Base/Cap or APP Torch S Premier, torch applied.
- Or
- One or more plies of Nail Base or Nail Base P, adhered in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs./sq.
- Membrane:** One ply of APP Torch Base/Cap, APP Torch G, APP Torch S Premier, APP Torch G Premier, APP Torch G FR Premier, APP Torch G KoolCap or APP Torch G FR KoolCap, torch applied.
- Surfacing:
(Optional)** Install one of the approved surfacing products listed in Table 4 to obtain desired coating or required fire classification.
- Maximum Design
Pressure:** -157.5 psf; (See General Limitation #9.)



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Membrane Type: SBS/APP
Deck Type 7I: Recover over existing asphalt BUR or mineral surfaced cap
Deck Description: 2500 psi structural concrete or concrete plank / 18-22 ga. Steel, 33ksi.
System Type A(7): One or more layers of insulation adhered with approved adhesive. Membranes subsequently adhered to insulation

All General and System limitations apply.

One or more layers of any of the following insulations:

<u>Insulation Layer</u>	<u>Insulation Fasteners (Table 3)</u>	<u>Fastener Density/ft²</u>
ACFoam-II, Poly ISO 2, ACFoam-III, ENRGY 3, H-Shield, Mule-Hide Poly ISO 1, H-Shield CG, Multi-Max FA-3 Minimum 1.5” thick	N/A	N/A

Note: Apply insulation in ICP Adhesives CR-20 in 3” to 3-1/2” continuous beads/ribbons spaced 12” o.c. Please refer to Roofing Application Standard RAS 117 for insulation attachment. Additional layers of insulation should be adhered in ICP Adhesives CR-20 in 3” to 3-1/2” continuous beads/ribbons spaced 12” o.c.

Primer: (For self-adhering base sheets only) Top insulation is primed with WB-3000.

(Optional)

Base Sheet: (Optional if using ply sheet in hot asphalt)
 One ply of Nail Base adhered to the insulation in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs./sq.

Or

One ply of SA Base Sheet* or SA Base Sheet FR* self-adhered.
 *Requires torch-applied ply or cap sheet.

Ply Sheet: (Optional if using base sheet in hot asphalt)

(Optional) One or more plies of APP Torch Base/Cap or APP Torch S Premier torch applied.

Or

One or more plies of Nail Base, Nail Base P, one or more plies of Type IV or VI ply sheet adhered in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs./sq.



Membrane: One ply of APP Torch Base/Cap, APP Torch G, APP Torch S Premier, APP Torch G Premier, APP Torch G FR Premier, APP Torch G KoolCap or APP Torch G FR KoolCap torch applied.

**Surfacing:
(Optional)** Install one of the approved surfacing products listed in Table 4 to obtain desired coating or required fire classification.

**Maximum Design
Pressure:** -262.5 psf; (See General Limitation #9.)



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Membrane Type: SBS/APP
Deck Type 7I: Recover over existing asphalt BUR or mineral surfaced cap
Deck Description: 2500 psi structural concrete or concrete plank / 18-22 ga. Steel, 33ksi.
System Type A(8): One or more layers of insulation adhered with approved adhesive. Membranes subsequently adhered to insulation

All General and System limitations apply.

One or more layers of any of the following insulations:

<u>Base Insulation Layer</u>	<u>Insulation Fasteners (Table 3)</u>	<u>Fastener Density/ft²</u>
ACFoam-II, Poly ISO 2, ACFoam-III, ENRGY 3, H-Shield, Mule-Hide Poly ISO 1, H-Shield CG, Multi-Max FA-3 Minimum 1.5” thick	N/A	N/A
<u>Top Insulation Layer</u>	<u>Insulation Fasteners (Table 3)</u>	<u>Fastener Density/ft²</u>
SECUROCK Gypsum-Fiber Roof Board Minimum 1/4” thick	N/A	N/A

Note: Apply insulation in ICP Adhesives CR-20 in 3” to 3-1/2” continuous beads/ribbons spaced 12” o.c. Please refer to Roofing Application Standard RAS 117 for insulation attachment. Additional layers of insulation should be adhered in ICP Adhesives CR-20 in 3” to 3-1/2” continuous beads/ribbons spaced 12” o.c.

Primer: (For self-adhering base sheets only) Top insulation is primed with WB-3000.
(Optional)

Base Sheet: (Optional if using ply sheet in hot asphalt)
 One ply of Nail Base, Nail Base P, APP Torch Base/Cap or APP Torch S Premier adhered to the insulation in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs./sq.
 Or
 One ply of Nail Base or Nail Base P adhered in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs./sq.
 Or
 One ply of SA Base Sheet* or SA Base Sheet FR* self-adhered.
 *Requires torch-applied ply or cap sheet.



- Ply Sheet:
(Optional)** One or more plies of Nail Base, Nail Base P, APP Torch Base/Cap or APP Torch S Premier torch applied.
Or
One or more plies of Nail Base or Nail Base P adhered in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs./sq.
- Membrane:** One ply of APP Torch Base/Cap, APP Torch G, APP Torch S Premier, APP Torch G Premier, APP Torch G FR Premier, APP Torch G KoolCap or APP Torch G FR KoolCap torch applied.
- Surfacing:
(Optional)** Install one of the approved surfacing products listed in Table 4 to obtain desired coating or required fire classification.
- Maximum Design
Pressure:** -262.5 psf; (See General Limitation #9.)



Membrane Type: SBS/APP
Deck Type 7I: Recover, Insulated
Deck Description: 2500 psi structural concrete or concrete plank / 18-22 ga. Steel, 33ksi.
System Type B(1): Base layers of insulation mechanically fastened, top layer fully adhered with approved asphalt. Membranes subsequently adhered to insulation.

All General and System limitations apply.

One or more layers of any of the following insulations:

<u>Base Insulation Layer</u>	<u>Insulation Fasteners (Table 3)</u>	<u>Fastener Density/ft²</u>
H-Shield, Mule-Hide Poly ISO 1, H-Shield CG, ACFoam-II, Poly ISO 2, ACFoam Composite, Poly ISO 2 Composite Minimum 1.5” thick	1, 2 with 3	1:4 ft ²

Note: Base layers of insulation shall be mechanically attached using the fastener density listed. The insulation panels listed are minimum sizes and dimensions; if larger panels are used, the number of fasteners shall be increased maintaining the same fastener density. Insulation fasteners shall be tested for withdrawal resistance in compliance with Protocol TAS 105 to confirm compliance with the wind load requirements. Please refer to Roofing Application Standard RAS 117 for insulation attachment.

<u>Top Insulation Layer</u>	<u>Insulation Fasteners (Table 3)</u>	<u>Fastener Density/ft²</u>
FescoBoard Minimum ¾” thick	N/A	N/A

Note: Top layer of insulation shall be adhered with approved hot asphalt within the EVT range and at a rate of 20-40 lbs/100 ft². Please refer to Roofing Application Standard RAS 117 for insulation attachment. Composite insulation boards used as a top layer shall be installed with the polyisocyanurate face down.

Base Sheet: *(Optional if using 1 to 3 plies of ply sheet)* One ply of Nail Base, adhered in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs./sq.

**Ply Sheet:
(Optional)** One or more plies of Nail Base or one to three plies of Type IV or VI ply sheet adhered in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs./sq.

Membrane: One ply of APP Torch Base/Cap, APP Torch G, APP Torch S Premier, APP Torch G Premier, APP Torch G FR Premier, APP Torch G KoolCap or APP Torch G FR KoolCap, torch applied.

**Surfacing:
(Optional)** Install one of the approved surfacing products listed in Table 4 to obtain desired coating or required fire classification.

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



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Membrane Type: SBS/APP

Deck Type 7I: Recover, Insulated

Deck Description: Min. $1\frac{5}{32}$ " plywood or wood plank attached to structural supports spaced at a maximum of 24" o.c. with 8d ring shank nails at 6" o.c.

The deck should record a Minimum Characteristic Resistance Force (MCRF) of 150 lbf. when tested with fasteners, listed in this assembly, installed through to the deck in accordance with TAS 105.

System Type B(2): Base layer of insulation mechanically fastened, optional top layer adhered with approved asphalt. Membranes subsequently adhered to insulation.

All General and System Limitations apply.

One or more layers of the following:

<u>Base Insulation Layer</u>	<u>Insulation Fasteners</u> <u>(Table 3)</u>	<u>Fastener</u> <u>Density/ft²</u>
ACFoam-II, Poly ISO 2, H-Shield, Mule-Hide Poly ISO 1, ENRGY 3, Multi-Max FA-3, EnergyGuard Polyiso Insulation Minimum 2.0" thick	1 with 3, 12 with 10, or 13 with 14	1:1 ft ²

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

<u>Top Insulation Layer</u>	<u>Insulation Fasteners</u> <u>(Table 3)</u>	<u>Fastener</u> <u>Density/ft²</u>
DensDeck Prime, SECUROCK Gypsum-Fiber Roof Board Minimum 1/4" thick	N/A	N/A

Note: Top layer of insulation shall be adhered with approved asphalt within the EVT range and at a rate of 20-40 lbs/100 ft². Please refer to Roofing Application Standard RAS 117 for insulation attachment. Composite insulation boards used as a top layer shall be installed with the polyisocyanurate face down.

Primer: (Optional) *(For self-adhering base sheets only)* Top insulation is primed with WB-3000.



- Base Sheet:** One ply of Nail Base, Nail Base P, APP Torch Base/Cap, APP Torch S Premier or APP Torch Base Premier torch applied.
- Or
- One ply of Nail Base or Nail Base P, adhered in full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs./sq.
- Or
- One ply of SA Base Sheet* or SA Base Sheet FR*, self-adhered.
*Requires torch-applied ply or cap sheet.
- Ply Sheet:
(Optional)** One or more plies of Nail Base, Nail Base P, APP Torch Base/Cap, APP Torch S Premier APP Torch Base Premier torch applied.
- Or
- One or more plies of Nail Base or Nail Base P, adhered in full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs./sq.
- Membrane:** One ply of APP Torch Base/Cap, APP Torch G, APP Torch S Premier, APP Torch G Premier, APP Torch G FR Premier, APP Torch G KoolCap or APP Torch G FR KoolCap, torch applied.
- Surfacing:
(Optional)** Install one of the approved surfacing products listed in Table 4 to obtain desired coating or required fire classification.
- Maximum Design
Pressure:** -75.0 psf; (See General Limitation #7)



Membrane Type: SBS/APP

Deck Type 7I: Recover, Insulated

Deck Description: Min ¹⁵/₃₂" plywood or wood plank attached to structural supports spaced at a maximum of 24" o.c. with 8d ring shank nails at 6" o.c.

The deck should record a Minimum Characteristic Resistance Force (MCRF) of 160 lbf. when tested with fasteners, listed in this assembly, installed through to the deck in accordance with TAS 105.

System Type C(1): All layers of insulation are mechanically attached to roof deck. Membranes subsequently adhered to insulation.

All General and System Limitations apply.

One or more layers of the following:

<u>Base Insulation Layer</u>	<u>Insulation Fasteners (Table 3)</u>	<u>Fastener Density/ft²</u>
ACFoam-II, Poly ISO 2, H-Shield, Mule-Hide Poly ISO 1, ENRGY 3, Multi-Max FA-3, EnergyGuard Polyiso Insulation Minimum 1.0" thick	N/A	N/A

Note: All layers shall be simultaneously fastened; see top layer below for fasteners and density. Insulation panels listed are minimum sizes and dimensions; if larger panels are used, the number of fasteners shall be increased maintaining the same fastener density. Please refer to Roofing Application Standard RAS 117 for insulation attachment.

<u>Top Insulation Layer</u>	<u>Insulation Fasteners (Table 3)</u>	<u>Fastener Density/ft²</u>
DensDeck Prime, SECUROCK Gypsum-Fiber Roof Board Minimum 1/4" thick	1 with 3, 12 with 10, or 13 with 14	1:1.78 ft ²

Note: All layers of insulation shall be mechanically attached using the fastener density listed above. The insulation panels listed are minimum sizes and dimensions; if larger panels are used, the number of fasteners shall be increased maintaining the same fastener density. Please refer to Roofing Application Standard RAS 117 for insulation attachment.

Primer: (For self-adhering base sheets only) Top insulation is primed with WB-3000.
(Optional)



- Base Sheet:** One ply of Nail Base, Nail Base P, APP Torch Base/Cap, APP Torch S Premier or APP Torch Base Premier torch applied.
- Or
- One ply of Nail Base or Nail Base P, adhered in full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs./sq.
- Or
- One ply of SA Base Sheet* or SA Base Sheet FR*, self-adhered.
*Requires torch-applied ply or cap sheet.
- Ply Sheet:
(Optional)** One ply of Nail Base, Nail Base P, APP Torch Base/Cap, APP Torch S Premier or APP Torch Base Premier torch applied.
- Or
- One ply of Nail Base or Nail Base P, adhered in full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs./sq.
- Membrane:** One ply of APP Torch Base/Cap, APP Torch G, APP Torch S Premier, APP Torch G Premier, APP Torch G FR Premier, APP Torch G KoolCap or APP Torch G FR KoolCap, torch applied.
- Surfacing:
(Optional)** Install one of the approved surfacing products listed in Table 4 to obtain desired coating or required fire classification.
- Maximum Design
Pressure:** -45.0 psf; (See General Limitation #7)



Membrane Type: SBS/APP

Deck Type 7I: Recover, Insulated

Deck Description: 18-22 ga. Type B, Grade 40 steel deck attached 6" o.c. with 5/8" puddle welds to steel supports spaced max. 6 ft. o.c.

The deck should record a Minimum Characteristic Resistance Force (MCRF) of 195 lbf. when tested with fasteners, listed in this assembly, installed through to the deck in accordance with TAS 105.

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

System Type C(2): All layers of insulation are mechanically attached to roof deck. Membranes subsequently adhered to insulation.

All General and System limitations apply.

One or more layers of any of the following insulations:

<u>Base Insulation Layer</u>	<u>Insulation Fasteners (Table 3)</u>	<u>Fastener Density/ft²</u>
Any approved polyisocyanurate listed in Table 2 Minimum 1.0" thick	N/A	N/A
<u>Top Insulation Layer</u>	<u>Insulation Fasteners (Table 3)</u>	<u>Fastener Density/ft²</u>
SECUROCK Gypsum-Fiber Roof Board Minimum 1/4" thick	1 with 3; 4 with 11, or 13 with 14	1:1.78 ft ²
DensDeck Prime Minimum 1/4" thick	1 with 3; 4 with 11, or 13 with 14	1:1.78 ft ²

Note: All layers of insulation shall be mechanically attached using the fastener density listed above. The insulation panels listed are minimum sizes and dimensions; if larger panels are used, the number of fasteners shall be increased maintaining the same fastener density. Insulation fasteners shall be tested for withdrawal resistance in compliance with Testing Application Standard TAS 105 to confirm compliance with the wind load requirements. Please refer to Roofing Application Standard RAS 117 for insulation attachment.

Primer: Apply WB-3000 at 1 gal. per 300 sq. ft.
(Optional)

Base Sheet: One ply of SA Base Sheet or SA Base Sheet FR, self-adhered.

Ply Sheet: One or more plies of Nail Base, Nail Base P, APP Torch Base/Cap, APP Torch S Premier or
(Optional) APP Torch Base Premier torch applied.



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Membrane: One ply of APP Torch Base/Cap, APP Torch G, APP Torch S Premier, APP Torch G Premier, APP Torch G FR Premier, APP Torch G KoolCap or APP Torch G FR KoolCap, torch applied.

**Surfacing:
(Optional)** Install one of the approved surfacing products listed in Table 4 to obtain desired coating or required fire classification.

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



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Membrane Type: SBS/APP

Deck Type 7I: Recover, Insulated

Deck Description: Min. ¹⁵/₃₂" plywood or wood plank attached to structural supports spaced at a maximum of 24" with 8d ring shank nails at 6" o.c.

The deck should record a Minimum Characteristic Resistance Force (MCRF) of 150 lbf. when tested with fasteners, listed in this assembly, installed through to the deck in accordance with TAS 105.

System Type C(3): All layers of insulation are mechanically attached to roof deck. Membranes subsequently adhered to insulation.

All General and System Limitations apply.

One or more layers of the following:

<u>Base Insulation Layer</u>	<u>Insulation Fasteners (Table 3)</u>	<u>Fastener Density/ft²</u>
ACFoam-II, Poly ISO 2, H-Shield, Mule-Hide Poly ISO 1, ENRGY 3, Multi-Max FA-3, EnergyGuard Polyiso Insulation Minimum 1.0" thick	N/A	N/A

Note: All layers shall be simultaneously fastened; see top layer below for fasteners and density. Insulation panels listed are minimum sizes and dimensions; if larger panels are used, the number of fasteners shall be increased maintaining the same fastener density. Please refer to Roofing Application Standard RAS 117 for insulation attachment.

<u>Top Insulation Layer</u>	<u>Insulation Fasteners (Table 3)</u>	<u>Fastener Density/ft²</u>
DensDeck Prime, SECUROCK Gypsum-Fiber Roof Board Minimum 1/4" thick	1 with 3, 12 with 10, or 13 with 14	1:1 ft ²

Note: All layers of insulation shall be mechanically attached using the fastener density listed above. The insulation panels listed are minimum sizes and dimensions; if larger panels are used, the number of fasteners shall be increased maintaining the same fastener density. Please refer to Roofing Application Standard RAS 117 for insulation attachment.

Primer: (Optional) (For self-adhering base sheets only) Top insulation is primed with WB-3000.



- Base Sheet:** One ply of Nail Base, Nail Base P, APP Torch Base/Cap, APP Torch S Premier or APP Torch Base Premier torch applied.
- Or
- One ply of Nail Base or Nail Base P, adhered in full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs./sq.
- Or
- One ply of SA Base Sheet* or SA Base Sheet FR*, self-adhered.
*Requires torch-applied ply or cap sheet.
- Ply Sheet:
(Optional)** One or more plies of Nail Base, Nail Base P, APP Torch Base/Cap, APP Torch S Premier or APP Torch Base Premier torch applied.
- Or
- One or more plies of Nail Base or Nail Base P, adhered in full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs./sq.
- Membrane:** One ply of APP Torch Base/Cap, APP Torch G APP Torch S Premier, APP Torch G Premier, APP Torch G FR Premier, APP Torch G KoolCap or APP Torch G FR KoolCap, torch applied.
- Surfacing:
(Optional)** Install one of the approved surfacing products listed in Table 4 to obtain desired coating or required fire classification.
- Maximum Design
Pressure:** -75.0 psf; (See General Limitation #7)



Membrane Type: SBS/APP
Deck Type 7I: Recover, Insulated
Deck Description: 18-22 ga. Type B, Grade 40 steel deck attached 6" o.c. with 5/8" puddle welds to steel supports spaced max. 6 ft. o.c.
 The deck should record a Minimum Characteristic Resistance Force (MCRF) of 180 lbf. when tested with fasteners, listed in this assembly, installed through to the deck in accordance with TAS 105.
This Tested Assembly has been analyzed for allowable deck stress. See Deck Stress Analysis Table.
System Type C(4): All layers of insulation are mechanically attached to roof deck. Membranes subsequently adhered to insulation.

All General and System limitations apply.

One or more layers of any of the following insulations:

<u>Base Insulation Layer</u>	<u>Insulation Fasteners (Table 3)</u>	<u>Fastener Density/ft²</u>
Any approved polyisocyanurate listed in Table 2 Minimum 1.0" thick	N/A	N/A
<u>Top Insulation Layer</u>	<u>Insulation Fasteners (Table 3)</u>	<u>Fastener Density/ft²</u>
SECUROCK Gypsum-Fiber Roof Board Minimum 1/4" thick	1 or 2 with 3, 4 or 5 with 6 or 11, or 13 or 15 with 14	1:1 ft ²

Note: All layers of insulation shall be mechanically attached using the fastener density listed above. The insulation panels listed are minimum sizes and dimensions; if larger panels are used, the number of fasteners shall be increased maintaining the same fastener density.

Primer: Apply WB-3000 at 1 gal. per 300 sq. ft.
(Optional)
Base Sheet: One ply of SA Base Sheet or SA Base Sheet FR, self-adhered.
Membrane: One ply of APP Torch Base/Cap, APP Torch G, APP Torch S Premier, APP Torch G Premier, APP Torch G FR Premier, APP Torch G KoolCap or APP Torch G FR KoolCap, torch applied.
Surfacing: Install one of the approved surfacing products listed in Table 4 to obtain desired coating or
(Optional) required fire classification.
Maximum Design Pressure: -90.0 psf; (See General Limitation #7.)



Membrane Type: SBS/APP

Deck Type 7I: Recover, Insulated

Deck Description: 18-22 ga. Type B, Grade 40 steel deck attached 6" o.c. with 5/8" puddle welds to steel supports spaced max. 6 ft. o.c.

The deck should record a Minimum Characteristic Resistance Force (MCRF) of 195 lbf. when tested with fasteners, listed in this assembly, installed through to the deck in accordance with TAS 105.

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

System Type C(5): All layers of insulation are mechanically attached to roof deck. Membranes subsequently adhered to insulation.

All General and System limitations apply.

One or more layers of any of the following insulations:

<u>Base Insulation Layer</u>	<u>Insulation Fasteners (Table 3)</u>	<u>Fastener Density/ft²</u>
Any approved polyisocyanurate listed in Table 2 Minimum 1.0" thick	N/A	N/A
<u>Top Insulation Layer</u>	<u>Insulation Fasteners (Table 3)</u>	<u>Fastener Density/ft²</u>
DensDeck Prime Minimum 1/4" thick	1 or 2 with 3, 4 or 6 with 6, or 13 or 15 with 14	1:1 ft ²

Note: All layers of insulation shall be mechanically attached using the fastener density listed above. The insulation panels listed are minimum sizes and dimensions; if larger panels are used, the number of fasteners shall be increased maintaining the same fastener density.

Primer: Apply WB-3000 at 1 gal. per 300 sq. ft.
(Optional)

Base Sheet: One ply of SA Base Sheet or SA Base Sheet FR, self-adhered.

Membrane: One ply of APP Torch Base/Cap, APP Torch G, APP Torch S Premier, APP Torch G Premier, APP Torch G FR Premier, APP Torch G KoolCap or APP Torch G FR KoolCap, torch applied.

Surfacing: Install one of the approved surfacing products listed in Table 4 to obtain desired coating or
(Optional) required fire classification.

Maximum Design Pressure: -97.5 psf; (See General Limitation #7.)



Membrane Type: SBS/APP
Deck Type 7I: Recover, Insulated
Deck Description: 2500 psi structural concrete or concrete plank / 18-22 ga. Steel, 33ksi.
System Type D(1): All layers of insulation and base sheet simultaneously attached. Membranes subsequently adhered.

All General and System limitations apply.

One or more layers of any of the following insulations:

<u>Insulation Layer</u>	<u>Insulation Fasteners (Table 3)</u>	<u>Fastener Density/ft²</u>
ACFoam-II, Poly ISO 2, ACFoam-III, Multi-Max FA-3, H-Shield, Mule-Hide Poly ISO 1, Thermo roof Composite-3, ACFoam Composite, Poly ISO 2 Composite		
Minimum 1.5" thick	N/A	N/A
Structodek High Density Fiberboard Roof Insulation		
Minimum 1" thick	N/A	N/A
FescoBoard		
Minimum 3/4" thick	N/A	N/A

Note: Top layer shall have preliminary attachment, prior to installation of the base sheet, at an application rate of two fasteners per board for insulation boards having no dimension greater than 4 ft., and four fasteners for any insulation board having no dimension greater than 8 ft. All layers of insulation and base sheet shall be simultaneously fastened. See base sheet below for fasteners and density.

Base Sheet: One ply of Nail Base, APP Torch Base Premier or G2 Base Sheet, fastened to the deck as described below:

Fastening: Attach base sheet using Dekfast DF-#14-PH3 fasteners with Dekfast PLT-H-2-7/8 plates or OMG #14 Roofgrip fasteners with OMG Flat Bottom Metal plates or Mule-Hide HDP Fastener fasteners with Mule-Hide 3" Insulation Plates spaced 12" o.c. in a 4" lap and 18" o.c. in two equally spaced staggered rows in the center of the sheet. Fasteners shall penetrate through the existing roof to the structural deck.

**Ply Sheet:
(Optional)** One or more plies of Nail Base, adhered in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs./sq.



Membrane: One ply of APP Torch Base/Cap, APP Torch G, APP Torch S Premier, APP Torch G Premier, APP Torch G FR Premier, APP Torch G KoolCap or APP Torch G FR KoolCap, torch applied.

**Surfacing:
(Optional)** Install one of the approved surfacing products listed in Table 4 to obtain desired coating or required fire classification.

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



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Membrane Type: APP
Deck Type 7I: Recover, Insulated
Deck Description: 2500 psi structural concrete or concrete plank / 18-22 ga. Steel, 33ksi.
System Type D(2): All layers of insulation and base sheet simultaneously attached. Membranes subsequently adhered.

All General and System limitations apply.

One or more layers of any of the following insulations:

<u>Insulation Layer</u>	<u>Insulation Fasteners (Table 3)</u>	<u>Fastener Density/ft²</u>
H-Shield, Mule-Hide Poly ISO 1, ACFoam-II, Poly ISO 2, ACFoam-III, ACFoam Composite, Poly ISO 2 Composite Minimum 1.5” thick	N/A	N/A
Structodek High Density Fiberboard Roof Insulation Minimum 1” thick	N/A	N/A
FescoBoard Minimum ¾” thick	N/A	N/A

Note: Top layer shall have preliminary attachment, prior to installation of the base sheet, at an application rate of two fasteners per board for insulation boards having no dimension greater than 4 ft., and four fasteners for any insulation board having no dimension greater than 8 ft. All layers of insulation and base sheet shall be simultaneously fastened. See base sheet below for fasteners and density.

Base Sheet: One ply of APP Torch Base/Cap or APP Torch S Premier mechanically fastened to the deck as described below:

Fastening #1 Attach base sheet using Dekfast DF-#14-PH3 fasteners with Dekfast PLT-H-2-7/8 plates spaced 18” o.c. in a minimum 5” wide side lap. The side lap is either torch or hot air welded closed. Fasteners shall penetrate through the existing roof to the structural deck.

Membrane: One ply of APP Torch Base/Cap, APP Torch G, APP Torch S Premier, APP Torch G Premier, APP Torch G FR Premier, APP Torch G KoolCap or APP Torch G FR KoolCap, torch applied.

**Surfacing:
(Optional)** Install one of the approved surfacing products listed in Table 4 to obtain desired coating or required fire classification.

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



Membrane Type: APP

Deck Type 7I: Recover, Insulated

Deck Description: Min 2500 psi structural concrete or min. 18-22 ga. Type WR, Grade 80 steel deck fastened with Traxx/5 fastener spaced 6" o.c. to steel supports spaced max. 6 ft. Deck side laps are secured with Traxx/1 fasteners spaced 30" o.c.

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

System Type D(3): All layers of insulation and base sheet simultaneously attached. Membranes subsequently adhered.

All General and System limitations apply.

One or more layers of any of the following insulations:

<u>Insulation Layer</u>	<u>Insulation Fasteners (Table 3)</u>	<u>Fastener Density/ft²</u>
H-Shield, Mule-Hide Poly ISO 1, AC Foam-II, Poly ISO 2, AC Foam-III, AC Foam Composite, Poly ISO 2 Composite Minimum 1.5" thick	N/A	N/A
Structodek High Density Fiberboard Roof Insulation Minimum 1" thick	N/A	N/A
FescoBoard Minimum 3/4" thick	N/A	N/A

Note: Top layer shall have preliminary attachment, prior to installation of the base sheet, at an application rate of two fasteners per board for insulation boards having no dimension greater than 4 ft., and four fasteners for any insulation board having no dimension greater than 8 ft. All layers of insulation and base sheet shall be simultaneously fastened. See base sheet below for fasteners and density.

Base Sheet: One ply of APP Torch Base/Cap or APP Torch S Premier mechanically fastened to the deck as described below:

Fastening: Attach base sheet using Dekfast DF-#14-PH3 fasteners with Dekfast PLT-H-2-7/8 plates spaced 12" o.c. in a minimum 6" wide side lap. The side lap is either torch or hot air welded closed. Fasteners shall penetrate through the existing roof to the structural deck.

Membrane: One ply of APP Torch Base/Cap, APP Torch G, APP Torch S Premier, APP Torch G Premier, APP Torch G FR Premier, APP Torch G KoolCap or APP Torch G FR KoolCap, torch applied.

**Surfacing:
(Optional)** Install one of the approved surfacing products listed in Table 4 to obtain desired coating or required fire classification.

Maximum Design Pressure: -82.5 psf (See General Limitation #7.)



Membrane Type: SBS/APP
Deck Type 7: Recover, Non-Insulated
Deck Description: 2500 psi structural concrete or concrete plank / 18-22 ga. Steel, 33ksi.
System Type E(1): Base sheet mechanically attached. Membranes subsequently adhered.

All General and System limitations apply.

Base Sheet: One ply of Nail Base, APP Torch Base Premier or G2 Base Sheet, fastened to the deck as described below:

Fastening: Attach base sheet using Dekfast DF-#14-PH3 fasteners with Dekfast PLT-H-2-7/8 plates or OMG #14 Roofgrip fasteners with OMG Flat Bottom Metal plates or Mule-Hide HDP Fastener fasteners with Mule-Hide 3” Insulation Plates spaced 12” o.c. in a 4” lap and 18” o.c. in two equally spaced staggered rows in the center of the sheet. Fasteners shall penetrate through the existing roof to the structural deck.

**Ply Sheet:
(Optional)** One or more plies of Nail Base, adhered in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs./sq.

Membrane: One ply of APP Torch Base/Cap, APP Torch G, APP Torch S Premier, APP Torch G Premier, APP Torch G FR Premier, APP Torch G KoolCap or APP Torch G FR KoolCap, torch applied.

**Surfacing:
(Optional)** Install one of the approved surfacing products listed in Table 4 to obtain desired coating or required fire classification.

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



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Membrane Type: SBS/APP

Deck Type 7: Recover, Non-Insulated

Deck Description: Min 19/32" plywood or wood plank, fastened to structural supports spaced at a maximum of 24" o.c. with 8d ring shank nails at 6" o.c.

The deck shall record a Minimum Characteristic Resistance Force (MCRF) of 32 lbf when tested with fasteners, listed in this assembly, installed through to the deck in accordance with TAS 105.

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

System Type E(2): Base sheet is mechanically attached to roof deck. Membranes subsequently adhered.

All General and System limitations apply.

Base Sheet: One ply of APP Torch Base Premier sheet fastened to the deck as described below:

Fastening: Attach base sheet using 11 ga. annular grooved shank and 1" diameter caps spaced 6" o.c. in a 3" lap and 6" o.c. in four equally spaced staggered center rows.

Membrane: One ply of APP Torch Base/Cap, APP Torch G, APP Torch G Premier, APP Torch G KoolCap or APP Torch G FR KoolCap, torch applied.

Surfacing: (Optional) Install one of the approved surfacing products listed in Table 4 to obtain desired coating or required fire classification.

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



Membrane Type: SBS/APP

Deck Type 7: Recover, Non-Insulated

Deck Description: Min. 330 psi. Elastizell with Zell-Crete fibers with supplemental attachment with Roofgrip #21 screws and 3” Flat Bottom Plates at 1 per 8ft² over min 2500 psi structural concrete or min. 18-22 ga., Type B, Grade 33 vented steel deck secured to structural supports spaced 5 ft. o.c. with Traxx/5 fasteners spaced 6” o.c. Deck side laps are secured 12” o.c. with Traxx/1 fasteners.

The deck shall record a Minimum Characteristic Resistance Force (MCRF) of 44 lbf when tested with fasteners, listed in this assembly, installed through to the deck in accordance with TAS 105.

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

System Type E(3): Base sheet mechanically fastened. Membranes subsequently adhered.

All General and System limitations apply.

Base Sheet: One ply of Nail Base, Nail Base P or G2 Base Sheet, fastened as outlined below:

Fastening: Trufast Twin Loc-Nail Assembled Fastener at 6” o.c. in 4” lap and 6” o.c. in three equally spaced center rows.

Ply Sheet: One or more plies of Nail Base, or one or more plies of Type IV or VI ply sheet, adhered to the Base Sheet in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs.

Or

One or more plies of SA Base Sheet* or SA Base Sheet FR*, self-adhered.

*Requires torch-applied cap sheet

Membrane: One ply of APP Torch Base/Cap, APP Torch G, APP Torch S Premier, APP Torch G Premier, APP Torch G FR Premier, APP Torch G KoolCap or APP Torch G FR KoolCap, torch applied.

Surfacing: (Optional) Install one of the approved surfacing products listed in Table 4 to obtain desired coating or required fire classification.

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



Membrane Type: SBS/APP

Deck Type 7: Recover, Non-Insulated

Deck Description: Min. 380 psi Celcore MF Lightweight Concrete over min 2500 structural concrete or min. 18-22 ga., Type B, Grade 33 vented steel deck secured to structural supports spaced 5 ft. o.c. with Traxx/5 fasteners spaced 6" o.c. Deck side laps are secured 12" o.c. with Traxx/1 fasteners.

The deck shall record a Minimum Characteristic Resistance Force (MCRF) of 59 lbf when tested with fasteners, listed in this assembly, installed through to the deck in accordance with TAS 105.

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

System Type E(4): Base sheet mechanically fastened. Membranes subsequently adhered.

All General and System limitations apply.

Base Sheet: One ply of Nail Base or Nail Base P, fastened as outlined below:

Fastening: Trufast FM-90 Base Sheet Fasteners at 8" o.c. in 4" lap and 8" o.c. in three equally spaced center rows.

Ply Sheet: One or more plies of Nail Base, or one or more plies of Type IV or VI ply sheet adhered to the Base Sheet in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs.

Or

One or more plies of SA Base Sheet* or SA Base Sheet FR*, self-adhered.
*Requires torch-applied cap sheet

Membrane: One ply of APP Torch Base/Cap, APP Torch G, APP Torch S Premier, APP Torch G Premier, APP Torch G FR Premier, APP Torch G KoolCap or APP Torch G FR KoolCap, torch applied

**Surfacing:
(Optional)** Install one of the approved surfacing products listed in Table 4 to obtain desired coating or required fire classification.

**Maximum Design
Pressure:** -60.0 psf; (See General Limitation #7.)



- Membrane Type:** SBS/APP
- Deck Type 7:** Recover, Non- Insulated
- Deck Description:** Min $1\frac{5}{32}$ " plywood or wood plank attached to structural supports spaced at maximum of 24" o.c. with 8d ring shank nails at 6" o.c.
- System Type E(5):** Base sheet mechanically attached. Membranes subsequently adhered.

All General and System Limitations apply.

Base Sheet: One ply of APP Torch Base Premier or G2 Base Sheet fastened to the deck as described below:

Fastening: Attach base sheet using Dekfast DF-#14-PH3 fasteners with Dekfast PLT-H-2-7/8 plates or OMG Heavy-Duty with OMG 3" Galvalume Steel Plates or OMG #14 Roofgrip fasteners with OMG Flat Bottom Plates or AccuTrac Flat Bottom Plates or Mule-Hide HDP Fastener with Mule-Hide 3" Insulation Plate or Simplex MAXX Cap Fasteners spaced 10" o.c. in 4" lap and 10" o.c. in three equally spaced staggered center rows.

**Ply Sheet:
(Optional)** One or more plies of Nail Base, Nail Base P, APP Torch Base/Cap, APP Torch S Premier or APP Torch Base Premier torch applied.

Or

One or more plies of Nail Base or Nail Base P, adhered in full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs./sq.

Membrane: One ply of APP Torch Base/Cap, APP Torch G, APP Torch S Premier, APP Torch G Premier, APP Torch G FR Premier, APP Torch G KoolCap or APP Torch G FR KoolCap, torch applied.

**Surfacing:
(Optional)** Install one of the approved surfacing products listed in Table 4 to obtain desired coating or required fire classification.

**Maximum Design
Pressure:** -75.0 psf; (See General Limitation #7)



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Membrane Type: SBS/APP

Deck Type 7I: Recover, Non-Insulated

Deck Description: Min 390 psi. Celcore MF Lightweight Concrete over min 2500 psi. structural concrete or min. 18-22 ga., Type B, Grade 33 vented steel deck secured to structural supports spaced 5 ft. o.c. with Traxx/5 fasteners spaced 6" o.c. Deck side laps are secured 12" o.c. with Traxx/1 fasteners.

The deck shall record a Minimum Characteristic Resistance Force (MCRF) of 110 lbf when tested with fasteners, listed in this assembly, installed through to the deck in accordance with TAS 105.

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

System Type E(6): Base sheet mechanically fastened. Membranes subsequently adhered.

All General and System limitations apply.

Base Sheet: One ply of Nail Base P fastened as outlined below:

Fastening: Trufast FM-290 Base Sheet Fasteners at 10" o.c. in 4" lap and 10" o.c. in three equally spaced center rows.

Ply Sheet: (Optional) One or more plies of Nail Base or one or more plies of Type IV or VI ply sheet adhered to the base sheet in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs.

Membrane: One ply of APP Torch Base/Cap, APP Torch G, APP Torch S Premier, APP Torch G Premier, APP Torch G FR Premier, APP Torch G KoolCap or APP Torch G FR KoolCap, torch applied.

Surfacing: (Optional) Install one of the approved surfacing products listed in Table 4 to obtain desired coating or required fire classification.

Maximum Design Pressure: -90.0 psf; (See General Limitation #7.)



Membrane Type: SBS/APP
Deck Type 7: Recover, Non-Insulated
Deck Description: Min. ¹⁹/₃₂" plywood or wood plank, attached to structural supports at a maximum of 24" o.c. with #10 wood screws at 6" o.c.
The deck should record a Minimum Characteristic Resistance Force (MCRF) of 66 lbf. when tested with fasteners, listed in this assembly, installed through to the deck in accordance with TAS 105.
System Type E(7): Base sheet is mechanically attached to roof deck. Membranes subsequently adhered.

All General and System Limitations apply.

Base Sheet: One ply of APP Torch Base Premier or G2 Base Sheet fastened to the deck as described below:

Fastening: Attach base sheet using OMG #12 Standard Roofgrip or OMG Heavy Duty fasteners with OMG 3 in. Round Metal Plates or OMG Flat Bottom Metal Plates spaced 6" o.c. in a 4" lap and 6" o.c. in three equally spaced staggered center rows.

Membrane: One ply of APP Torch Base/Cap, APP Torch G, APP Torch S Premier, APP Torch G Premier, APP Torch G FR Premier, APP Torch G KoolCap, or APP Torch G FR KoolCap, torch applied.

**Surfacing:
(Optional)** Install one of the approved surfacing products listed in Table 4 to obtain desired coating or required fire classification.

**Maximum Design
Pressure:** -90.0 psf; (See General Limitation #7)



Membrane Type: SBS/APP
Deck Type 7: Recover, Non-Insulated
Deck Description: Min ¹⁵/₃₂" plywood or wood plank attached to structural supports spaced at a maximum of 24" o.c. with #10 wood screws at 6" o.c.
The deck should record a Minimum Characteristic Resistance Force (MCRF) of 72 lbf. when tested with fasteners, listed in this assembly, installed through to the deck in accordance with TAS 105.
System Type E(8): Base sheet mechanically fastened. Membranes subsequently adhered.

All General and System Limitations apply.

Base Sheet: One ply of APP Torch Base Premier or G2 Base Sheet fastened to the deck as described below:

Fastening: Attach base sheet using Dekfast DF-#14-PH3 fasteners with Dekfast PLT-H-2-7/8 plates or OMG Heavy-Duty with OMG 3" Galvalume Steel Plates or OMG #14 Roofgrip fasteners with OMG Flat Bottom Plates or AccuTrac Flat Bottom Plates or Mule-Hide HDP Fastener with Mule-Hide 3" Insulation Plate or Simplex MAXX Cap Fasteners spaced 9" o.c. in 4" lap and 9" o.c. in four equally spaced staggered center rows.

**Ply Sheet:
(Optional)** One ply of Nail Base, Nail Base P, APP Torch Base/Cap, APP Torch S Premier APP Torch Base Premier torch applied.
Or
One ply of Nail Base or Nail Base P, adhered in full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs./sq.

Membrane: One ply of APP Torch Base/Cap, APP Torch G, APP Torch S Premier, APP Torch G Premier, APP Torch G FR Premier, APP Torch G KoolCap or APP Torch G FR KoolCap, torch applied.

**Surfacing:
(Optional)** Install one of the approved surfacing products listed in Table 4 to obtain desired coating or required fire classification.

**Maximum Design
Pressure:** -90.0 psf; (See General Limitation #7)



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- Membrane Type:** SBS/APP
- Deck Type 7:** Recover, Non-Insulated
- Deck Description:** Min. ¹⁹/₃₂" plywood or wood plank, attached to structural supports spaced at a maximum of 24" o.c. with #10 wood screws at 4" o.c.
- The deck should record a Minimum Characteristic Resistance Force (MCRF) of 59 lbf. when tested with fasteners, listed in this assembly, installed through to the deck in accordance with TAS 105.
- System Type E(9):** Base sheet is mechanically attached to roof deck. Membranes subsequently adhered.

All General and System Limitations apply.

- Base Sheet:** One ply of APP Torch Base Premier or G2 Base Sheet fastened to the deck as described below:
- Fastening:** Attach base sheet using OMG #12 Standard Roofgrip or OMG Heavy Duty fasteners with OMG 3 in. Round Metal Plates or OMG Flat Bottom Metal Plates spaced 6" o.c. in a 4" lap and 6" o.c. in five equally spaced staggered center rows.
- Membrane:** One ply of APP Torch Base/Cap, APP Torch G, APP Torch S Premier, APP Torch G Premier, APP Torch G FR Premier, APP Torch G KoolCap or APP Torch G FR KoolCap, torch applied.
- Surfacing:
(Optional)** Install one of the approved surfacing products listed in Table 4 to obtain desired coating or required fire classification.
- Maximum Design
Pressure:** -120.0 psf; (See General Limitation #7)



Membrane Type: SBS/APP
Deck Type 7: Recover, Non-Insulated
Deck Description: 2500 psi structural concrete or concrete plank / 18-22 ga. Steel, 33ksi.
System Type F(1): Optional base sheet fully adhered with approved asphalt. Membranes subsequently adhered

All General and System limitations apply.

Note: Existing roof surface shall be primed with PG 100 and allowed to dry prior to application of base sheet.

**Base Sheet:
(Optional)** One ply of Nail Base adhered in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs./sq.

**Ply Sheet:
(Optional)** One or more plies of Nail Base adhered in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs./sq.

Membrane: One ply of APP Torch Base/Cap, APP Torch G, APP Torch S Premier, APP Torch G Premier, APP Torch G FR Premier, APP Torch G KoolCap or APP Torch G FR KoolCap, torch applied.

**Surfacing:
(Optional)** Install one of the approved surfacing products listed in Table 4 to obtain desired coating or required fire classification.

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



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RECOVER SYSTEM LIMITATIONS:

1. All System Limitations and General Limitations shall apply. See specific deck type Notice of Acceptance for deck type System Limitations.
2. All assemblies listed herein shall be installed in compliance with the applicable sections of FBC 1521. Uplift performance of assemblies bonded to existing roofing system shall be verified per 1521.10. Uplift performance of assemblies mechanically attached through existing roofing system shall be verified per 1521.11.

GENERAL LIMITATIONS:

1. Fire classification is not part of this acceptance; refer to a current Approved Roofing Materials Directory for fire ratings of this product.
2. Insulation may be installed in multiple layers. The first layer shall be attached in compliance with Product Control Approval guidelines. All other layers shall be adhered in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs./sq. or mechanically attached using the fastening pattern of the top layer
3. All standard panel sizes are acceptable for mechanical attachment. When applied in approved asphalt, panel size shall be 4' x 4' maximum.
4. An overlay and/or recovery board insulation panel is required on all applications over closed cell foam insulations when the base sheet is fully mopped. If no recovery board is used the base sheet shall be applied using spot mopping with approved asphalt, 12" diameter circles, 24" o.c.; or strip mopped 8" ribbons in three rows, one at each side lap and one down the center of the sheet allowing a continuous area of ventilation. Encircling of the strips is not acceptable. A 6" break shall be placed every 12' in each ribbon to allow cross ventilation. Asphalt application of either system shall be at a minimum rate of 12 lbs./sq.
Note: Spot attached systems shall be limited to a maximum design pressure of -45 psf.
5. Fastener spacing for insulation attachment is based on a Minimum Characteristic Force (F') value of 275 lbf., as tested in compliance with Testing Application Standard TAS 105. If the fastener value, as field-tested, are below 275 lbf. insulation attachment shall not be acceptable.
6. Fastener spacing for mechanical attachment of anchor/base sheet or membrane attachment is based on a minimum fastener resistance value in conjunction with the maximum design value listed within a specific system. Should the fastener resistance be less than that required, as determined by the Building Official, a revised fastener spacing, prepared, signed and sealed by a Florida registered Professional Engineer, Registered Architect or Registered Roof Consultant may be submitted. Said revised fastener spacing shall utilize the withdrawal resistance value taken from Testing Application Standards TAS 105 and calculations in compliance with Roofing Application Standard RAS 117.
7. Perimeter and corner areas shall comply with the enhanced uplift pressure requirements of these areas. Fastener densities shall be increased for both insulation and base sheet as calculated in compliance with Roofing Application Standard RAS 117. 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



NOA No.: 20-0902.23
Expiration Date: 07/13/24
Approval Date: 10/22/20
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