MIAMI-DADE COUNTY
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) 31525-99
www.miamidade.gov/economy

NOTICE OF ACCEPTANCE (NOA)

The Garland Company, Inc.
3800 East 91st Street
Cleveland, OH 44105-2197

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: Garland Modified Bitumen Roofing Systems over Recover Decks.

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

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

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

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

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

This NOA renews NOA # 22-0811.09 and consists of pages 1 through 53.
The submitted documentation was reviewed by Alex Tigera.

MIAMI-DADE COUNTY APPROVED

ROOFING SYSTEM APPROVAL

Category:	Roofing
Sub-Category:	Modified Bitumen
Material:	SBS/SIS/SEBS
Deck Type:	Recover
Maximum Design Pressure:	See specific deck type.

TRADE NAMES OF PRODUCTS MANUFACTURED OR LABELED BY APPLICANT:

TABLE 1

Product	Dimensions	Test Specification	Product Description
HPR Tri-Base Premium	36” x 72’	ASTM D4601	Double asphalt coated, polyester/fiberglass/polyester scrim reinforced base sheet.
HPR Glasfelt	36” x 180’	ASTM D2178, Type IV	Asphalt impregnated glass felt
HPR Premium Glasfelt	36" x 180'	ASTM D2178, Type VI	Asphalt impregnated glass felt
HPR Glasbase	36” x 108’	ASTM D4601, Type II	Asphalt coated fiberglass base sheet.
HPR Premium Glasbase	36” x 72’	ASTM D4601, Type II	Asphalt coated fiberglass base sheet.
Millennium Base	39” x 51’5”	ASTM D6162	Smooth surfaced, SBS modified coal tar, fiberglass/polyester reinforced base sheet.
HPR Torch Base Sheet	39” x 34’8”	ASTM D6163	SBS modified, fiberglass reinforced, torch applied base sheet.
HPR Polyscrim Plus	40” x 324’	ASTM D5726	Polyester felt
Millennium FR Mineral	39” x 26’	ASTM D6162	Mineral surfaced, SBS modified coal tar, fiberglass/polyester reinforced membrane.
StressPly EUV FR Mineral	39” x 26’2”	ASTM D6162, Type III	Mineral surfaced, SBS/SIS modified, fiberglass/polyester reinforced membrane.
StressPly Plus	39" x 34'8”	ASTM D6162, Type III	Smooth surfaced, SBS modified, fiberglass/polyester scrim membrane.
StressPly Plus FR Mineral	39” x 26’2”	ASTM D6162, Type III	Mineral surfaced, SBS modified, fire retardant, UV resistant, fiberglass/polyester scrim membrane.

TRADE NAMES OF PRODUCTS MANUFACTURED OR LABELED BY APPLICANT:

TABLE 1

Product	Dimensions	Test Specification	Product Description
StressPly E FR Mineral	39" x 26'2"	ASTM D6162, Type III	Mineral surfaced, SBS/SIS modified, fire retardant, fiberglass/polyester reinforced membrane.
StressPly FR Mineral	39" x 26'2"	ASTM D6163, Type III	Mineral surfaced, SBS modified, fire retardant, fiberglass scrim membrane.
VersiPly Mineral	39" x 26'2"	ASTM D6163, Type III	Mineral surfaced, SBS modified, fiberglass scrim reinforced roofing membrane.
StressPly IV Mineral	39" x 26'2"	ASTM D6163, Type III	Mineral surfaced, SBS modified, fiberglass reinforced, torch applied cap sheet.
Garla-Prime VOC	5, 55 gallon	ASTM D41	Non-fibered, quick drying asphalt roof primer
Insul-Lock HR	1.5 liters	Proprietary	Polyurethane two component high rise insulation adhesive
Black-Knight	70 lb. keg	Proprietary	Polymer modified coal tar pitch.
Black-Knight Cold	5, 55 gallon	Proprietary	Polymer modified coal tar pitch.
Green-Lock Membrane Adhesive	5 gallon	Proprietary	Cold process roof coating and adhesive.
Weatherking	5, 55 gallon	ASTM D3019, Type III	Cold process roof coating and adhesive.
Weatherking Plus WC	5, 55 gallon	ASTM D3019, Type III	Cold process roof coating and adhesive.
Weatherking Flashing Adhesive	5, 55 gallon	ASTM D3019, Type III	Cold process roof flashing adhesive.
Garlastic KM Plus	60 lb. keg	TAS 121	SEBS modified, hot applied asphalt.
HPR All Temp Asphalt	100 lb. keg	TAS 121	Hot asphalt adhesive for modified bitumen and BUR roof systems.
GarMesh	6" x 150'	ASTM D1668	SBR coated woven fiberglass reinforcing membrane.
Grip Polyester Firm	10 sq.	ASTM D1682	Polyester reinforcing fabric for use in cold applied systems.

TRADE NAMES OF PRODUCTS MANUFACTURED OR LABELED BY APPLICANT:

TABLE 1

Product	Dimensions	Test Specification	Product Description
Grip Polyester Soft	10 sq.	ASTM D1682	Polyester reinforcing fabric, for use in cold applied systems.
Silver-Shield	5, 55 gallon	ASTM D2824, Type III	High solids, aluminized roof coating.
WeatherScreen	5, 55 gallon	ASTM D4479, Type I	Asbestos-free, heavy-bodied, fiber-reinforced, fire-rated asphalt roof coating.
Garla-Brite	5, 55 gallon	ASTM D4479, Type I	Asbestos-free, heavy-bodied, fiber-reinforced, fire-rated asphalt roof coating.
Energizer K Plus FR	5, 55 gallon	ASTM D4479, Type I	Multipurpose, rubberized, liquid waterproofing membrane.
Green-Lock Flashing Adhesive	3.5 gallon	Proprietary	Trowel grade, roofing mastic for use in repair and patching against leaks in built-up roofs.
Black-Knight Mastic	5 gallon	Proprietary	Trowel grade, tar based roofing mastic for use in repair and patching.
Flashing Bond	5 gallon	ASTM D4586	Trowel grade, asphalt based roofing mastic for use in repair and patching against leaks in built-up asphalt roofs.
Silver-Flash	5 gallon	ASTM D4586	Trowel grade, asphalt based roofing mastic for use in repair and patching against leaks in built-up asphalt roofs.
Garla-Flex	2, 5 gallon pail	ASTM D4586	Elastomeric, asphaltic compound formulated from a special weather and ozone-resistant thermoplastic rubber, plasticizing oils and bitumen. Asbestos free.

APPROVED INSULATIONS:

TABLE 2

Product Name	Product Description	Manufacturer (With Current NOA)
ACFoam-II, ACFoam-III	Polyisocyanurate foam insulation	Atlas Roofing Corporation
ACFoam Composite	Composite polyisocyanurate insulation board	Atlas Roofing Corporation
ISO 95+ GL	Polyisocyanurate foam insulation	Holcim Solutions and Products US, LLC.
DensDeck, DensDeck Prime	Water resistant gypsum board	Georgia Pacific Gypsum LLC
H-Shield	Polyisocyanurate foam insulation	Hunter Panels, LLC.
ENRGY 3, ENRGY 3 25 PSI	Polyisocyanurate foam insulation	Johns Manville, Corp.
Fesco Board	Expanded Perlite and fiber insulation	Johns Manville, Corp.
Retro-Fit Board	Expanded Perlite and fiber insulation	Johns Manville, Corp.
Ultra-Max, Multi-Max FA-3	Polyisocyanurate foam insulation	RMax Operating, LLC
Structodek High Density Fiberboard Roof Insulation	High Density wood fiber insulation board	Blue Ridge Fiberboard, Inc.

APPROVED FASTENERS/ADHESIVES:

TABLE 3

Fastener Number	Product Name	Product Description	Dimensions	Manufacturer (With Current NOA)
1.	Dekfast 12	Insulation fastener for wood, steel and concrete decks	Various	SFS Intec, Inc.
2.	Dekfast 14	Insulation fastener for wood, steel and concrete decks	Various	SFS Intec, Inc.
3.	Dekfast 15 HS	Insulation fastener for wood, steel and concrete decks	Various	SFS Intec, Inc.
4.	Dekfast Galvalume Steel Hex Plate	Galvalume hex stress plate.	2 7/8" x 3 1/4"	SFS Intec, Inc.
5.	Dekfast Dekflat Round Plastic Lock Plate	Polypropylene locking plate.	3" x 3 1/4"	SFS Intec, Inc.
6.	AccuTrac Plate	Galvalume stress plate.	3” square	OMG, Inc.
7.	#12 Standard Roofgrip	Insulation fastener	Various	OMG, Inc.
8.	#14 Roofgrip	Insulation fastener	Various	OMG, Inc.
9.	#15 Roofgrip	Insulation fastener	Various	OMG, Inc.
10.	OMG ASAP Pre-Assembled System	Pre-assembled Insulation fastener and plate	Various	OMG, Inc.
11.	OMG Lite-Deck	Carbon Steel CR-10 coanting insulation fastener	Various	OMG, Inc.
12.	Lite-Deck Plate	3" round galvalume AZ55 steel plate	3" round	OMG, Inc.
13.	OMG Plastic Plate	Polypropylene plastic plate	3¼”round	OMG, Inc.
14.	3” Round Metal Plate	3" round galvalume AZ50 steel plate	3" round	OMG, Inc.
15.	Trufast #12 DP Fastener	Insulation fastener for steel and wood decks	Various	Altenloh, Brinck & Co. U.S., Inc.
16.	Trufast #14 HD Fastener	Insulation fastener for steel and wood decks	Various	Altenloh, Brinck & Co. U.S., Inc.
17.	Trufast 3” Metal Insulation Plates	3" round galvalume AZ50 steel plate	3" round	Altenloh, Brinck & Co. U.S., Inc.

APPROVED FASTENERS/ADHESIVES:

TABLE 3

Fastener Number	Product Name	Product Description	Dimensions	Manufacturer (With Current NOA)
18.	OMG Heavy Duty Fastener	Insulation fastener for wood, steel and concrete.	Various	OMG, Inc.
19.	Trufast Twin Loc-Nail Assembled Fastener	Base ply fastening systems.		Altenloh, Brinck & Co. U.S., Inc.
20.	Flat Bottom Metal Plate	A2-SS aluminized steel plate	3” square	OMG, Inc.
21.	AccuTrac Hextra	Insulation fastener for steel and wood decks	Various	OMG, Inc.
22.	AccuTrac Flat Bottom Plate	A2-SS aluminized steel plate	3” square	OMG, Inc.
23.	Dekfast Galvalume Steel 3 in. Round	3" round galvalume AZ50 steel plate	3" round	SFS Intec, Inc.

EVIDENCE SUBMITTED:

Test Agency	Test Identifier	Description	Date
Dynatech Engineering Corporation	#4530.05.95-1	TAS 114	05/31/95
Factory Mutual Research Corporation	IVOA7.AM	FM 4470	02/21/95
	0Y5A6.AM	FM 4470	09/08/97
	1B4A7.AM	FM 4470	12/15/97
	3004392	FM 4470	09/21/99
	3000637	FM 4470	04/26/00
	0D9A0.AM	FM 4470	05/02/00
	3004907	FM 4470	05/16/00
	3009117	FM 4470	12/21/00
	3010113	FM 4470	11/18/02
	3014751	FM 4470	08/27/03
	3019046	FM 4470	03/04/05
	3021718	FM 4470	04/11/05
	3023724	FM 4470	07/20/05
	3032647	FM 4470	07/28/08
Momentum Technologies, Inc.	TX21G5A	ASTM D5147	04/25/06
	DX14C7A	ASTM D6163	03/16/07
	EX11L5A	ASTM D5147	03/19/07
	EX22B7A	ASTM D6162	04/11/07
	RX18C8A-R	ASTM D6162/D6163	03/28/08
PRI Construction Materials Technologies LLC	GRD-051-02-01	ASTM D2178	10/28/11
	GRD-052-02-01	ASTM D2178	10/28/11

EVIDENCE SUBMITTED:

Test Agency	Test Identifier	Description	Date
	GRD-054-02-01	ASTM D2626	11/17/11
Trinity | ERD	4544.11.06	TAS 114	11/02/06
	C8500SC.11.07-R1	TAS 117/ASTM D6862	08/07/09
	G32950.06.10	ASTM D4601	06/11/10
	4533.05.98-1-R1	TAS 114(J)	09/09/11
	G32700.09.11-1	ASTM D4601	09/16/11
	G39620.07.12	ASTM D4990	07/02/12
	G39630.07.12	Physical Properties	07/12/12
	G37200.10.12-1-R1	ASTM D6163/D4798	12/05/12
	G37200.10.12-4-R1	ASTM D6162	12/05/12
	G37200.10.12-7-R1	ASTM D6162	12/05/12
	G37200.10.12-9-R1	ASTM D6162/D4798	12/05/12
	G37200.10.12-10-R1	ASTM D6163/D4798	12/05/12
	G37200.10.12-5-R2	ASTM D6162	09/23/13
	G37200.10.12-6-R2	ASTM D6162/D4798	09/23/13
	G37200.10.12-2-R2	ASTM D6162/D4798	09/24/13
	G37200.10.12-3-R2	ASTM D6162/D4798	09/24/13
	G37200.10.12-11-R2	ASTM D6163/D4798	09/24/13
	G37200.10.12-12-R2	ASTM D6163/D4798	09/24/13
	G37200.09.13-10	ASTM D6163/D4798	09/24/13
	G37200.09.13-1	ASTM D6163/D4798	09/24/13
	G37200.08.12-13-R2	ASTM D6162/D4798	09/26/13

DECK STRESS ANALYSIS CALCULATIONS/REPORTS:

Engineer/Agency	Identifier	Assemblies	Date
Robert Nieminen, P.E.	Signed/Sealed Calculations	A(5), A(6), B(1), B(2), B(3), B(4), C(1), D(1), D(2), D(5)	11/02/16

APPROVED ASSEMBLIES:

Membrane Type: SBS/SIS/SEBS

Deck Type 7I: Recover, Insulated

Deck Description: Concrete

System Type A(1): All layers of insulation adhered with approved asphalt.

All General and System Limitations apply.

One or more layers of any of the following insulations:

Base Insulation Layer:	**Insulation Fasteners (Table 3)**	**Fastener Density/ft²**
ACFoam-II, ENRGY 3, ENRGY 3 25 PSI, ISO-95+ GL **Minimum 1.5" thick**	**N/A**	**N/A**

Top Insulation Layer:	**Insulation Fasteners (Table 3)**	**Fastener Density/ft²**
Structodek High Density Fiberboard Roof Insulation, Fesco Board, Retro-Fit Board **Minimum ½" thick**	**N/A**	**N/A**
Fesco Board, Retro-Fit Board **Minimum ¾" thick**	**N/A**	**N/A**
DensDeck, DensDeck Prime **Minimum ¼" thick**	**N/A**	**N/A**

Note: Existing roof shall be primed with ASTM D 41 asphalt primer and allowed to dry prior to application of base sheet. All insulation shall be adhered to the anchor sheet in full mopping of approved asphalt, HPR All Temp Asphalt or Garlastic KM Plus within the EVT range and at a rate of 20-40 lbs./100 ft². Please refer to Roofing Application Standard RAS 117 for insulation attachment. Insulation listed as base layer only shall be used only as base layers with a second layer of approved top layer insulation installed as the final membrane substrate. Composite insulation panels used as a top layer shall be placed with the polyisocyanurate side facing down.

Base/Ply Sheet: One or more plies of HPR Glasbase, HPR Premium Glasbase, HPR Tri-Base Premium, HPR Glasfelt, HPR Premium Glasfelt or HPR Polyscrim Plus adhered with a full mopping of approved asphalt, HPR All Temp Asphalt or Garlastic KM Plus within the EVT range and at a rate of 20-40 lbs./sq.

Membrane: One ply of StressPly E FR Mineral, StressPly FR Mineral, StressPly Plus, StressPly Plus FR Mineral, StressPly EUV FR Mineral or VersiPly Mineral adhered with a full mopping of approved asphalt, HPR All Temp Asphalt or Garlastic KM Plus within the EVT range and at a rate of 20-40 lbs./sq.

Surfacing:

Optional for FR or mineral surfaced Membranes. Required for non-FR or smooth surfaced membranes. Apply one of the below or any approved coating.

1. 400 lb./sq. gravel or 300 lb./sq. slag in a flood coat of approved mopping asphalt at an application rate of 60 lb./sq. or in Black-Knight at 70 lb./sq. or Black-Knight Cold at 5 gal./sq. (asphalt applied systems only, Not compatable with Weatherking and Weatherking Plus WC applied systems)
2. Minimum two coats of Garla-Brite applied at min. 0.5 gal./sq./coat
3. Energizer K Plus FR applied at 3.5 gal./sq. with minimum two coats of Garla-Brite applied at min 0.5 gal./sq./coat
4. WeatherScreen applied at min. 4 gal./sq. with minimum two coats of Garla-Brite applied at min. 0.5 gal./sq./coat
5. WeatherScreen applied at min. 4 gal./sq. with #11 roofing granules at 60 lb./sq.
6. WeatherScreen applied at applied at min. 4 gal./sq. with roofing gravel applied at 400 lb./sq.

Maximum Design Pressure:

-145 psf. (concrete deck only – for minimum 1.5" thick ENRGY 3 followed by Fesco Board or Retro-Fit Board, or minimum ¾" thick, applied in type III asphalt.) (See General Limitation #9.)

-237.5 psf. (concrete deck only – for minimum 1.5" thick ENRGY 3 followed by minimum ¼" DensDeck or DensDeck Prime, or minimum ½" Structodek High Density Fiberboard applied in type III asphalt.) (See General Limitation #9.)

Membrane Type: SBS/SIS/SEBS

Deck Type 7I: Recover, Insulated

Deck Description: Concrete

System Type A(2): All layers of insulation adhered with approved asphalt.

All General and System Limitations apply.

One or more layers of any of the following insulations:

Base Insulation Layer:	**Insulation Fasteners (Table 3)**	**Fastener Density/ft^2**
ACFoam-II, ENRGY 3, ENRGY 3 25 PSI, ISO-95+ GL Minimum 1.5" thick	**N/A**	**N/A**
Top Insulation Layer:	**Insulation Fasteners (Table 3)**	**Fastener Density/ft^2**
Fesco Board, Retro-Fit Board Minimum ¾" thick	**N/A**	**N/A**
Structodek High Density Fiberboard Roof Insulation Minimum ½" thick	**N/A**	**N/A**
DensDeck, DensDeck Prime Minimum ¼" thick	**N/A**	**N/A**

Note: Existing roof shall be primed with ASTM D 41 asphalt primer and allowed to dry prior to application of base sheet. All insulation shall be adhered to the anchor sheet in full mopping of approved asphalt, HPR All Temp Asphalt or Garlastic KM Plus within the EVT range and at a rate of 20-40 lbs./100 ft^2. 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.

Base/Ply Sheet: One more plies of HPR Glasbase, HPR Premium Glasbase, HPR Tri-Base Premium, HPR Glasfelt, HPR Premium Glasfelt adhered with a full mopping of approved asphalt, HPR All Temp Asphalt or Garlastic KM Plus within the EVT range and at a rate of 20-40 lbs./sq.
Or
One ply of HPR Torch Base Sheet torch applied to coverboard.

Membrane: One ply of StressPly IV Mineral torch applied.

Surfacing: Optional for FR or mineral surfaced Membranes. Required for non-FR or smooth surfaced membranes. Apply one of the below or any approved coatings:

1. Minimum two coats of Garla-Brite applied at min. 0.5 gal./sq./coat

2. 400 lb./sq. gravel or 300 lb./sq. slag in a flood coat of approved mopping asphalt at an application rate of 60 lb./sq. or in Black-Knight at 70 lb./sq. or Black-Knight Cold at 5 gal./sq.

Maximum Design Pressure:

-145 psf. (concrete deck only - for minimum 1.5" thick ENRGY 3 followed by Fesco Board or Retro-Fit Board minimum ¾" thick, applied in type III asphalt.) (See General Limitation #9.)

-237.5 psf. (concrete deck only - for minimum 1.5" thick ENRGY 3 followed by minimum ¼" DensDeck or DensDeck Prime or minimum ½" HD Fiberboard applied in type III asphalt.) (See General Limitation #9.)

Membrane Type: SBS/SIS/SEBS

Deck Type 7I: Recover, Insulated

Deck Description: Min. 15/32" plywood APA rated, 40/20 span rating, CDX, 4-ply or greater plywood or wood plank secured to structural supports spaced 24" o.c. with #8 screws spaced 6" o.c. in every support. *The deck shall record a Minimum Characteristic Resistance Force (MCRF) of 90 lbf. when tested with fasteners, listed in this assembly, installed through to the deck in accordance with TAS 105.

System Type A(3): Anchor sheet mechanically fastened; all layers of insulation adhered with approved adhesive.

All General and System Limitations apply.

Anchor Sheet: One ply of HPR Glasbase, HPR Premium Glasbase or HPR Tri-Base Premium fastened to the deck as described below:

Fastening: Attach anchor sheet using Trufast 3" Metal Insulation plates with Trufast #14 HD fasteners, OMG 3 in. Round Metal Plates with OMG Heavy Duty fasteners, OMG Flat Bottom Metal Plates with #14 Roofgrip fasteners or SFS Dekfast Galvalume Steel Hex plates with Dekfast 14 fasteners spaced 6" o.c. within 4" wide lap and 6" o.c. within three equally spaced staggered rows in the field.

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

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

Note: All insulation shall be adhered to the anchor sheet in Insul-Lock HR applied in ¾"- 1" wide ribbons atop the anchor sheet fastener rows (approximately 8.8" o.c.). 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 may be used as a top layer placed with the polyisocyanurate side facing down.

Base/Ply Sheet: One or more plies of HPR Glasbase, HPR Premium Glasbase, HPR Tri-Base Premium, HPR Glasfelt, HPR Premium Glasfelt adhered with a full mopping of approved asphalt, HPR All Temp Asphalt or Garlastic KM Plus within the EVT range and at a rate of 25 lbs./sq.
Or
One ply of HPR Torch Base Sheet torch applied to coverboard.

Membrane: One ply of StressPly E FR Mineral, StressPly FR Mineral, StressPly Plus, StressPly Plus FR Mineral, StressPly EUV FR Mineral or VersiPly Mineral adhered with a full mopping of approved asphalt, HPR All Temp Asphalt or Garlastic KM Plus within the EVT range and at a rate of 25 lbs./sq.
Or
One ply of StressPly IV Mineral torch applied.

Surfacing: Optional for FR or mineral surfaced Membranes. Required for non-FR or smooth surfaced membranes. Apply one of the below or any approved coating.

1. 400 lb./sq. gravel or 300 lb./sq. slag in a flood coat of approved mopping asphalt at an application rate of 60 lb./sq. or in Black-Knight at 70 lb./sq. or Black-Knight Cold at 5 gal./sq. (asphalt applied systems only, Not compatable with Weatherking and Weatherking Plus WC applied systems)
2. Minimum two coats of Garla-Brite applied at min. 0.5 gal./sq./coat
3. Energizer K Plus FR applied at 3.5 gal./sq. with minimum two coats of Garla-Brite applied at min 0.5 gal./sq./coat
4. WeatherScreen applied at min. 4 gal./sq. with minimum two coats of Garla-Brite applied at min. 0.5 gal./sq./coat
5. WeatherScreen applied at min. 4 gal./sq. with #11 roofing granules at 60 lb./sq.
6. WeatherScreen applied at applied at min. 4 gal./sq. with roofing gravel applied at 400 lb./sq.

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

Membrane Type: SBS/SIS/SEBS

Deck Type 7I: Recover, Insulated

Deck Description: Cementitious Wood Fiber secured to steel structural supports spaced 2' o.c. with 2" barbed plates and #15 fasteners, spaced 2' o.c. in every support. *The deck shall record a Minimum Characteristic Resistance Force (MCRF) of 35 lbf. when tested with fasteners, listed in this assembly, installed through to the deck in accordance with TAS 105.

System Type A(4): Anchor sheet mechanically fastened; all layers of insulation adhered with approved adhesive.

All General and System Limitations apply.

Anchor Sheet: One ply of HPR Glasbase, HPR Premium Glasbase or HPR Tri-Base Premium fastened to the deck as described below:

Fastening: Attach anchor sheet using Trufast Twin Loc-Nail Assembled Fastener spaced 6" o.c. within 4" wide lap and 6" o.c. within three equally spaced staggered rows in the field. *Trufast Twin Loc-Nail Assembled Fastener shall be of sufficient length for minimum 1.8-inch embedment into the roof deck.*

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

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

Note: All insulation shall be adhered to the anchor sheet in Insul-Lock HR applied in ¾"- 1" wide ribbons atop the anchor sheet fastener rows (approximately 8.8" o.c.). 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 may be used as a top layer placed with the polyisocyanurate side facing down.

Base/Ply Sheet: One or more plies of HPR Glasbase, HPR Premium Glasbase, HPR Tri-Base Premium, HPR Glasfelt, HPR Premium Glasfelt adhered with a full mopping of approved asphalt, HPR All Temp Asphalt or Garlastic KM Plus within the EVT range and at a rate of 25 lbs./sq.
Or
One ply of HPR Torch Base Sheet torch applied to coverboard.

Membrane: One ply of StressPly E FR Mineral, StressPly FR Mineral, StressPly Plus, StressPly Plus FR Mineral, StressPly EUV FR Mineral or VersiPly Mineral adhered with a full mopping of approved asphalt, HPR All Temp Asphalt or Garlastic KM Plus within the EVT range and at a rate of 25 lbs./sq.
Or
One ply of StressPly IV Mineral torch applied.

Surfacing:

Optional for FR or mineral surfaced Membranes. Required for non-FR or smooth surfaced membranes. Apply one of the below or any approved coating.

1. 400 lb./sq. gravel or 300 lb./sq. slag in a flood coat of approved mopping asphalt at an application rate of 60 lb./sq. or in Black-Knight at 70 lb./sq. or Black-Knight Cold at 5 gal./sq. (asphalt applied systems only, Not compatable with Weatherking and Weatherking Plus WC applied systems)
2. Minimum two coats of Garla-Brite applied at min. 0.5 gal./sq./coat
3. Energizer K Plus FR applied at 3.5 gal./sq. with minimum two coats of Garla-Brite applied at min 0.5 gal./sq./coat
4. WeatherScreen applied at min. 4 gal./sq. with minimum two coats of Garla-Brite applied at min. 0.5 gal./sq./coat
5. WeatherScreen applied at min. 4 gal./sq. with #11 roofing granules at 60 lb./sq.
6. WeatherScreen applied at applied at min. 4 gal./sq. with roofing gravel applied at 400 lb./sq.

Maximum Design Pressure:

-52.5 psf. (See General Limitation #7.)

Membrane Type: SBS/SIS/SEBS

Deck Type 7I: Recover, Insulated

Deck Description: Min. 22 ga., Type B, Grade 33 steel deck secured 6" o.c. (every flute) using ¾" puddle welds to steel supports spaced 5 ft. o.c. Steel deck side laps attached 20" o.c. with Traxx/1 fasteners. *The deck shall record a Minimum Characteristic Resistance Force (MCRF) of 107 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 A(5): Anchor sheet mechanically fastened; one or more layers of insulation adhered with approved asphalt.

All General and System Limitations apply.

Anchor Sheet: One ply of HPR Glasbase, HPR Premium Glasbase, HPR Tri-Base Premium fastened to the deck using OMG Accutrac Hextra fasteners and Plates spaced 12" o.c. in a 4" lap and 12" o.c. in two staggered rows in the center of the sheet.

Insulation Layer:	**Insulation Fasteners (Table 3)**	**Fastener Density/ft^2**
ACFoam-II **Minimum 1.5" thick**	**N/A**	**N/A**
Structodek High Density Fiberboard Roof Insulation **Minimum ½" thick**	**N/A**	**N/A**

Note: Existing roof shall be primed with ASTM D 41 asphalt primer and allowed to dry prior to application of base sheet. All insulation shall be adhered to the anchor sheet in full mopping of approved asphalt, HPR All Temp Asphalt or Garlastic KM Plus within the EVT range and at a rate of 20-40 lbs./100 ft^2. 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.

Base/Ply Sheet: One or more plies of HPR Glasbase, HPR Premium Glasbase, HPR Tri-Base Premium, HPR Glasfelt, HPR Premium Glasfelt adhered with a full mopping of approved asphalt, HPR All Temp Asphalt or Garlastic KM Plus within the EVT range and at a rate of 20-40 lbs./sq.

Membrane: One ply of StressPly E FR Mineral, StressPly FR Mineral, StressPly Plus, StressPly Plus FR Mineral, StressPly EUV FR Mineral or VersiPly Mineral adhered with a full mopping of approved asphalt, HPR All Temp Asphalt or Garlastic KM Plus within the EVT range and at a rate of 20-40 lbs./sq.

Surfacing: Optional for FR or mineral surfaced Membranes. Required for non-FR or smooth surfaced membranes. Apply one of the below or any approved coating.

1. 400 lb./sq. gravel or 300 lb./sq. slag in a flood coat of approved mopping asphalt at an application rate of 60 lb./sq. or in Black-Knight at 70 lb./sq. or Black-Knight Cold at 5 gal./sq. (asphalt applied systems only, Not compatable with Weatherking and Weatherking Plus WC applied systems)
2. Minimum two coats of Garla-Brite applied at min. 0.5 gal./sq./coat
3. Energizer K Plus FR applied at 3.5 gal./sq. with minimum two coats of Garla-Brite applied at min 0.5 gal./sq./coat
4. WeatherScreen applied at min. 4 gal./sq. with minimum two coats of Garla-Brite applied at min. 0.5 gal./sq./coat
5. WeatherScreen applied at min. 4 gal./sq. with #11 roofing granules at 60 lb./sq.
6. WeatherScreen applied at applied at min. 4 gal./sq. with roofing gravel applied at 400 lb./sq.

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

Membrane Type: SBS/SIS/SEBS

Deck Type 7I: Recover, Insulated

Deck Description: Min. 22 ga., Type B, Grade 33 steel deck secured 6" o.c. (every flute) using ¾" puddle welds to steel supports spaced 5 ft. o.c. Steel deck side laps attached 20" o.c. with Traxx/1 fasteners. *The deck shall record a Minimum Characteristic Resistance Force (MCRF) of 107 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 A(6): Anchor sheet mechanically fastened; all layers of insulation adhered with approved asphalt.

All General and System Limitations apply.

Anchor Sheet: One ply of HPR Glasbase, HPR Premium Glasbase, HPR Tri-Base Premium fastened to the deck using OMG Accutrac Hextra fasteners and Plates spaced 12" o.c. in a 4" lap and 12" o.c. in two staggered rows in the center of the sheet.

Insulation Layer:	**Insulation Fasteners (Table 3)**	**Fastener Density/ft^2**
ACFoam-II Minimum 1.5" thick	**N/A**	**N/A**
Structodek High Density Fiberboard Roof Insulation Minimum ½" thick	**N/A**	**N/A**

Note: Existing roof shall be primed with ASTM D 41 asphalt primer and allowed to dry prior to application of base sheet. All insulation shall be adhered to the anchor sheet in full mopping of approved asphalt, HPR All Temp Asphalt or Garlastic KM Plus within the EVT range and at a rate of 20-40 lbs./100 ft$^{2.}$ 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.

Base/Ply Sheet: One more plies of HPR Glasbase, HPR Premium Glasbase, HPR Tri-Base Premium, HPR Glasfelt, HPR Premium Glasfelt adhered with a full mopping of approved asphalt, HPR All Temp Asphalt or Garlastic KM Plus within the EVT range and at a rate of 20-40 lbs./sq.
Or
One ply of HPR Torch Base Sheet torch applied to coverboard.

Membrane: One ply of StressPly IV Mineral torch applied.

Surfacing: Optional for Stress Ply IV Mineral. Required for StressPly. Apply one of the below or any approved coating.

1. Minimum two coats of Garla-Brite applied at min. 0.5 gal./sq./coat
2. 400 lb./sq. gravel or 300 lb./sq. slag in a flood coat of approved mopping asphalt at an application rate of 60 lb./sq. or in Black-Knight at 70 lb./sq. or Black-Knight Cold at 5 gal./sq.

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

Membrane Type: SBS/SIS/SEBS

Deck Type 7I: Recover, Insulated

Deck Description: Min. 15/32" plywood APA rated, 40/20 span rating, CDX, 4-ply or greater plywood or wood plank secured to structural supports spaced 24" o.c. with #10 wood screws spaced 6" o.c. at perimeter and 12" o.c. at mid-span supports. *The deck shall record a Minimum Characteristic Resistance Force (MCRF) of 80 lbf. When tested with fasteners, listed in this assembly, installed through to the deck in accordance with TAS 105.

System Type A(7): Anchor sheet mechanically fastened; one or more layers of insulation adhered with approved asphalt.

All General and System Limitations apply.

Anchor Sheet: One ply of HPR Glasbase, HPR Premium Glasbase, HPR Tri-Base Premium fastened to the deck using SFS Dekfast 12 fasteners with SFS Defkast Galvalume Steel Hex plates, OMG #12 Standard Roofgrip or OMG Heavy Duty Fasteners with OMG 3 in. Round Metal Plates, or using OMG Accutrac Hextra fasteners and Accutrac Plates spaced 9" o.c. in a 4" lap and 9" o.c. in two staggered rows in the center of the sheet.

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

Top Insulation Layer:	**Insulation Fasteners (Table 3)**	**Fastener Density/ft^2**
Structodek High Density Fiberboard Roof Insulation, Fesco Board, Retro-Fit Board Minimum ½" thick	**N/A**	**N/A**
DensDeck, DensDeck Prime Minimum ¼" thick	**N/A**	**N/A**

Note: Existing roof shall be primed with ASTM D 41 asphalt primer and allowed to dry prior to application of base sheet. All insulation shall be adhered to the anchor sheet in full mopping of approved asphalt, HPR All Temp Asphalt or Garlastic KM Plus within the EVT range and at a rate of 20-40 lbs./100 ft^2. 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.

Base/Ply Sheet: One or more plies of HPR Glasbase, HPR Premium Glasbase, HPR Tri-Base Premium, HPR Glasfelt, HPR Premium Glasfelt, HPR Polyscrim Plus adhered with a full mopping of approved asphalt, HPR All Temp Asphalt or Garlastic KM Plus within the EVT range and at a rate of 20-40 lbs./sq.

Membrane: One ply of StressPly E FR Mineral, StressPly FR Mineral, StressPly Plus, StressPly Plus FR Mineral, StressPly EUV FR Mineral or VersiPly Mineral adhered with a full mopping of approved asphalt, HPR All Temp Asphalt or Garlastic KM Plus within the EVT range and at a rate of 20-40 lbs./sq.

Surfacing: Optional for FR or mineral surfaced Membranes. Required for non-FR or smooth surfaced membranes. Apply one of the below or any approved coating.

1. 400 lb./sq. gravel or 300 lb./sq. slag in a flood coat of approved mopping asphalt at an application rate of 60 lb./sq. or in Black-Knight at 70 lb./sq. or Black-Knight Cold at 5 gal./sq. (asphalt applied systems only, Not compatable with Weatherking and Weatherking Plus WC applied systems)
2. Minimum two coats of Garla-Brite applied at min. 0.5 gal./sq./coat
3. Energizer K Plus FR applied at 3.5 gal./sq. with minimum two coats of Garla-Brite applied at min 0.5 gal./sq./coat
4. WeatherScreen applied at min. 4 gal./sq. with minimum two coats of Garla-Brite applied at min. 0.5 gal./sq./coat
5. WeatherScreen applied at min. 4 gal./sq. with #11 roofing granules at 60 lb./sq.
6. WeatherScreen applied at applied at min. 4 gal./sq. with roofing gravel applied at 400 lb./sq.

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

Membrane Type: SBS/SIS/SEBS

Deck Type 7I: Recover, Insulated

Deck Description: Min. 15/32" plywood APA rated, 40/20 span rating, CDX, 4-ply or greater plywood or wood plank secured to structural supports spaced 24" o.c. with #10 wood screws spaced 6" o.c. at perimeter and 12" o.c. at mid-span supports. *The deck shall record a Minimum Characteristic Resistance Force (MCRF) of 80 lbf. when tested with fasteners, listed in this assembly, installed through to the deck in accordance with TAS 105.

System Type A(8): Anchor sheet mechanically fastened; all layers of insulation adhered with approved asphalt.

All General and System Limitations apply.

Anchor Sheet: One ply of HPR Glasbase, HPR Premium Glasbase, HPR Tri-Base Premium fastened to the deck using SFS Dekfast 12 fasteners with SFS Dekfast Galvalume Steel Hex plates, OMG #12 Standard Roofgrip or OMG Heavy Duty Fasteners with OMG 3 in. Round Metal Plates, or OMG Accutrac Hextra fasteners and Accutrac Plates spaced 9" o.c. in a 4" lap and 9" o.c. in two staggered rows in the center of the sheet.

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

Top Insulation Layer:	**Insulation Fasteners (Table 3)**	**Fastener Density/ft^2**
Structodek High Density Fiberboard Roof Insulation Minimum ½" thick	**N/A**	**N/A**
DensDeck, DensDeck Prime Minimum ¼" thick	**N/A**	**N/A**

Note: Existing roof shall be primed with ASTM D 41 asphalt primer and allowed to dry prior to application of base sheet. All insulation shall be adhered to the anchor sheet in full mopping of approved asphalt, HPR All Temp Asphalt or Garlastic KM Plus within the EVT range and at a rate of 20-40 lbs./100 ft$^{2.}$ 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.

Base/Ply Sheet: One more plies of HPR Glasbase, HPR Premium Glasbase, HPR Tri-Base Premium, HPR Glasfelt, HPR Premium Glasfelt adhered with a full mopping of approved asphalt, HPR All Temp Asphalt or Garlastic KM Plus within the EVT range and at a rate of 20-40 lbs./sq.
Or
One ply of HPR Torch Base Sheet torch applied to coverboard.

Membrane: One ply of StressPly IV Mineral torch applied.

Surfacing: Optional for Stress Ply IV Mineral. Required for StressPly. Apply one of the below or any approved coating.

1. Minimum two coats of Garla-Brite applied at min. 0.5 gal./sq./coat
2. 400 lb./sq. gravel or 300 lb./sq. slag in a flood coat of approved mopping asphalt at an application rate of 60 lb./sq. or in Black-Knight at 70 lb./sq. or Black-Knight Cold at 5 gal./sq.

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

Membrane Type: SBS/SIS/SEBS

Deck Type 7I: Recover, Insulated

Deck Description: Min. 15/32" plywood APA rated, 40/20 span rating, CDX, 4-ply or greater or wood plank secured to structural supports spaced 24" o.c. with #8 screws spaced 6" o.c. in every support. *The deck shall record a Minimum Characteristic Resistance Force (MCRF) of 90 lbf. when tested with fasteners, listed in this assembly, installed through to the deck in accordance with TAS 105.

System Type A(9): Anchor sheet mechanically fastened; all layers of insulation adhered with approved asphalt.

All General and System Limitations apply.

Anchor Sheet: One ply of HPR Glasbase, HPR Premium Glasbase or HPR Tri-Base Premium fastened to the deck as described below:

Fastening: Attach anchor sheet using Trufast 3" Metal Insulation plates with Trufast #14 HD fasteners, OMG 3 in. Round Metal Plates with OMG Heavy Duty fasteners, OMG Flat Bottom Metal Plates with #14 Roofgrip fasteners or SFS Dekfast Galvalume Steel Hex plates with Dekfast 14 fasteners spaced 6" o.c. within 4" wide lap and 6" o.c. within three equally spaced staggered rows in the field.

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

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

Note: All insulation shall be adhered to the anchor sheet in full mopping of approved hot asphalt, HPR All Temp Asphalt or Garlastic KM Plus within the EVT range and at a rate of 25 lbs./100 ft^2. 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 may be used as a top layer placed with the polyisocyanurate side facing down.

Base/Ply Sheet: One or more plies of HPR Glasbase, HPR Premium Glasbase, HPR Tri-Base Premium, HPR Glasfelt, HPR Premium Glasfelt adhered with a full mopping of approved asphalt, HPR All Temp Asphalt or Garlastic KM Plus within the EVT range and at a rate of 25 lbs./sq.
Or
One ply of HPR Torch Base Sheet torch applied to coverboard.

Membrane: One ply of StressPly E FR Mineral, StressPly FR Mineral, StressPly Plus, StressPly Plus FR Mineral, StressPly EUV FR Mineral or VersiPly Mineral adhered with a full mopping of approved asphalt, HPR All Temp Asphalt or Garlastic KM Plus within the EVT range and at a rate of 25 lbs./sq.
Or
One ply of StressPly IV Mineral torch applied.

Surfacing: Optional for FR or mineral surfaced Membranes. Required for non-FR or smooth surfaced membranes. Apply one of the below or any approved coating.

1. 400 lb./sq. gravel or 300 lb./sq. slag in a flood coat of approved mopping asphalt at an application rate of 60 lb./sq. or in Black-Knight at 70 lb./sq. or Black-Knight Cold at 5 gal./sq. (asphalt applied systems only, Not compatable with Weatherking and Weatherking Plus WC applied systems)
2. Minimum two coats of Garla-Brite applied at min. 0.5 gal./sq./coat
3. Energizer K Plus FR applied at 3.5 gal./sq. with minimum two coats of Garla-Brite applied at min 0.5 gal./sq./coat
4. WeatherScreen applied at min. 4 gal./sq. with minimum two coats of Garla-Brite applied at min. 0.5 gal./sq./coat
5. WeatherScreen applied at min. 4 gal./sq. with #11 roofing granules at 60 lb./sq.
6. WeatherScreen applied at applied at min. 4 gal./sq. with roofing gravel applied at 400 lb./sq.

Maximum Design Pressure: -135 psf. (See General Limitation #7.)

Membrane Type: SBS/SIS/SEBS

Deck Type 7I: Recover, Insulated

Deck Description: Cementitious Wood Fiber secured to steel structural supports spaced 2' o.c. with 2" barbed plates and #15 fasteners, spaced 2' o.c. in every support. *The deck shall record a Minimum Characteristic Resistance Force (MCRF) of 115 lbf. when tested with fasteners, listed in this assembly, installed through to the deck in accordance with TAS 105.

System Type A(10): Anchor sheet mechanically fastened; all layers of insulation adhered with approved asphalt

All General and System Limitations apply.

Anchor Sheet: One ply of HPR Glasbase, HPR Premium Glasbase or HPR Tri-Base Premium fastened to the deck as described below:

Fastening: Attach anchor sheet using Trufast Twin Loc-Nail Assembled Fastener spaced 6" o.c. within 4" wide lap and 6" o.c. within three equally spaced staggered rows in the field. *Trufast Twin Loc-Nail Assembled Fastener shall be of sufficient length for minimum 1.8-inch embedment into the roof deck*

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

Top Insulation Layer:	**Insulation Fasteners (Table 3)**	**Fastener Density/ft²**
DensDeck Prime Minimum ¼" thick	**N/A**	**N/A**

Note: All insulation shall be adhered to the anchor sheet in full mopping of approved hot asphalt, HPR All Temp Asphalt or Garlastic KM Plus within the EVT range and at a rate of 25 lbs./100 ft². 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 may be used as a top layer placed with the polyisocyanurate side facing down.

Base/Ply Sheet: One or more plies of HPR Glasbase, HPR Premium Glasbase, HPR Tri-Base Premium, HPR Glasfelt, HPR Premium Glasfelt adhered with a full mopping of approved asphalt, HPR All Temp Asphalt or Garlastic KM Plus within the EVT range and at a rate of 25 lbs./sq.
Or
One ply of HPR Torch Base Sheet torch applied to coverboard.

Membrane: One ply of StressPly E FR Mineral, StressPly FR Mineral, StressPly Plus, StressPly Plus FR Mineral, StressPly EUV FR Mineral or VersiPly Mineral adhered with a full mopping of approved asphalt, HPR All Temp Asphalt or Garlastic KM Plus within the EVT range and at a rate of 25 lbs./sq.
Or
One ply of StressPly IV Mineral torch applied.

Surfacing: Optional for FR or mineral surfaced Membranes. Required for non-FR or smooth surfaced membranes. Apply one of the below or any approved coating.

1. 400 lb./sq. gravel or 300 lb./sq. slag in a flood coat of approved mopping asphalt at an application rate of 60 lb./sq. or in Black-Knight at 70 lb./sq. or Black-Knight Cold at 5 gal./sq. (asphalt applied systems only, Not compatable with Weatherking and Weatherking Plus WC applied systems)
2. Minimum two coats of Garla-Brite applied at min. 0.5 gal./sq./coat
3. Energizer K Plus FR applied at 3.5 gal./sq. with minimum two coats of Garla-Brite applied at min 0.5 gal./sq./coat
4. WeatherScreen applied at min. 4 gal./sq. with minimum two coats of Garla-Brite applied at min. 0.5 gal./sq./coat
5. WeatherScreen applied at min. 4 gal./sq. with #11 roofing granules at 60 lb./sq.
6. WeatherScreen applied at applied at min. 4 gal./sq. with roofing gravel applied at 400 lb./sq.

Maximum Design Pressure: -135 psf. (See General Limitation #7.)

Membrane Type: SBS/SIS/SEBS

Deck Type 7I: Recover, Insulated

Deck Description: 18-22 ga., Type B, Grade 33 steel deck secured 6" o.c. (every flute) using ¾" puddle welds to steel supports spaced 5 ft. o.c. Steel deck side laps attached 20" o.c. with Traxx/1 fasteners. *The deck shall record a Minimum Characteristic Resistance Force (MCRF) of 220 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 B(1): Base layers of insulation mechanically fastened, top layer adhered with approved asphalt.

All General and System Limitations apply.

One or more layers of any of the following insulations:

Base Insulation Layer:	**Insulation Fasteners (Table 3)**	**Fastener Density/ft²**
ACFoam-II **Minimum 1.5" thick**	**7 & 14**	**1:1.33 ft²**

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

Top Insulation Layer:	**Insulation Fasteners (Table 3)**	**Fastener Density/ft²**
Structodek High Density Fiberboard Roof Insulation **Minimum ½" thick**	**N/A**	**N/A**
DensDeck, DensDeck Prime **Minimum ¼" thick**	**N/A**	**N/A**

Note: Top layer of insulation shall be adhered with approved hot asphalt, HPR All Temp Asphalt or Garlastic KM Plus 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. 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 panels may be used as a top layer placed with the polyisocyanurate side face down.

Base/Ply Sheet: One or more plies of HPR Glasbase, HPR Premium Glasbase, HPR Tri-Base Premium, HPR Glasfelt, HPR Premium Glasfelt, HPR Polyscrim Plus adhered with a full mopping of approved asphalt, HPR All Temp Asphalt or Garlastic KM Plus within the EVT range and at a rate of 20-40 lbs./sq.

Membrane: One ply of StressPly E FR Mineral, StressPly FR Mineral, StressPly Plus, StressPly Plus FR Mineral, StressPly EUV FR Mineral or VersiPly Mineral adhered with a full mopping of approved asphalt, HPR All Temp Asphalt or Garlastic KM Plus within the EVT range and at a rate of 20-40 lbs./sq.

Surfacing: Optional for FR or mineral surfaced Membranes. Required for non-FR or smooth surfaced membranes. Apply one of the below or any approved coating.

1. 400 lb./sq. gravel or 300 lb./sq. slag in a flood coat of approved mopping asphalt at an application rate of 60 lb./sq. or in Black-Knight at 70 lb./sq. or Black-Knight Cold at 5 gal./sq. (asphalt applied systems only, Not compatable with Weatherking and Weatherking Plus WC applied systems)
2. Minimum two coats of Garla-Brite applied at min. 0.5 gal./sq./coat
3. Energizer K Plus FR applied at 3.5 gal./sq. with minimum two coats of Garla-Brite applied at min 0.5 gal./sq./coat
4. WeatherScreen applied at min. 4 gal./sq. with minimum two coats of Garla-Brite applied at min. 0.5 gal./sq./coat
5. WeatherScreen applied at min. 4 gal./sq. with #11 roofing granules at 60 lb./sq.
6. WeatherScreen applied at applied at min. 4 gal./sq. with roofing gravel applied at 400 lb./sq.

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

Membrane Type: SBS/SIS/SEBS

Deck Type 7I: Recover, Insulated

Deck Description: 18-22 ga., Type B, Grade 33 steel deck secured 6" o.c. (every flute) using ¾" puddle welds to steel supports spaced 5 ft. o.c. Steel deck side laps attached 20" o.c. with Traxx/1 fasteners. *The deck shall record a Minimum Characteristic Resistance Force (MCRF) of 220 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 B(2): Base layers of insulation mechanically fastened, top layer adhered with approved asphalt.

All General and System Limitations apply.

One or more layers of any of the following insulations:

Base Insulation Layer:	**Insulation Fasteners (Table 3)**	**Fastener Density/ft²**
ACFoam-II **Minimum 1.5" thick**	**7 & 14**	**1:1.33 ft²**

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

Top Insulation Layer:	**Insulation Fasteners (Table 3)**	**Fastener Density/ft²**
Structodek High Density Fiberboard Roof Insulation **Minimum ½" thick**	**N/A**	**N/A**
DensDeck, DensDeck Prime **Minimum ½" thick**	**N/A**	**N/A**

Note: Top layer of insulation shall be adhered with approved hot asphalt, HPR All Temp Asphalt or Garlastic KM Plus 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. 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 panels may be used as a top layer placed with the polyisocyanurate side face down.

Base/Ply Sheet: One more plies of HPR Glasbase, HPR Premium Glasbase, HPR Tri-Base Premium, HPR Glasfelt, HPR Premium Glasfelt adhered with a full mopping of approved asphalt, HPR All Temp Asphalt or Garlastic KM Plus within the EVT range and at a rate of 20-40 lbs./sq.
Or
One ply of HPR Torch Base Sheet torch applied to coverboard.

Membrane: One ply of StressPly IV Mineral torch applied.

Surfacing: Optional for FR or mineral surfaced Membranes. Required for non-FR or smooth surfaced membranes. Apply one of the below or any approved coatings:

1. Minimum two coats of Garla-Brite applied at min. 0.5 gal./sq./coat
2. 400 lb./sq. gravel or 300 lb./sq. slag in a flood coat of approved mopping asphalt at an application rate of 60 lb./sq. or in Black-Knight at 70 lb./sq. or Black-Knight Cold at 5 gal./sq.

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

Membrane Type: SBS/SIS/SEBS

Deck Type 7I: Recover, Insulated

Deck Description: 18-22 ga., Type B, Grade 80 steel deck secured with Traxx/5 fasteners 6" o.c. (every flute) to steel supports spaced 6' o.c. Side laps attached 24" o.c. with Traxx/1 fasteners. *The deck shall record a Minimum Characteristic Resistance Force (MCRF) of 225 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 B(3): Base layer of insulation mechanically fastened, top layer adhered with approved asphalt or adhesive.

All General and System Limitations apply.

Base Insulation Layer:	**Insulation Fasteners (Table 3)**	**Fastener Density/ft²**
ACFoam-II, ENRGY 3, H-Shield Minimum 2" thick	**17 & 16, 14 & 16, 8 & 6 or 4**	**1:1 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/ft²**
DensDeck Prime Minimum ½" thick	**N/A**	**N/A**

Note: Top layer of insulation shall be adhered in full mopping of approved hot asphalt, HPR All Temp Asphalt or Garlastic KM Plus within the EVT range and at a rate of 25 lbs./100 ft² or with Insul-Lock HR applied in ¾"-1" wide ribbons spaced 6" 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 panels may be used as a top layer placed with the polyisocyanurate side face down.

Base/Ply Sheet: One or more plies of HPR Glasbase, HPR Premium Glasbase, HPR Tri-Base Premium, HPR Glasfelt, HPR Premium Glasfelt adhered with a full mopping of approved asphalt, HPR All Temp Asphalt or Garlastic KM Plus within the EVT range and at a rate of 25 lbs./sq.

Or

One ply of HPR Torch Base Sheet torch applied to coverboard.

Membrane:

One ply of StressPly E FR Mineral, StressPly FR Mineral, StressPly Plus, StressPly Plus FR Mineral, StressPly EUV FR Mineral or VersiPly Mineral adhered with a full mopping of approved asphalt, HPR All Temp Asphalt or Garlastic KM Plus within the EVT range and at a rate of 25 lbs./sq.

Or

One ply of StressPly IV Mineral torch applied.

Surfacing:

Optional for FR or mineral surfaced Membranes. Required for non-FR or smooth surfaced membranes. Apply one of the below or any approved coating.

1. 400 lb./sq. gravel or 300 lb./sq. slag in a flood coat of approved mopping asphalt at an application rate of 60 lb./sq. or in Black-Knight at 70 lb./sq. or Black-Knight Cold at 5 gal./sq. (asphalt applied systems only, Not compatable with Weatherking and Weatherking Plus WC applied systems)
2. Minimum two coats of Garla-Brite applied at min. 0.5 gal./sq./coat
3. Energizer K Plus FR applied at 3.5 gal./sq. with minimum two coats of Garla-Brite applied at min 0.5 gal./sq./coat
4. WeatherScreen applied at min. 4 gal./sq. with minimum two coats of Garla-Brite applied at min. 0.5 gal./sq./coat
5. WeatherScreen applied at min. 4 gal./sq. with #11 roofing granules at 60 lb./sq.
6. WeatherScreen applied at applied at min. 4 gal./sq. with roofing gravel applied at 400 lb./sq.

Maximum Design Pressure:

-112.5 psf. (See General Limitation #7)

Membrane Type: SBS/SIS/SEBS

Deck Type 7I: Recover, Insulated

Deck Description: 18-22 ga., Type B, Grade 80 steel deck secured with Traxx/5 fasteners 6" o.c. (every flute) to steel supports spaced 6' o.c. Side laps attached 24" o.c. with Traxx/1 fasteners. *The deck shall record a Minimum Characteristic Resistance Force (MCRF) of 285 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 B(4): Base layer of insulation mechanically fastened, top layer adhered with approved asphalt.

All General and System Limitations apply.

Base Insulation Layer:	**Insulation Fasteners (Table 3)**	**Fastener Density/ft²**
ACFoam-II, ENRGY 3, H-Shield Minimum 2" thick	**17 & 16, 14 & 16, 8 & 6 or 4**	**1:1 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/ft²**
DensDeck Prime Minimum ½" thick	**N/A**	**N/A**

Note: Top layer of insulation shall be adhered in full mopping of approved hot asphalt, HPR All Temp Asphalt or Garlastic KM Plus within the EVT range and at a rate of 25 lbs./100 ft². 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 panels may be used as a top layer placed with the polyisocyanurate side face down.

Base/Ply Sheet: One or more plies of HPR Glasbase, HPR Premium Glasbase, HPR Tri-Base Premium, HPR Glasfelt, HPR Premium Glasfelt adhered with a full mopping of approved asphalt, HPR All Temp Asphalt or Garlastic KM Plus within the EVT range and at a rate of 25 lbs./sq.

Membrane: One ply of StressPly EUV FR Mineral adhered with a full mopping of approved asphalt, HPR All Temp Asphalt or Garlastic KM Plus within the EVT range and at a rate of 25 lbs./sq.

Surfacing:

Optional for FR or mineral surfaced Membranes. Required for non-FR or smooth surfaced membranes. Apply one of the below or any approved coating.

1. 400 lb./sq. gravel or 300 lb./sq. slag in a flood coat of approved mopping asphalt at an application rate of 60 lb./sq. or in Black-Knight at 70 lb./sq. or Black-Knight Cold at 5 gal./sq. (asphalt applied systems only, Not compatable with Weatherking and Weatherking Plus WC applied systems)
2. Minimum two coats of Garla-Brite applied at min. 0.5 gal./sq./coat
3. Energizer K Plus FR applied at 3.5 gal./sq. with minimum two coats of Garla-Brite applied at min 0.5 gal./sq./coat
4. WeatherScreen applied at min. 4 gal./sq. with minimum two coats of Garla-Brite applied at min. 0.5 gal./sq./coat
5. WeatherScreen applied at min. 4 gal./sq. with #11 roofing granules at 60 lb./sq.
6. WeatherScreen applied at applied at min. 4 gal./sq. with roofing gravel applied at 400 lb./sq.

Maximum Design Pressure:

-142.5 psf. (See General Limitation #7)

Membrane Type: SBS/SIS/SEBS

Deck Type 7I: Recover, Insulated

Deck Description: 18-22 ga., Type B, Grade 80 steel deck secured with Traxx/5 fasteners 6" o.c. (every flute) to steel supports spaced 6' o.c. Side laps attached 24" o.c. with Traxx/1 fasteners. *The deck shall record a Minimum Characteristic Resistance Force (MCRF) of 300 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(1): All layers of insulation simultaneously attached.

All General and System Limitations apply.

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

Note: All layers shall be simultaneously fastened; see top layer below for fasteners and density.

Top Insulation Layer:	**Insulation Fasteners (Table 3)**	**Fastener Density/ft²**
DensDeck Prime Minimum ½" thick	**17 & 16, 14 & 16, 8 & 6 or 4**	**1:1 ft²**

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

Base/Ply Sheet: One ply of HPR Torch Base Sheet torch applied to coverboard.

Membrane: One ply of StressPly E FR Mineral, StressPly FR Mineral, StressPly Plus, StressPly Plus FR Mineral, StressPly EUV FR Mineral or VersiPly Mineral adhered with a full mopping of approved asphalt, HPR All Temp Asphalt or Garlastic KM Plus within the EVT range and at a rate of 25 lbs./sq.
Or
One ply of StressPly IV Mineral torch applied.

Surfacing: Optional for FR or mineral surfaced Membranes. Required for non-FR or smooth surfaced membranes. Apply one of the below or any approved coating.

1. 400 lb./sq. gravel or 300 lb./sq. slag in a flood coat of approved mopping asphalt at an application rate of 60 lb./sq. or in Black-Knight at 70 lb./sq. or Black-Knight Cold at 5 gal./sq. (asphalt applied systems only, Not compatable with Weatherking and Weatherking Plus WC applied systems)
2. Minimum two coats of Garla-Brite applied at min. 0.5 gal./sq./coat
3. Energizer K Plus FR applied at 3.5 gal./sq. with minimum two coats of Garla-Brite applied at min 0.5 gal./sq./coat
4. WeatherScreen applied at min. 4 gal./sq. with minimum two coats of Garla-Brite applied at min. 0.5 gal./sq./coat
5. WeatherScreen applied at min. 4 gal./sq. with #11 roofing granules at 60 lb./sq.
6. WeatherScreen applied at applied at min. 4 gal./sq. with roofing gravel applied at 400 lb./sq.

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

Membrane Type: SBS/SIS/SEBS

Deck Type 7I: Recover, Insulated

Deck Description: Min. 22 ga., Type B, Grade 33 steel deck secured 6" o.c. (every flute) using ¾" puddle welds to steel supports spaced 5 ft. o.c. Steel deck side laps attached 20" o.c. with Traxx/1 fasteners. *The deck shall record a Minimum Characteristic Resistance Force (MCRF) of 107 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 D(1): All layers of insulation and base sheet simultaneously attached.

All General and System Limitations apply.

One or more layers of the following:

Base Insulation Layer:	**Insulation Fasteners (Table 3)**	**Fastener Density/ft²**
ACFoam-II Minimum 1.5" thick	**N/A**	**N/A**

Note: All layers of insulation and base sheet shall be simultaneously attached. See base sheet below for fasteners and density. Refer to Roofing Application Standard RAS 117 for insulation attachment requirements. Insulation shall have preliminary attachment, prior to the installation of the roofing membrane. 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.

Base Sheet: One ply of HPR Glasbase, HPR Premium Glasbase, HPR Tri-Base Premium fastened to the deck using OMG Accutrac Hextra fasteners and Plates spaced 12" o.c. in a 4" lap and 12" o.c. in two staggered rows in the center of the sheet.

Intermediate Coverboard: Apply onto the mechanically fastened base sheet a ½" thick Structodek High Density Fiberboard Roof Insulation adhered with a full mopping of approved asphalt, HPR All Temp Asphalt or Garlastic KM Plus within the EVT range and at a rate of 20-40 lbs./sq.

Ply Sheet: One or more plies of HPR Glasbase, HPR Premium Glasbase, HPR Tri-Base Premium, HPR Glasfelt, HPR Premium Glasfelt, HPR Polyscrim Plus adhered with a full mopping of approved asphalt, HPR All Temp Asphalt or Garlastic KM Plus within the EVT range and at a rate of 20-40 lbs./sq.

Membrane: One ply of StressPly E FR Mineral, StressPly FR Mineral, StressPly Plus, StressPly Plus FR Mineral, StressPly EUV FR Mineral or VersiPly Mineral adhered with a full mopping of approved asphalt, HPR All Temp Asphalt or Garlastic KM Plus within the EVT range and at a rate of 20-40 lbs./sq.

Surfacing: Optional for FR or mineral surfaced Membranes. Required for non-FR or smooth surfaced membranes. Apply one of the below or any approved coating.

1. 400 lb./sq. gravel or 300 lb./sq. slag in a flood coat of approved mopping asphalt at an application rate of 60 lb./sq. or in Black-Knight at 70 lb./sq. or Black-Knight Cold at 5

gal./sq. (asphalt applied systems only, Not compatable with Weatherking and Weatherking Plus WC applied systems)

2. Minimum two coats of Garla-Brite applied at min. 0.5 gal./sq./coat
3. Energizer K Plus FR applied at 3.5 gal./sq. with minimum two coats of Garla-Brite applied at min 0.5 gal./sq./coat
4. WeatherScreen applied at min. 4 gal./sq. with minimum two coats of Garla-Brite applied at min. 0.5 gal./sq./coat
5. WeatherScreen applied at min. 4 gal./sq. with #11 roofing granules at 60 lb./sq.
6. WeatherScreen applied at applied at min. 4 gal./sq. with roofing gravel applied at 400 lb./sq.

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

Membrane Type: SBS/SIS/SEBS

Deck Type 7I: Recover, Insulated

Deck Description: Min. 22 ga., Type B, Grade 33 steel deck secured 6" o.c. (every flute) using ¾" puddle welds to steel supports spaced 5 ft. o.c. Steel deck side laps attached 20" o.c. with Traxx/1 fasteners. *The deck shall record a Minimum Characteristic Resistance Force (MCRF) of 107 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 D(2): All layers of insulation and base sheet simultaneously attached.

All General and System Limitations apply.

One or more layers of the following:

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

Note: All layers of insulation and base sheet shall be simultaneously attached. See base sheet below for fasteners and density. Refer to Roofing Application Standard RAS 117 for insulation attachment requirements. Insulation shall have preliminary attachment, prior to the installation of the roofing membrane. 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.

Base Sheet: One ply of HPR Glasbase, HPR Premium Glasbase, HPR Tri-Base Premium fastened to the deck using OMG Accutrac Hextra fasteners and Plates spaced 12" o.c. in a 4" lap and 12" o.c. in two staggered rows in the center of the sheet.

Intermediate Coverboard: Apply onto the mechanically fastened base sheet a ½" thick Structodek High Density Fiberboard Roof Insulation adhered with a full mopping of approved asphalt, HPR All Temp Asphalt or Garlastic KM Plus within the EVT range and at a rate of 20-40 lbs./sq.

Base/Ply Sheet: One more plies of HPR Glasbase, HPR Premium Glasbase, HPR Tri-Base Premium, HPR Glasfelt, HPR Premium Glasfelt adhered with a full mopping of approved asphalt, HPR All Temp Asphalt or Garlastic KM Plus within the EVT range and at a rate of 20-40 lbs./sq.
Or
One ply of HPR Torch Base Sheet torch applied to coverboard.

Membrane: One ply of StressPly IV Mineral torch applied.

Surfacing: Optional for FR or mineral surfaced Membranes. Required for non-FR or smooth surfaced membranes. Apply one of the below or any approved coatings:

1. Minimum two coats of Garla-Brite applied at min. 0.5 gal./sq./coat
2. 400 lb./sq. gravel or 300 lb./sq. slag in a flood coat of approved mopping asphalt at an application rate of 60 lb./sq. or in Black-Knight or BlackKnight LV at 70 lb./sq. or Black-Knight Cold at 5 gal./sq.

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

Membrane Type: SBS/SIS/SEBS

Deck Type 7I: Recover, Insulated

Deck Description: Min. 15/32" plywood APA rated, 40/20 span rating, CDX, 4-ply or greater plywood or wood plank secured to structural supports spaced 24" o.c. with #10 wood screws spaced 6" o.c. at perimeter and 12" o.c. at mid-span supports. *The deck shall record a Minimum Characteristic Resistance Force (MCRF) of 80 lbf. When tested with fasteners, listed in this assembly, installed through to the deck in accordance with TAS 105.

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

All General and System Limitations apply.

One or more layers of the following:

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

Note: All layers of insulation and base sheet shall be simultaneously attached. See base sheet below for fasteners and density. Refer to Roofing Application Standard RAS 117 for insulation attachment requirements. Insulation shall have preliminary attachment, prior to the installation of the roofing membrane. 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.

Base Sheet: One ply of HPR Glasbase, HPR Premium Glasbase, HPR Tri-Base Premium fastened to the deck using SFS Dekfast 12 fasteners with SFS Dekfast Galvalume Steel Hex plates, OMG #12 Standard Roofgrip or OMG Heavy Duty Fasteners with OMG 3 in. Round Metal Plates, or using OMG Accutrac Hextra fasteners and Accutrac Plates spaced 9" o.c. in a 4" lap and 9" o.c. in two staggered rows in the center of the sheet.

Intermediate Coverboard: (Optional) Apply onto the mechanically fastened base sheet a ½" thick approved Structodek High Density Fiberboard Roof Insulation adhered with a full mopping of approved asphalt, HPR All Temp Asphalt or Garlastic KM Plus within the EVT range and at a rate of 20-40 lbs./sq.

Ply Sheet: One or more plies of HPR Glasbase, HPR Premium Glasbase, HPR Tri-Base Premium, HPR Glasfelt, HPR Premium Glasfelt, HPR Polyscrim Plus adhered with a full mopping of approved asphalt, HPR All Temp Asphalt or Garlastic KM Plus within the EVT range and at a rate of 20-40 lbs./sq.

Membrane: One ply of StressPly E FR Mineral, StressPly FR Mineral, StressPly Plus, StressPly Plus FR Mineral, StressPly EUV FR Mineral or VersiPly Mineral adhered with a full mopping of approved asphalt, HPR All Temp Asphalt or Garlastic KM Plus within the EVT range and at a rate of 20-40 lbs./sq.

Surfacing: Optional for FR or mineral surfaced Membranes. Required for non-FR or smooth surfaced membranes. Apply one of the below or any approved coating.

1. 400 lb./sq. gravel or 300 lb./sq. slag in a flood coat of approved mopping asphalt at an application rate of 60 lb./sq. or in Black-Knight at 70 lb./sq. or Black-Knight Cold at 5 gal./sq. (asphalt applied systems only, Not compatable with Weatherking and Weatherking Plus WC applied systems)
2. Minimum two coats of Garla-Brite applied at min. 0.5 gal./sq./coat
3. Energizer K Plus FR applied at 3.5 gal./sq. with minimum two coats of Garla-Brite applied at min 0.5 gal./sq./coat
4. WeatherScreen applied at min. 4 gal./sq. with minimum two coats of Garla-Brite applied at min. 0.5 gal./sq./coat
5. WeatherScreen applied at min. 4 gal./sq. with #11 roofing granules at 60 lb./sq.
6. WeatherScreen applied at applied at min. 4 gal./sq. with roofing gravel applied at 400 lb./sq.

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

Membrane Type: SBS/SIS/SEBS

Deck Type 7I: Recover, Insulated

Deck Description: Min. 15/32" plywood APA rated, 40/20 span rating, CDX, 4-ply or greater plywood or wood plank secured to structural supports spaced 24" o.c. with #10 wood screws spaced 6" o.c. at perimeter and 12" o.c. at mid-span supports. *The deck shall record a Minimum Characteristic Resistance Force (MCRF) of 80 lbf. when tested with fasteners, listed in this assembly, installed through to the deck in accordance with TAS 105.

System Type D(4): All layers of insulation and base sheet simultaneously attached.

All General and System Limitations apply.

One or more layers of the following:

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

Note: All layers of insulation and base sheet shall be simultaneously attached. See base sheet below for fasteners and density. Refer to Roofing Application Standard RAS 117 for insulation attachment requirements. Insulation shall have preliminary attachment, prior to the installation of the roofing membrane. 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.

Base Sheet: One ply of HPR Glasbase, HPR Premium Glasbase, HPR Tri-Base Premium fastened to the deck using SFS Dekfast 12 fasteners with SFS Dekfast Galvalume Steel Hex plates, OMG #12 Standard Roofgrip or OMG Heavy Duty Fasteners with OMG 3 in. Round Metal Plates, or using OMG Accutrac Hextra fasteners and Accutrac Plates spaced 9" o.c. in a 4" lap and 9" o.c. in two staggered rows in the center of the sheet.

Intermediate Coverboard: (Optional) Apply onto the mechanically fastened base sheet a ½" thick approved Structodek High Density Fiberboard Roof Insulation adhered with a full mopping of approved asphalt, HPR All Temp Asphalt or Garlastic KM Plus within the EVT range and at a rate of 20-40 lbs./sq.

Base/Ply Sheet: One more plies of HPR Glasbase, HPR Premium Glasbase, HPR Tri-Base Premium, HPR Glasfelt, HPR Premium Glasfelt adhered with a full mopping of approved asphalt, HPR All Temp Asphalt or Garlastic KM Plus within the EVT range and at a rate of 20-40 lbs./sq.
Or
One ply of HPR Torch Base Sheet torch applied to coverboard.

Membrane: One ply of StressPly IV Mineral torch applied.

Surfacing: Optional for FR or mineral surfaced Membranes. Required for non-FR or smooth surfaced membranes. Apply one of the below or any approved coatings:

1. Minimum two coats of Garla-Brite applied at min. 0.5 gal./sq./coat
2. 400 lb./sq. gravel or 300 lb./sq. slag in a flood coat of approved mopping asphalt at an application rate of 60 lb./sq. or in Black-Knight or BlackKnight LV at 70 lb./sq. or Black-Knight Cold at 5 gal./sq.

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

Membrane Type: SBS/SIS/SEBS

Deck Type 7I: Recover, Insulated

Deck Description: 18-22 ga., Type B, Grade 50 steel deck secured with Traxx/5 fasteners 6" o.c. (every flute) to steel supports spaced 6' o.c. Side laps attached 24" o.c. with Traxx/1 fasteners. *The deck shall record a Minimum Characteristic Resistance Force (MCRF) of 257 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 D(5): All layers of insulation and base sheet simultaneously attached.

All General and System Limitations apply.

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

Note: All layers of insulation and base sheet shall be simultaneously attached. See base sheet below for fasteners and density. Refer to Roofing Application Standard RAS 117 for insulation attachment requirements. Insulation shall have preliminary attachment, prior to the installation of the roofing membrane. 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.

Base Sheet: One ply HPR Tri-Base Premium, mechanically attached to the deck as follows:

Fastening: OMG Flat Bottom Metal Plates and #15 Roofgrip fasteners spaced 12" o.c. within 4" wide lap and 18" o.c. in two equally spaced staggered rows in the field.

Ply Sheet: One or more plies of HPR Torch Base Sheet torch applied.

Membrane:

One ply of StressPly E FR Mineral, StressPly FR Mineral, StressPly Plus, StressPly Plus FR Mineral, StressPly EUV FR Mineral or VersiPly Mineral adhered with a full mopping of approved asphalt, HPR All Temp Asphalt or Garlastic KM Plus within the EVT range and at a rate of 25 lbs./sq.

Or

One ply of StressPly IV Mineral torch applied.

Surfacing:

Optional for FR or mineral surfaced Membranes. Required for non-FR or smooth surfaced membranes. Apply one of the below or any approved coating.

1. 400 lb./sq. gravel or 300 lb./sq. slag in a flood coat of approved mopping asphalt at an application rate of 60 lb./sq. or in Black-Knight at 70 lb./sq. or Black-Knight Cold at 5 gal./sq. (asphalt applied systems only, Not compatable with Weatherking and Weatherking Plus WC applied systems)
2. Minimum two coats of Garla-Brite applied at min. 0.5 gal./sq./coat
3. Energizer K Plus FR applied at 3.5 gal./sq. with minimum two coats of Garla-Brite applied at min 0.5 gal./sq./coat
4. WeatherScreen applied at min. 4 gal./sq. with minimum two coats of Garla-Brite applied at min. 0.5 gal./sq./coat
5. WeatherScreen applied at min. 4 gal./sq. with #11 roofing granules at 60 lb./sq.
6. WeatherScreen applied at applied at min. 4 gal./sq. with roofing gravel applied at 400 lb./sq.

Maximum Design Pressure:

-112.5 psf. (See General Limitation #7)

Membrane Type: SBS/SIS/SEBS

Deck Type 7: Recover, Non-Insulated

Deck Description: Min. 15/32" plywood APA rated, 40/20 span rating, CDX, 4-ply or greater plywood or wood plank secured to structural supports spaced 24" o.c. with #10 wood screws spaced 6" o.c. at perimeter and 12" o.c. at mid-span supports. *The deck should record a Minimum Characteristic Resistance Force (MCRF) of 80 lbf. when tested with fasteners, listed in this assembly, installed through to the deck in accordance with TAS 105.

System Type E(1): Base sheet mechanically attached.

All General and System Limitations apply.

Base Sheet: One ply of HPR Glasbase, HPR Premium Glasbase, HPR Tri-Base Premium fastened to the deck using SFS Dekfast 12 fasteners with SFS Dekfast Galvalume Steel Hex plates, OMG #12 Standard Roofgrip or Heavy Duty Fasteners with OMG 3 in. Round Metal Plates, or using OMG Accutrac Hextra fasteners and Accutrac Plates spaced 9" o.c. in a 4" lap and 9" o.c. in two staggered rows in the center of the sheet.

Ply Sheet: One or more plies of HPR Glasbase, HPR Premium Glasbase, HPR Tri-Base Premium, HPR Glasfelt, HPR Premium Glasfelt or HPR Polyscrim Plus adhered with a full mopping of approved asphalt, HPR All Temp Asphalt or Garlastic KM Plus within the EVT range and at a rate of 20-40 lbs./sq.

Membrane: One ply of StressPly E FR Mineral, StressPly FR Mineral, StressPly Plus, StressPly Plus FR Mineral, StressPly EUV FR Mineral or VersiPly Mineral adhered with a full mopping of approved asphalt, HPR All Temp Asphalt or Garlastic KM Plus within the EVT range and at a rate of 20-40 lbs./sq.

Surfacing: Optional for FR or mineral surfaced Membranes. Required for non-FR or smooth surfaced membranes. Apply one of the below or any approved coating.

1. 400 lb./sq. gravel or 300 lb./sq. slag in a flood coat of approved mopping asphalt at an application rate of 60 lb./sq. or in Black-Knight at 70 lb./sq. or Black-Knight Cold at 5 gal./sq. (asphalt applied systems only, Not compatable with Weatherking and Weatherking Plus WC applied systems)
2. Minimum two coats of Garla-Brite applied at min. 0.5 gal./sq./coat
3. Energizer K Plus FR applied at 3.5 gal./sq. with minimum two coats of Garla-Brite applied at min 0.5 gal./sq./coat
4. WeatherScreen applied at min. 4 gal./sq. with minimum two coats of Garla-Brite applied at min. 0.5 gal./sq./coat
5. WeatherScreen applied at min. 4 gal./sq. with #11 roofing granules at 60 lb./sq.
6. WeatherScreen applied at applied at min. 4 gal./sq. with roofing gravel applied at 400 lb./sq.

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

Membrane Type: SBS/SIS/SEBS

Deck Type 7: Recover, Non-Insulated

Deck Description: Min. 15/32" plywood APA rated, 40/20 span rating, CDX, 4-ply or greater plywood or wood plank secured to structural supports spaced 24" o.c. with #10 wood screws spaced 6" o.c. at perimeter and 12" o.c. at mid-span supports. *The deck should record a Minimum Characteristic Resistance Force (MCRF) of 80 lbf. when tested with fasteners, listed in this assembly, installed through to the deck in accordance with TAS 105.

System Type E(2): Base sheet mechanically attached.

All General and System Limitations apply.

Base Sheet: One ply of HPR Glasbase, HPR Premium Glasbase, HPR Tri-Base Premium fastened to the deck using SFS Dekfast 12 fasteners with SFS Dekfast Galvalume Steel Hex plates, OMG #12 Standard Roofgrip or OMG Heavy Duty Fasteners with OMG 3 in. Round Metal Plates, or using OMG Accutrac Hextra fasteners and Accutrac Plates spaced 9" o.c. in a 4" lap and 9" o.c. in two staggered rows in the center of the sheet.

Ply Sheet: One more plies of HPR Glasbase, HPR Premium Glasbase, HPR Tri-Base Premium, HPR Glasfelt, HPR Premium Glasfelt adhered with a full mopping of approved asphalt, HPR All Temp Asphalt or Garlastic KM Plus within the EVT range and at a rate of 20-40 lbs./sq.
Or
One ply of HPR Torch Base Sheet torch applied to coverboard.

Membrane: One ply of StressPly IV Mineral torch applied.

Surfacing: Optional for FR or mineral surfaced Membranes. Required for non-FR or smooth surfaced membranes. Apply one of the below or any approved coatings:

1. Minimum two coats of Garla-Brite applied at min. 0.5 gal./sq./coat
2. 400 lb./sq. gravel or 300 lb./sq. slag in a flood coat of approved mopping asphalt at an application rate of 60 lb./sq. or in Black-Knight at 70 lb./sq. or Black-Knight Cold at 5 gal./sq.

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

Membrane Type: SBS/SIS/SEBS

Deck Type 7: Recover, Non-Insulated

Deck Description: Min. 15/32" plywood APA rated, 40/20 span rating, CDX, 4-ply or greater plywood or wood plank secured to structural supports spaced 24" o.c. with #8 screws spaced 6" o.c. in every support. *The deck shall record a Minimum Characteristic Resistance Force (MCRF) of 90 lbf. when tested with fasteners, listed in this assembly, installed through to the deck in accordance with TAS 105.

System Type E(3): Base sheet mechanically fastened

All General and System Limitations apply.

Base Sheet: One ply of HPR Glasbase, HPR Premium Glasbase or HPR Tri-Base Premium fastened to the deck as described below:

Fastening: Trufast 3" Metal Insulation plates with Trufast #14 HD fasteners, OMG 3 in. Round Metal Plates with OMG Heavy Duty fasteners, OMG Flat Bottom Metal Plates with #14 Roofgrip fasteners or SFS Dekfast Galvalume Steel Hex plates with Dekfast 14 fasteners spaced 6" o.c. within 4" wide lap and 6" o.c. within three equally spaced staggered rows in the field.

Ply Sheet: One or more plies of HPR Glasbase, HPR Premium Glasbase, HPR Tri-Base Premium, HPR Glasfelt, HPR Premium Glasfelt adhered with a full mopping of approved asphalt, HPR All Temp Asphalt or Garlastic KM Plus within the EVT range and at a rate of 25 lbs./sq.

Membrane: One ply of StressPly E FR Mineral, StressPly FR Mineral, StressPly Plus, StressPly Plus FR Mineral, StressPly EUV FR Mineral or VersiPly Mineral adhered with a full mopping of approved asphalt, HPR All Temp Asphalt or Garlastic KM Plus within the EVT range and at a rate of 25 lbs./sq.

Surfacing: Optional for FR or mineral surfaced Membranes. Required for non-FR or smooth surfaced membranes. Apply one of the below or any approved coating.

1. 400 lb./sq. gravel or 300 lb./sq. slag in a flood coat of approved mopping asphalt at an application rate of 60 lb./sq. or in Black-Knight at 70 lb./sq. or Black-Knight Cold at 5 gal./sq. (asphalt applied systems only, Not compatable with Weatherking and Weatherking Plus WC applied systems)
2. Minimum two coats of Garla-Brite applied at min. 0.5 gal./sq./coat
3. Energizer K Plus FR applied at 3.5 gal./sq. with minimum two coats of Garla-Brite applied at min 0.5 gal./sq./coat
4. WeatherScreen applied at min. 4 gal./sq. with minimum two coats of Garla-Brite applied at min. 0.5 gal./sq./coat
5. WeatherScreen applied at min. 4 gal./sq. with #11 roofing granules at 60 lb./sq.
6. WeatherScreen applied at applied at min. 4 gal./sq. with roofing gravel applied at 400 lb./sq.

Maximum Design Pressure: -135 psf. (See General Limitation #7)

Membrane Type: SBS/SIS/SEBS

Deck Type 7: Recover, Non-Insulated

Deck Description: Cementitious Wood Fiber secured to steel structural supports spaced 2' o.c. with 2" barbed plates and #15 fasteners, spaced 2' o.c. in every support. *The deck shall record a Minimum Characteristic Resistance Force (MCRF) of 115 lbf. when tested with fasteners, listed in this assembly, installed through to the deck in accordance with TAS 105.

System Type E(4): Base sheet mechanically fastened

All General and System Limitations apply.

Base Sheet: One ply of HPR Glasbase, HPR Premium Glasbase or HPR Tri-Base Premium fastened to the deck as described below:

Fastening: Attach anchor sheet using Trufast Twin Loc-Nail Assembled Fastener spaced 6" o.c. within 4" wide lap and 6" o.c. within three equally spaced staggered rows in the field. *Trufast Twin Loc-Nail Assembled Fastener shall be of sufficient length for minimum 1.8-inch embedment into the roof deck*

Ply Sheet: One or more plies of HPR Glasbase, HPR Premium Glasbase, HPR Tri-Base Premium, HPR Glasfelt, HPR Premium Glasfelt adhered with a full mopping of approved asphalt, HPR All Temp Asphalt or Garlastic KM Plus within the EVT range and at a rate of 25 lbs./sq.

Membrane: One ply of StressPly E FR Mineral, StressPly FR Mineral, StressPly Plus, StressPly Plus FR Mineral, StressPly EUV FR Mineral or VersiPly Mineral adhered with a full mopping of approved asphalt, HPR All Temp Asphalt or Garlastic KM Plus within the EVT range and at a rate of 25 lbs./sq.

Surfacing: Optional for FR or mineral surfaced Membranes. Required for non-FR or smooth surfaced membranes. Apply one of the below or any approved coating.

1. 400 lb./sq. gravel or 300 lb./sq. slag in a flood coat of approved mopping asphalt at an application rate of 60 lb./sq. or in Black-Knight at 70 lb./sq. or Black-Knight Cold at 5 gal./sq. (asphalt applied systems only, Not compatable with Weatherking and Weatherking Plus WC applied systems)
2. Minimum two coats of Garla-Brite applied at min. 0.5 gal./sq./coat
3. Energizer K Plus FR applied at 3.5 gal./sq. with minimum two coats of Garla-Brite applied at min 0.5 gal./sq./coat
4. WeatherScreen applied at min. 4 gal./sq. with minimum two coats of Garla-Brite applied at min. 0.5 gal./sq./coat
5. WeatherScreen applied at min. 4 gal./sq. with #11 roofing granules at 60 lb./sq.
6. WeatherScreen applied at applied at min. 4 gal./sq. with roofing gravel applied at 400 lb./sq.

Maximum Design Pressure: -172.5 psf. (See General Limitation #7)

Membrane Type: SBS/SIS/SEBS

Deck Type 7: Recover, Non-Insulated

Deck Description: Concrete

System Type F(1) Roof cover adhered with approved asphalt.

All General and System Limitations apply.

Base/Ply Sheet: One or more plies of HPR Glasbase, HPR Premium Glasbase, HPR Tri-Base Premium, HPR Glasfelt, HPR Premium Glasfelt, HPR Polyscrim Plus adhered to the primed deck with a full mopping of approved asphalt, HPR All Temp Asphalt or Garlastic KM Plus within the EVT range and at a rate of 20-40 lbs./sq.

Membrane: One ply of StressPly E FR Mineral, StressPly FR Mineral, StressPly Plus, StressPly Plus FR Mineral, StressPly EUV FR Mineral or VersiPly Mineral adhered with a full mopping of approved asphalt, HPR All Temp Asphalt or Garlastic KM Plus within the EVT range and at a rate of 20-40 lbs./sq.

Surfacing: Optional for FR or mineral surfaced Membranes. Required for non-FR or smooth surfaced membranes. Apply one of the below or any approved coating.

1. 400 lb./sq. gravel or 300 lb./sq. slag in a flood coat of approved mopping asphalt at an application rate of 60 lb./sq. or in Black-Knight at 70 lb./sq. or Black-Knight Cold at 5 gal./sq. (asphalt applied systems only, Not compatable with Weatherking and Weatherking Plus WC applied systems)
2. Minimum two coats of Garla-Brite applied at min. 0.5 gal./sq./coat
3. Energizer K Plus FR applied at 3.5 gal./sq. with minimum two coats of Garla-Brite applied at min 0.5 gal./sq./coat
4. WeatherScreen applied at min. 4 gal./sq. with minimum two coats of Garla-Brite applied at min. 0.5 gal./sq./coat
5. WeatherScreen applied at min. 4 gal./sq. with #11 roofing granules at 60 lb./sq.
6. WeatherScreen applied at applied at min. 4 gal./sq. with roofing gravel applied at 400 lb./sq.

Maximum Design Pressure: -375 psf.; Concrete deck only (See General Limitation #9.)

RECOVER SYSTEM LIMITATIONS:

1. All System Limitations and General Limitations shall apply. See specific deck type Notice of Acceptance for deck type System Limitations.
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 sidelap and one down the center of the sheet allowing a continuous area of ventilation. Encircling of the strips is not acceptable. A 6" break shall be placed every 12' in each ribbon to allow cross ventilation. Asphalt application of either system shall be at a minimum rate of 12 lbs./sq.
   Note: Spot attached systems shall be limited to a maximum design pressure of -45 psf.
5. Fastener spacing for insulation attachment is based on a Minimum Characteristic Force (F') value of 275 lbf., as tested in compliance with Testing Application Standard TAS 105. If the fastener value, as field-tested, are below 275 lbf. insulation attachment shall not be acceptable.
6. Fastener spacing for mechanical attachment of anchor/base sheet or membrane attachment is based on a minimum fastener resistance value in conjunction with the maximum design value listed within a specific system. Should the fastener resistance be less than that required, as determined by the Building Official, a revised fastener spacing, prepared, signed and sealed by a Florida registered Professional Engineer, Registered Architect, or Registered Roof Consultant may be submitted. Said revised fastener spacing shall utilize the withdrawal resistance value taken from Testing Application Standards TAS 105 and calculations in compliance with Roofing Application Standard RAS 117.
7. Perimeter and corner areas shall comply with the enhanced uplift pressure requirements of these areas. Fastener densities shall be increased for both insulation and base sheet as calculated in compliance with Roofing Application Standard RAS 117. Calculations prepared, signed and sealed by a Florida registered Professional Engineer, Registered Architect, or Registered Roof Consultant **(When this limitation is specifically referred within this NOA, General Limitation #9 will not be applicable.)**
8. All attachment and sizing of perimeter nailers, metal profile, and/or flashing termination designs shall conform with Roofing Application Standard RAS 111 and applicable wind load requirements.
9. The maximum designed pressure limitation listed shall be applicable to all roof pressure zones (i.e. field, perimeters, and corners). Neither rational analysis, nor extrapolation shall be permitted for enhanced fastening at enhanced pressure zones (i.e. perimeters, extended corners and corners). **(When this limitation is specifically referred within this NOA, General Limitation #7 will not be applicable.)**
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