DEPARTMENT OF PERMITTING, ENVIRONMENT, AND REGULATORY AFFAIRS (PERA)
BOARD AND CODE ADMINISTRATION DIVISION

NOTICE OF ACCEPTANCE (NOA)

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

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 PERA – 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. PERA 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 Roof System Over Wood Deck.

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 No. 06-1120.06 and consists of pages 1 through 28.
The submitted documentation was reviewed by Jorge L. Acebo.

ROOFING ASSEMBLY NOTICE OF ACCEPTANCE

Category:	Roofing
Sub-Category:	Modified Bitumen
Material:	SBS/SIS/SEBS
Deck Type:	Wood
Maximum Design Pressure	-135.0 psf

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 D 6162	Double asphalt coated, polyester/fiberglass/polyester scrim reinforced base sheet.
HPR Glasfelt	36” x 180’	ASTM D 2178, Type IV	Asphalt impregnated glass felt
HPR Premium Glasfelt	36" x 180'	ASTM D 2178, Type VI	Asphalt impregnated glass felt
HPR Glasbase	36” x 108’	ASTM D 4601, Type II	Asphalt coated fiberglass base sheet.
HPR Premium Glasbase	36” x 72’	ASTM D 4601, Type II	Asphalt coated fiberglass base sheet.
BK Glasfelt	36” x 180’	ASTM D 4990, Type I	Coal Tar impregnated glass felt
BK Premium Glasfelt	36" x 180'	ASTM D 4990, Type I	Coal Tar impregnated glass felt
HPR Polyscrim Plus	40” x 324’	ASTM D 5726	Polyester felt
StressPly EUV FR Mineral	39” x 26’2”	ASTM D 6162, Type III	Mineral surfaced, SBS/SIS modified, fiberglass/polyester reinforced membrane.
StressPly EUV	39" x 34’8”	ASTM D 6162, Type III	Smooth surfaced, SBS/SIS modified, fiberglass/polyester reinforced membrane.
StressPly Plus	39" x 34'8”	ASTM D 6162, Type III	Smooth surfaced, SBS modified, fiberglass/polyester scrim membrane.
StressPly Plus FR Mineral	39” x 26’2”	ASTM D 6162, Type III	Mineral surfaced, SBS modified, fire retardant, UV resistant, fiberglass/polyester scrim membrane.
StressPly E	39" x 34'8”	ASTM D 6162, Type III	Smooth surfaced, SBS/SIS modified, fiberglass/polyester reinforced membrane.
StressPly E FR Mineral	39" x 26'2”	ASTM D 6162, Type III	Mineral surfaced, SBS/SIS modified, fire retardant, fiberglass/polyester reinforced membrane.
StressPly FR Mineral	39” x 26’2”	ASTM D 6163, Type III	Mineral surfaced, SBS modified, fire retardant, fiberglass scrim membrane.

Product	Dimensions	Test Specification	Product Description
VersiPly 60	39" x 34'8”	ASTM D 6163, Type III	Smooth surfaced, SBS modified, fiberglass scrim reinforced roofing membrane.
VersiPly 80	39" x 34'8”	ASTM D 6163, Type III	Smooth surfaced, SBS modified, fiberglass scrim reinforced roofing membrane.
VersiPly Mineral	39" x 26'2”	ASTM D 6163, Type III	Mineral surfaced, SBS modified, fiberglass scrim reinforced roofing membrane.
StressPly IV	39” x 26’2”	ASTM D 6163, Type III	Smooth surfaced, SBS modified, fiberglass reinforced, torch applied cap sheet.
StressPly IV Mineral	39” x 26’2”	ASTM D 6163, Type III	Mineral surfaced, SBS modified, fiberglass reinforced, torch applied cap sheet.
StressPly IV UV Mineral	39” x 26’2”	ASTM D 6163, Type III	Mineral surfaced, SBS modified, fiberglass reinforced, torch applied cap sheet.
Garla-Prime	5, 55 gallon	ASTM D 41	Non-fibered, quick drying asphalt roof primer
Garla-Prime WB	5, 55 gallon	ASTM D 41	Non-fibered, quick drying asphalt roof primer
Insul-Lock II	3 gallon	Proprietary	Polyurethane low rise insulation adhesive
Black-Knight	70 lb. keg	Proprietary	Polymer modified coal tar pitch.
Black-Knight LV Flood Coat	70 lb. keg	Proprietary	Polymer modified coal tar pitch.
Black-Knight CTP	200 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 D 3019, Type III	Cold process roof coating and adhesive.
Weatherking Plus WC	5, 55 gallon	ASTM D 3019, Type III	Cold process roof coating and adhesive.
Weatherking Flashing Adhesive	5, 55 gallon	ASTM D 3019, 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 D 1668	SBR coated woven fiberglass reinforcing membrane.
Grip Polyester Firm	10 sq.	ASTM D 1682	Polyester reinforcing fabric for use in cold applied systems.
Grip Polyester Soft	10 sq.	ASTM D 1682	Polyester reinforcing fabric, for use in cold applied systems.
Pyramic	5, 55 gallon	Proprietary	White acrylic reflective roof coating
Solex	5, 55 gallon	Proprietary	White kynar Reflective roof coating
White-Knight	5, 55 gallon	Proprietary	White urethane reflective roof coating.

Product	Dimensions	Test Specification	Product Description
Garla-Shield	5, 55 gallon	ASTM D 1227, Type IV	Asphalt emulsion roof coating.
Silver-Shield	5, 55 gallon	ASTM D 2824, Type III	High solids, aluminized roof coating.
WeatherScreen	5, 55 gallon	ASTM D 4479, Type I	Asbestos-free, heavy-bodied, fiber-reinforced, fire-rated asphalt roof coating.
Garla-Brite	5, 55 gallon	ASTM D 4479, Type I	Asbestos-free, heavy-bodied, fiber-reinforced, fire-rated asphalt roof coating.
Energizer K Plus FR	5, 55 gallon	ASTM D 4479, 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 D 4586	Trowel grade, asphalt based roofing mastic for use in repair and patching against leaks in built-up asphalt roofs.
Silver-Flash	5 gallon	ASTM D 4586	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 D 4586	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 Energy Products
ISO 95+GL	Polyisocyanurate foam insulation	Firestone Building Products
High Density Wood Fiberboard	Wood fiber insulation board	Generic
Perlite Insulation	Perlite insulation board	Generic
DensDeck, DensDeck Prime	Water resistant gypsum board	G-P Gypsum Corp.
H-Shield	Polyisocyanurate foam insulation	Hunter Panels, Inc.
ENRGY-3, ENRGY 3 PSI-25	Polyisocyanurate foam insulation	Johns Manville
Fesco Board	Expanded mineral fiber insulation	Johns Manville
Retrofit Board	Perlite insulation board	Johns Manville
Multi-Max FA-3	Polyisocyanurate foam insulation	Rmax
Structodek High Density Fiberboard Roof Insulation	High Density wood fiber insulation board	Blue Ridge Fiberboard
FiberGlass Roof Insulation	Glass fiber/Mineral fiber insulation	Generic

APPROVED FASTENERS:

TABLE 3

Fastener Number	Product Name	Product Description	Dimensions	Manufacturer (With Current NOA)
1.	Dekfast Fasteners #12, #14 & #15	Insulation fastener for wood, steel and concrete decks	Various	SFS Intec, Inc.
2.	Dekfast Galvalume Steel Hex Plate	Galvalume hex stress plate.	2 7/8" x 3 1/4"	SFS Intec, Inc.
3.	#12 Roofgrip Fasteners	Insulation fastener for wood and steel.	Various	OMG, Inc.
4.	AccuTrac Plate	Galvalume stress plate.	3” square	OMG, Inc.
5.	OMG Fastener #12 & #14	Insulation fastener		OMG, Inc.
6.	OMG Fastener ASAP	Pre-assembled Insulation fastener and plate		OMG, Inc.
7.	OMG Plastic Plate	Polypropylene plastic plate	3.25" round	OMG, Inc.
8.	3” Round Metal Plate	3" round galvalume AZ50 steel plate	3" round	OMG, Inc.
9.	Tru-Fast	Insulation fastener for steel and wood decks		The Tru-Fast Corp.
10.	Tru-Fast 3” Metal Insulation Plates	3" round galvalume AZ50 steel plate	3" round	The Tru-Fast Corp.
11.	Tru-Fast Plastic Plates	Polyethylene plastic plate	3" round	The Tru-Fast Corp.
12.	AccuTrac Fastener	Insulation fastener for steel and wood decks	Various	OMG, Inc.
13.	AccuTrac Flat Bottom Plate	A2-SS aluminized steel plate	3” square	OMG, Inc.
14.	#14 & #15 Roofgrip Fasteners	Insulation fastener for wood, steel and concrete.	Various	OMG, Inc.
15.	Dekfast Galvalume Steel 3 in. Round	3" round galvalume AZ50 steel plate	3" round	SFS Intec, Inc.
16.	Flat Bottom Plate	A2-SS aluminized steel plate	3” square	OMG, Inc.

EVIDENCE SUBMITTED

Test Agency	Test Identifier	Description	Date
Dynatech Engineering Corporation	#4530.05.95-1	Wind Uplift Classification	5/31/95
Factory Mutual Research Corporation	IVOA7.AM	FM 4470	02/21/95
	1B4A7.AM	FM 4470	12/15/97
	4B4A9.AM	FM 4470	12/31/97
	0Y5A6.AM	FM 4470	09/08/97
	3D3A5.AM	FM 4470	09/15/98
	3004392	FM 4470	09/21/99
	3000637	FM 4470	4/26/00
	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
	3019046	FM 4470	03/04/05
	3021718	FM 4470	04/11/05
Momentum Technologies, Inc.	TX21G5A	Physical Properties ASTM D5147	4/25/06
PRI Asphalt Technologies, Inc.	GRD-03-02-01	Physical Properties ASTM D 5147	01/07/98
	GRD-05-02-01		12/18/97
	GRD-06-02-01		01/09/98
PRI Construction Materials Technologies	GRD-054-02-01	ASTM D 2626	11/17/11
	GRD-051-02-01	ASTM D 2178	10/28/11
	GRD-052-02-01	ASTM D 2178	10/28/11
Trinity | ERD	4533.05.98-1-R1	TAS 114(J)	09/09/11
	4544.11.06	TAS 114	11/02/06
	G32950.06.10	ASTM D4601	06/11/10
	G32700.09.11-1	ASTM D4601	09/16/11

APPROVED ASSEMBLIES:

Deck Type 1I: Wood, Insulated

Deck Description: $^{19}/_{32}$" or greater plywood attached to min. 2" x 4" supports spaced max. 24" with wood screws spaced 6" o.c. at intermediate supports and panel edges or wood plank

System Type A(1): 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 or ASTM D4897, Type II approved base sheet fastened to the deck as described below:

Fastening: Attach anchor sheet using SFS #12 fasteners with plates, OMG #12 or Heavy Duty Fasteners with OMG 3" Round Metal Plates or OMG Accutrac Fasteners and Plates spaced 9" o.c. in a 4" lap and 9" o.c. in two staggered rows in the center of the sheet.

One or more layers of any of the following insulations.

Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft^2
ACFoam II, Isotherm R, ENRGY 3, ENRGY 3 PSI-25, UltraGard, ISO-95+GL		
Minimum 1" thick	N/A	N/A
Approved High Density Fiberboard, Structodek High Density Fiberboard Roof Insulation, Fesco Board, Retrofit Board		
Minimum ½" thick	N/A	N/A
Approved Fiber Glass Roof Insulation (Standard or Wide Flute)		
Minimum $^{15}/_{16}$"" thick	N/A	N/A
DensDeck, 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 or Garlastic KM Plus within the EVT range and at a rate of 20-40 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, HPR Polyscrim Plus, or other Approved ASTM D 2178, type IV or VI ply sheet or other approved ASTM D 4601 Type II base sheet adhered with a full mopping of approved asphalt, HPR All Temp or Garlastic KM Plus within the EVT range and at a rate of 20-40 lbs./sq. (Note: Minimum two plies of ASTM D 2178, type VI or three plies of type IV is required for VersiPly 60 applications.)
Or
One or more plies of HPR Glasbase, HPR Premium Glasbase, HPR Tri-Base Premium or approved ASTM D 4601, Type II ply sheet adhered with Weatherking or Weatherking Plus WC applied at 2½ gal./sq.

Membrane: One ply of StressPly E, StressPly E FR Mineral, StressPly, StressPly FR Mineral, StressPly Plus, StressPly Plus FR Mineral, StressPly EUV, StressPly EUV FR Mineral, VersiPly 60, VersiPly 80 or VersiPly Mineral adhered with a full mopping of approved asphalt, HPR All Temp or Garlastic KM Plus within the EVT range and at a rate of 20-40 lbs./sq. or with Weatherking or Weatherking Plus WC applied at 2½ gal./sq. (Note: VersiPly 60 is not compatible with Weatherking or Weatherking Plus WC.)

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. 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 BlackKnight Flood Coat or Black-Knight LV Flood Coat at 70 lb/sq. or BlackKnight 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 or minimum two coats of Pyramic applied at min. 1.0 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 or minimum two coats of Pyramic applied at min. 1.0 gal/sq/coat.
4. WeatherScreen applied at min. 4 gal./sq. with minimum two coats of GarlaBrite applied at min. 0.5 gal/sq/coat or minimum two coats of Pyramic applied at min. 1.0 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: -45 psf (for membranes in Weatherking or Weatherking Plus WC) (See General Limitation #9.)
-60 psf. (for insulations and membranes in hot asphalt) (See General Limitation #7.)

Deck Type 1I: Wood, Insulated

Deck Description: $^{19}/_{32}$" or greater plywood or wood plank

System Type A(2): 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, HPR Tri-Base Premium fastened to the deck as described below:

Fastening: Tru-Fast 3" Metal Insulation plates with Tru-Fast HD fasteners, OMG 3" Round Metal Plates with OMG Heavy Duty fasteners, OMG Flat Bottom Plates with #14 Roofgrip fasteners or SFS Intec 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/ft2**
DensDeck Prime		
Minimum ¼" thick	N/A	N/A

Note: All insulation shall be adhered to the anchor sheet in Insul-Lock II or Millennium Pourable Foam Insulation Adhesive 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 or other approved ASTM D2178 Type IV or VI ply sheet, or other approved ASTM D 4601 Type II base sheet adhered with a full mopping of approved asphalt, HPR All Temp or Garlastic KM Plus within the EVT range and at a rate of 25 lbs./sq. (Note: Minimum two plies of ASTM D 2178, type VI or three plies of type IV is required for VersiPly 60 applications.)

Or

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

Membrane: One ply of StressPly E, StressPly E FR Mineral, StressPly, StressPly FR Mineral, StressPly Plus, StressPly Plus FR Mineral, StressPly EUV, StressPly EUV FR Mineral, VersiPly 60, VersiPly 80 or VersiPly Mineral adhered with a full mopping of approved asphalt, HPR All Temp or Garlastic KM Plus within the EVT range and at a rate of 25 lbs./sq.

Or

One ply of StressPly IV, StressPly IV UV Mineral or 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. 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 BlackKnight Flood Coat or Black-Knight LV Flood Coat at 70 lb/sq. or BlackKnight 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 or minimum two coats of Pyramic applied at min. 1.0 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 or minimum two coats of Pyramic applied at min. 1.0 gal/sq/coat.
4. WeatherScreen applied at min. 4 gal./sq. with minimum two coats of GarlaBrite applied at min. 0.5 gal/sq/coat or minimum two coats of Pyramic applied at min. 1.0 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.)

Deck Type 1I: Wood, Insulated

Deck Description: $^{19}/_{32}$" or greater plywood attached to min. 2" x 4" supports spaced max. 24 with wood screws spaced 6" o.c. at intermediate supports and panel edges or wood plank

System Type A(3): 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 or ASTM D4897, Type II approved base sheet fastened to the deck as described below:

Fastening: Attach anchor sheet using SFS #12 fasteners with plates, OMG #12 or Heavy Duty Fasteners with OMG 3" Round Metal Plates or OMG Accutrac Fasteners and Plates spaced 9" o.c. in a 4" lap and 9" o.c. in two staggered rows in the center of the sheet.

Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft^2
ACFoam II, ENRGY 3, ENRGY 3 PSI-25, ISO-95+GL Minimum 1.5" thick	N/A	N/A
Approved High Density Fiberboard, Minimum ½" thick	N/A	N/A
Approved Fiber Glass Roof Insulation (Standard or Wide Flute) Minimum $^{15}/_{16}$"" thick	N/A	N/A
DensDeck, 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 or Garlastic KM Plus within the EVT range and at a rate of 20-40 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 or other Approved ASTM D 2178, type IV or VI ply sheet or other approved ASTM D 4601 Type II base sheet adhered with a full mopping of approved asphalt, HPR All Temp 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, StressPly IV UV Mineral or StressPly IV Mineral, torch applied.

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

1. Minimum two or more coats of Garla-Brite applied at min. 0.5 gal/sq/coat or minimum two coats of Pyramic applied at min. 1.0 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 BlackKnight Flood Coat or BlackKnight LV Flood Coat at 70 lb/sq. or BlackKnight Cold at 5 gal/sq.

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

Deck Type 1I: Wood, Insulated

Deck Description: $^{19}/_{32}$" or greater plywood or wood plank secured to supports spaced 24" o.c. with #8 wood screws spaced 6" o.c.

System Type A(4): 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: Tru-Fast 3" Metal Insulation plates with Tru-Fast HD fasteners, OMG 3" Round Metal Plates with OMG Heavy Duty fasteners, OMG Flat Bottom Plates with #14 Roofgrip fasteners or SFS Intec 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 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 or other approved ASTM D2178 Type IV or VI ply sheet or other approved ASTM D 4601 Type II base sheet, adhered with a full mopping of approved asphalt, HPR All Temp or Garlastic KM Plus within the EVT range and at a rate of 25 lbs./sq. (Note: Minimum two plies of ASTM D 2178, type VI or three plies of type IV is required for VersiPly 60 applications.)

Or

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

Membrane: One ply of StressPly E, StressPly E FR Mineral, StressPly, StressPly FR Mineral, StressPly Plus, StressPly Plus FR Mineral, StressPly EUV, StressPly EUV FR Mineral, VersiPly 60, VersiPly 80 or VersiPly Mineral adhered with a full mopping of approved asphalt, HPR All Temp or Garlastic KM Plus within the EVT range and at a rate of 25 lbs./sq.

Or

One ply of StressPly IV, StressPly IV UV Mineral or 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. 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 BlackKnight Flood Coat or Black-Knight LV Flood Coat at 70 lb/sq. or BlackKnight 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 or minimum two coats of Pyramic applied at min. 1.0 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 or minimum two coats of Pyramic applied at min. 1.0 gal/sq/coat.
4. WeatherScreen applied at min. 4 gal./sq. with minimum two coats of GarlaBrite applied at min. 0.5 gal/sq/coat or minimum two coats of Pyramic applied at min. 1.0 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: -135.0 psf (See General Limitation #7.)

Deck Type 1I: Wood, Insulated

Deck Description: $^{19}/_{32}$" or greater plywood or wood plank

System Type B(1): Base layer of insulation mechanically attached, 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, ENRGY 3 PSI-25, ISO-95+GL		
Minimum 1.8" thick	1, 4, 5 & 9	1:3 ft²
Fesco Board		
Minimum 1.5" thick	1, 4, 5 & 9	1:2 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).

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

Top Insulation Layer (Optional)	**Insulation Fasteners (Table 2)**	**Fastener Density/ft²**
Approved High Density Fiberboard, Structodek High Density Fiberboard Roof Insulation		
Minimum ½" thick	N/A	N/A
DensDeck, DensDeck Prime		
Minimum ¼" thick	N/A	N/A

Note: Apply optional middle and/or top layer of insulation shall be adhered with approved hot asphalt, HPR All Temp or Garlastic KM Plus within the EVT range and at a rate of 20-40 lbs/100 ft² or in Insta-Stik Roofing Adhesive applied in continuous ¾ to 1 inch wide beads spaced 12" 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, HPR Polyscrim Plus, or other Approved ASTM D 2178, type IV or VI ply sheet or other ASTM D 4601 Type II base sheet adhered with a full mopping of approved asphalt, HPR All Temp or Garlastic KM Plus within the EVT range and at a rate of 20-40 lbs./sq. (Note: Minimum two plies of ASTM D 2178, type VI or three plies of type IV is required for VersiPly 60 applications.)

Or

Two or more plies of HPR Glasbase, HPR Premium Glasbase, HPR Tri-Base Premium or approved ASTM D 4601, Type II ply sheet adhered with Weatherking or Weatherking Plus WC applied at 2½ gal./sq.

Membrane: One ply of StressPly E, StressPly E FR Mineral, StressPly, StressPly FR Mineral, StressPly Plus, StressPly Plus FR Mineral, StressPly EUV, StessPly EUV Mineral, StressPly EUV FR Mineral, VersiPly 60, VersiPly 80 or VersiPly Mineral adhered with a full mopping of approved asphalt, HPR All Temp or Garlastic KM Plus within the EVT range and at a rate of 20-40 lbs./sq. or with Weatherking or Weatherking Plus WC applied at 2½ gal./sq. (Note: VersiPly 60 is not compatible with Weatherking or Weatherking Plus WC.)

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. 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 BlackKnight Flood Coat or Black-Knight LV Flood Coat at 70 lb/sq. or BlackKnight 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 or minimum two coats of Pyramic applied at min. 1.0 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 or minimum two coats of Pyramic applied at min. 1.0 gal/sq/coat.
4. WeatherScreen applied at min. 4 gal./sq. with minimum two coats of GarlaBrite applied at min. 0.5 gal/sq/coat or minimum two coats of Pyramic applied at min. 1.0 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: -45 psf. (See General Limitation #9.)

Deck Type 1I: Wood, Insulated

Deck Description: Min. 19/32"or greater, plywood or wood plank

System Type B(2): 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**
Any approved non-foil faced polyisocyanurate insulation listed in Table 2		
Minimum 1.5" thick	Any fastener from Table 3	1:2.67 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).

Middle Insulation Layer	**Insulation Fasteners (Table 3)**	**Fastener Density/ft²**
(Optional) Any approved non-foil faced polyisocyanurate insulation listed in Table 2		
Minimum 1.5" thick	N/A	N/A

Top Insulation Layer	**Insulation Fasteners (Table 3)**	**Fastener Density/ft²**
Approved High Density Wood Fiber		
Minimum ½" thick	N/A	N/A
Approved Perlite		
Minimum ½" thick	N/A	N/A
DensDeck, DensDeck Prime		
Minimum ½" thick	N/A	N/A

Note: Apply optional middle and/or top layer of insulation shall be adhered with Insul-Lock II applied in ¾"- 1" wide ribbons spaced 12" 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, HPR Polyscrim Plus or other Approved ASTM D 2178, type IV or VI ply sheet or other ASTM D 4601 Type II base sheet, adhered with a full mopping of approved asphalt, HPR All Temp or Garlastic KM Plus within the EVT range and at a rate of 20-40 lbs./sq. (Note: Minimum two plies of ASTM D 2178, type VI or three plies of type IV is required for VersiPly 60 applications.)

Or

Two or more plies of HPR Glasbase, HPR Premium Glasbase, HPR Tri-Base Premium or approved ASTM D 4601, Type II ply sheet adhered with Weatherking or Weatherking Plus WC applied at 2½ gal./sq.

Membrane: One ply of StressPly E, StressPly E FR Mineral, StressPly, StressPly FR Mineral, StressPly Plus, StressPly Plus FR Mineral, StressPly EUV, StessPly EUV Mineral, StressPly EUV FR Mineral, VersiPly 60, VersiPly 80 or VersiPly Mineral adhered with a full mopping of approved asphalt, HPR All Temp or Garlastic KM Plus within the EVT range and at a rate of 20-40 lbs./sq. or with Weatherking or Weatherking Plus WC applied at 2½ gal./sq. (Note: VersiPly 60 is not compatible with Weatherking or Weatherking Plus WC.)

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. 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 BlackKnight Flood Coat or Black-Knight LV Flood Coat at 70 lb/sq. or BlackKnight 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 or minimum two coats of Pyramic applied at min. 1.0 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 or minimum two coats of Pyramic applied at min. 1.0 gal/sq/coat.
4. WeatherScreen applied at min. 4 gal./sq. with minimum two coats of GarlaBrite applied at min. 0.5 gal/sq/coat or minimum two coats of Pyramic applied at min. 1.0 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: -45.0 psf. (See General Limitation #9.)

Deck Type 1I: Wood, Insulated

Deck Description: Min. 19/32"or greater, plywood or wood plank

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/ft^2
ACFoam II, ACFoam III, ENRGY 3, ENRGY 3 PSI 25, ISO 95+GL		
Minimum 1.8" thick	Any fastener from Table 3	1:3 ft²

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

Top Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft^2
Approved High Density Wood Fiber		
Minimum ½" thick	N/A	N/A
Approved Perlite		
Minimum ¾" 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 or Garlastic KM Plus within the EVT range and at a rate of 20-40 lbs/100 ft^2 or in Insta-Stik Roofing Adhesive applied in continuous ¾ to 1 inch wide beads spaced 12" 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: Minimum Two plies of HPR Glasbase, HPR Premium Glasbase, HPR Tri-Base Premium, HPR Polyscrim Plus or other approved ASTM D 4601 Type II base sheet adhered with a full mopping of approved asphalt, HPR All Temp or Garlastic KM Plus within the EVT range and at a rate of 20-40 lbs./sq.

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

Surfacing: 400 lb./sq. gravel or 300 lb./sq. slag in a flood coat of approved mopping asphalt at an application rate of 40 lb./sq. or in BlackKnight Flood Coat or BlackKnight LV Flood Coat at 70 lb/sq. or BlackKnight Cold at 5 gal/sq.

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

Deck Type 1I: Wood, Insulated

Deck Description: $^{19}/_{32}$" or greater plywood or wood plank

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

All General and System Limitations apply.

Base Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft^2
ACFoam II, ENRGY 3, ENRGY 3 PSI-25, ISO-95+GL		
Minimum 1" 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/ft^2
Approved High Density Fiberboard, Structodek High Density Fiberboard Roof Insulation, Fesco Board, Retrofit Board		
Minimum ½" thick	1, 3, 5 & 9	1:3 ft²
DensDeck, DensDeck Prime		
Minimum ½" thick	1, 3, 5 & 9	1:3 ft²
Approved Fiber Glass Roof Insulation (Standard or Wide Flute)		
Minimum $^{15}/_{16}$" thick	1, 3, 5 & 9	1:3 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 or more plies of HPR Glasbase, HPR Premium Glasbase, HPR Tri-Base Premium, HPR Glasfelt, HPR Premium Glasfelt, HPR Polyscrim Plus, or other Approved ASTM D 2178, type IV or VI ply sheet or other approved ASTM D 4601 Type II base sheet, adhered with a full mopping of approved asphalt, HPR All Temp or Garlastic KM Plus within the EVT range and at a rate of 20-40 lbs./sq. (Note: Minimum two plies of ASTM D 2178, type VI or three plies of type IV is required for VersiPly 60 applications.)

Or

Two or more plies of HPR Glasbase, HPR Premium Glasbase, HPR Tri-Base Premium or approved ASTM D 4601, Type II base sheet adhered with Weatherking or Weatherking Plus WC applied at 2½ gal./sq.

Membrane: One ply of StressPly E, StressPly E FR Mineral, StressPly, StressPly FR Mineral, StressPly Plus, StressPly Plus FR Mineral, StressPly EUV, StressPly EUV FR Mineral, VersiPly 60, VersiPly 80 or VersiPly Mineral adhered with a full mopping of approved asphalt, HPR All Temp or Garlastic KM Plus within the EVT range and at a rate of 20-40 lbs./sq. or with Weatherking or Weatherking Plus WC applied at 2½ gal./sq. (Note: VersiPly 60 is not compatible with Weatherking or Weatherking Plus WC.)

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. 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 BlackKnight Flood Coat or Black-Knight LV Flood Coat at 70 lb/sq. or BlackKnight 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 or minimum two coats of Pyramic applied at min. 1.0 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 or minimum two coats of Pyramic applied at min. 1.0 gal/sq/coat.
4. WeatherScreen applied at min. 4 gal./sq. with minimum two coats of GarlaBrite applied at min. 0.5 gal/sq/coat or minimum two coats of Pyramic applied at min. 1.0 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: -45 psf (See General Limitation #9.)

Deck Type 1I: Wood, Insulated

Deck Description: 19/32" or greater plywood or wood plank

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

All General and System Limitations apply.

Base Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft^2
ACFoam II, ENRGY 3, ENRGY 3 PSI-25, ISO-95+GL		
Minimum 1.5" thick	N/A	N/A
Approved Fiber Glass Roof Insulation (Standard or Wide Flute)		
Minimum $^{15}/_{16}$" 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/ft^2
Approved High Density Fiberboard,		
Minimum ½" thick	1, 3, 5 & 9	1:2.67 ft²
DensDeck, DensDeck Prime		
Minimum ½" thick	1, 3, 5 & 9	1:2.67 ft²
Approved Fiber Glass Roof Insulation (Standard or Wide Flute)		
Minimum $^{15}/_{16}$" thick	1	1:2 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 or more plies of HPR Glasbase, HPR Premium Glasbase, HPR Tri-Base Premium, HPR Glasfelt, HPR Premium Glasfelt or other Approved ASTM D 2178, type IV or VI ply sheet or other approved ASTM D 4601 Type II base sheet adhered with a full mopping of approved asphalt, HPR All Temp 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, Stress Ply IV UV Mineral or StressPly IV Mineral, torch applied.

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

1. Minimum two coats of Garla-Brite applied at min. 0.5 gal/sq/coat or minimum two coats of Pyramic applied at min. 1.0 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 BlackKnight Flood Coat or BlackKnight LV Flood Coat at 70 lb/sq. or BlackKnight Cold at 5 gal/sq.

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

Deck Type 1I: Wood, Non-Insulated

Deck Description: $^{19}/_{32}$" or greater plywood or wood plank

System Type E(1): Base sheet mechanically fastened

All General and System Limitations apply.

Base Sheet: One ply of HPR Glasbase, HPR Premium Glasbase, HPR Tri-Base Premium or ASTM D4897, Type II approved base sheet fastened to the deck as described below:

Fastening: Attach anchor sheet using SFS #12 fasteners with plates, OMG #12 or Heavy-Duty Fasteners with OMG 3" Round Metal Plates, or OMG AccuTrac Fasteners and 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, HPR Polyscrim Plus, or other Approved ASTM D 2178, type IV or VI ply sheet or other approved ASTM D 4601 Type II base sheet adhered with a full mopping of approved asphalt, HPR All Temp or Garlastic KM Plus within the EVT range and at a rate of 20-40 lbs./sq. (Note: Minimum two plies of ASTM D 2178, type VI or three plies of type IV is required for VersiPly 60 applications.)

Or

Two or more plies of HPR Glasbase, HPR Premium Glasbase, HPR Tri-Base Premium or approved ASTM D 4601, Type II base sheet adhered with Weatherking or Weatherking Plus WC applied at 2½ gal./sq.

Membrane: One ply of StressPly E, StressPly E FR Mineral, StressPly, StressPly FR Mineral, StressPly Plus, StressPly Plus FR Mineral, StressPly EUV, StressPly EUV FR Mineral, VersiPly 60, VersiPly 80 or VersiPly Mineral adhered with a full mopping of approved asphalt, HPR All Temp or Garlastic KM Plus within the EVT range and at a rate of 20-40 lbs./sq. or with Weatherking or Weatherking Plus WC applied at 2½ gal./sq. (Note: VersiPly 60 is not compatible with Weatherking or Weatherking Plus WC.)

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. 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 BlackKnight Flood Coat or Black-Knight LV Flood Coat at 70 lb/sq. or BlackKnight 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 or minimum two coats of Pyramic applied at min. 1.0 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 or minimum two coats of Pyramic applied at min. 1.0 gal/sq/coat.
4. WeatherScreen applied at min. 4 gal./sq. with minimum two coats of GarlaBrite applied at min. 0.5 gal/sq/coat or minimum two coats of Pyramic applied at min. 1.0 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: -45 psf (for membranes in Weatherking Mastic or Weatherking Plus Mastic, See General Limitation #9.)

-60 psf. (for membranes in hot asphalt, See General Limitation #7.)

Deck Type 1I: Wood, Non-Insulated

Deck Description: $^{19}/_{32}$" or greater plywood or wood plank

System Type E(2): Base sheet mechanically fastened

All General and System Limitations apply.

Base Sheet: One ply of HPR Glasbase, HPR Premium Glasbase, HPR Tri-Base Premium or ASTM D4897, Type II approved base sheet fastened to the deck as described below:

Fastening: Attach anchor sheet using SFS #12 fasteners with plates, OMG #12 or Heavy-Duty Fasteners with OMG 3" Round Metal Plates, or OMG AccuTrac Fasteners and 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 other Approved ASTM D 2178, type IV or VI ply sheet or other approved ASTM D 4601 Type II base sheet adhered with a full mopping of approved asphalt, HPR All Temp or Garlastic KM Plus within the EVT range and at a rate of 20-40 lbs./sq.

Membrane: One ply of StressPly IV, StressPly IV UV Mineral or StressPly IV Mineral, torch applied.

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

1. Minimum two coats of Garla-Brite applied at min. 0.5 gal/sq/coat or minimum two coats of Pyramic applied at min. 1.0 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 BlackKnight Flood Coat or BlackKnight LV Flood Coat at 70 lb/sq. or BlackKnight Cold at 5 gal/sq.

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

Deck Type 1: Wood, Non-Insulated

Deck Description: $^{19}/_{32}$" or greater plywood or wood plank secured to supports spaced 24" o.c. with #8 wood screws spaced 6" o.c.

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: Tru-Fast 3" Metal Insulation plates with Tru-Fast HD fasteners, OMG 3" Round Metal Plates with OMG Heavy Duty fasteners, OMG Flat Bottom Plates with #14 Roofgrip fasteners or SFS Intec 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 or other approved ASTM D 2178 Type IV or VI ply sheet or other approved ASTM D 4601 Type II base sheet adhered with a full mopping of approved asphalt, HPR All Temp or Garlastic KM Plus within the EVT range and at a rate of 25 lbs./sq. (Note: Minimum two plies of ASTM D 2178, type VI or three plies of type IV is required for VersiPly 60 applications.)

Membrane: One ply of StressPly E, StressPly E FR Mineral, StressPly, StressPly FR Mineral, StressPly Plus, StressPly Plus FR Mineral, StressPly EUV, StressPly EUV FR Mineral, VersiPly 60, VersiPly 80 or VersiPly Mineral adhered with a full mopping of approved asphalt, HPR All Temp 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 coatings:

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 BlackKnight Flood Coat or Black-Knight LV Flood Coat at 70 lb/sq. or BlackKnight 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 or minimum two coats of Pyramic applied at min. 1.0 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 or minimum two coats of Pyramic applied at min. 1.0 gal/sq/coat.
4. WeatherScreen applied at min. 4 gal./sq. with minimum two coats of GarlaBrite applied at min. 0.5 gal/sq/coat or minimum two coats of Pyramic applied at min. 1.0 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: -135.0 psf (See General Limitation #7)

WOOD DECK SYSTEM LIMITATIONS:

1. A slip sheet is required with Ply 4 and Ply 6 when used as a mechanically fastened base or anchor sheet.

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.)**

END OF THIS ACCEPTANCE