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 Steel Decks.

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

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

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

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

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

This NOA revises NOA# 25-0709.09 and consists of pages 1 through 65.
The submitted documentation was reviewed by Alex Tigera.

07/16/26

MIAMI-DADE COUNTY APPROVED

ROOFING SYSTEM APPROVAL

Category:	Roofing
Sub-Category:	Modified Bitumen
Material:	SBS/SIS/SEBS
Deck Type:	Steel
Maximum Design Pressure:	-172.5 psf.

TRADE NAMES OF PRODUCTS MANUFACTURED OR LABELED BY APPLICANT:

TABLE 1

Product	Dimensions	Test Specification	Product Description
Black-Knight Cold	5, 55 gallon	Proprietary	Polymer modified coal tar pitch.
Energizer K Plus FR	5, 55 gallon	ASTM D4479, Type I	Multipurpose, rubberized, liquid waterproofing membrane.
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.
FlexBase 80	39” x 34’8”	ASTM D6163, Type III	SBS modified, fiberglass reinforced base sheet.
FlexBase E 80	39” x 34’8”	ASTM D6162, Type III	SBS/SIS modified, fiberglass/polyester reinforced base sheet.
FlexBase Plus 80	39” x 34’8”	ASTM D6162, Type III	SBS modified, fiberglass/polyester reinforced base sheet
Garla-Brite	5, 55 gallon	ASTM D4479, Type I	Asbestos-free, heavy-bodied, fiber-reinforced, fire-rated asphalt roof coating.
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.
Garla-Prime VOC	5, 55 gallon	ASTM D41	Non-fibered, quick drying asphalt roof primer
Garlastic KM Plus	60 lb. keg	TAS 121	SEBS modified, hot applied asphalt.
Green-Lock Plus Membrane Adhesive	5 gallon	Proprietary	Cold process roof coating and adhesive
HPR All Temp Asphalt	100 lb. keg	TAS 121	Hot asphalt adhesive for modified bitumen and BUR roof systems.

TRADE NAMES OF PRODUCTS MANUFACTURED OR LABELED BY APPLICANT:

TABLE 1

Product	Dimensions	Test Specification	Product Description
HPR Glasbase	36” x 108’ 75 lbs.	ASTM D4601 Type II	Type II, asphalt coated fiberglass base sheet
HPR Glasfelt	36” x 180’	ASTM D2178, Type IV	Asphalt impregnated glass felt
HPR Polyscrim Plus	40” x 324’	ASTM D5726	Polyester felt
HPR Premium Glasbase	36” x 72’	ASTM D4601, Type II	Asphalt coated fiberglass base sheet.
HPR Torch Base Sheet	39” x 34’8”	ASTM D6163	SBS modified, fiberglass reinforced, torch applied base sheet.
HPR Tri-Base Premium	36” x 72’	ASTM D4601	Double asphalt coated, polyester/fiberglass/polyester scrim reinforced base sheet.
Insul-Lock HR	1.5 liters	Proprietary	Polyurethane two component high rise insulation adhesive
Millennium FR Mineral	39” x 26’	ASTM D6162	Mineral surfaced, SBS modified coal tar, fiberglass/polyester reinforced membrane.
OptiMax	39” x 34’2”	ASTM D4601, Type II ASTM D6163, Type III, Grade S	SBS-modified bitumen cap ply with fiberglass reinforcement, surfaced with mineral granules.
OptiMax FR Mineral	39" x 26’2”	ASTM D6163, Type III	Mineral surfaced, SBS modified, fiberglass reinforced, cap sheet.
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.
StressBase 80	39” x 52’	ASTM D6163, Type I	SBS modified, fiberglass reinforced base sheet.
StressBase 120	39” x 52’	ASTM D6163, Type I	SBS modified, fiberglass reinforced base sheet.
StressPly	39” x 34’8”	ASTM D6163, Type III, Grade S	SBS-modified bitumen cap ply with fiberglass reinforcement, surfaced with mineral granules

TRADE NAMES OF PRODUCTS MANUFACTURED OR LABELED BY APPLICANT:

TABLE 1

Product	Dimensions	Test Specification	Product Description
StressPly EUV	39” x 34’8”	ASTM D6162, Type III, Grade S & TAS 110	SBS-modified bitumen cap ply with fiberglass and polyester reinforcements.
StressPly EUV FR Mineral	39” x 26’2”	ASTM D6162, Type III	Mineral surfaced, SBS/SIS modified, fiberglass/polyester reinforced membrane.
StressPly FR Mineral	39” x 26’2”	ASTM D6163, Type III	Mineral surfaced, SBS modified, fire retardant, fiberglass scrim membrane.
StressPly IV Plus	39” x 26’2”	ASTM D6162, Type III	Smooth surfaced, SBS modified, fiberglass/polyester reinforced, torch applied cap sheet.
StressPly IV Plus Mineral	39” x 26’2”	ASTM D6162, Type III	Mineral surfaced, SBS modified, fiberglass/polyester reinforced, torch applied cap sheet.
StressPly IV Plus UV Mineral	39” x 26’2”	ASTM D6162, Type III	Mineral surfaced, SBS modified, fiberglass/polyester reinforced, torch applied cap sheet.
StressPly Legacy	39” x 34’8”	ASTM D6162, Type III, Grade S & TAS 110	SBS-modified bitumen cap ply with polyester and fiberglass reinforcement
StressPly Legacy FR Mineral	39" x 26’2”	ASTM D6162, Type III	SBS modified bitumen cap ply with fiberglass and polyester reinforcement, with fire retardant, surfaced with mineral granules.
StressPly Max	39” x 34’8”	ASTM D6162, Type III, Grade S & TAS 110	SBS-modified bitumen cap ply with fiberglass and polyester reinforcement, with fire retardant.
StressPly Max FR Mineral	39" x 26’2”	ASTM D6162, Type III	Mineral surfaced, SBS modified, fiberglass/polyester reinforced, torch applied cap sheet.
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
VaporSmart SA	39” x 75’	TAS 110	SBS-modified base ply, with fiberglass reinforcement, surfaced with adhesive and removable release film.
VersiPly 80	39" x 34'8”	ASTM D6163, Type III	Smooth surfaced, SBS modified, fiberglass scrim reinforced roofing membrane.
VersiPly Mineral	39" x 26'2”	ASTM D6163, Type III	Mineral surfaced, SBS modified, fiberglass scrim reinforced roofing membrane.
Weatherking	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.
Weatherking Plus WC	5, 55 gallon	ASTM D3019, Type III	Cold process roof coating and adhesive.
WeatherScreen	5, 55 gallon	ASTM D4479, Type I	Asbestos-free, heavy-bodied, fiber-reinforced, fire-rated asphalt roof coating.

APPROVED INSULATIONS:

TABLE 2

Product Name	Product Description	Manufacturer (With Current NOA)
ACFoam-II	Polyisocyanurate foam insulation	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.
Retro-Fit Board	Expanded Perlite and fiber insulation	Johns Manville, Corp.
Multi-Max FA-3	Polyisocyanurate foam insulation	RMax Operating, LLC
SECUROCK Gypsum-Fiber Roof Board	Gypsum board	United States Gypsum Corp.
Structodek High Density Fiberboard Roof Insulation	High Density wood fiber insulation	Blue Ridge Fiberboard, Inc.
Fesco Board	Expanded Perlite and fiber insulation	Johns Manville, Corp.
DEXcell FA Glass Mat Roof Board	Gypsum board	National Gypsum Compan a dba of National Gypsum Services Company

APPROVED FASTENERS/ADHESIVES:

TABLE 3

Fastener Number	Product Name	Product Description	Dimensions	Manufacturer (With Current NOA)
1.	Dekfast DF-#12-PH3	Insulation fastener for wood, steel and concrete decks		SFS Group USA, Inc.
2.	Dekfast DF-#14-PH3	Insulation fastener for wood, steel and concrete decks		SFS Group USA, Inc.
3.	Dekfast DF-#15-PH3	Insulation fastener for wood, steel and concrete decks		SFS Group USA, Inc.
4.	Dekfast PLT-H-2-7/8	Galvalume hex stress plate.	2 7/8" x 3 1/4"	SFS Group USA, Inc.
5.	AccuTrac Plate	Galvalume stress plate.	3” square	OMG, Inc.
6.	#12 Standard Roofgrip	Insulation fastener		OMG, Inc.
7.	#14 Roofgrip	Insulation fastener		OMG, Inc.
8.	OMG ASAP Pre-Assembled System	Pre-assembled Insulation fastener and plate		OMG, Inc.
9.	3 in. Round Metal Plate	3" round galvalume AZ50 steel plate	3" round	OMG, Inc.
10.	Trufast #12 DP Fastener	Insulation fastener for steel and wood decks		Altenloh, Brinck & Co. U.S., Inc.
11.	Trufast #14 HD Fastener	Insulation fastener for steel and wood decks		Altenloh, Brinck & Co. U.S., Inc.
12.	OMG Heavy-Duty Fastener	Insulation fastener for wood, steel and concrete.		OMG, Inc.
13.	Trufast 3” Metal Insulation Plates	Galvalume MP-3 Stress Plates	3” round	Altenloh, Brinck & Co. U.S., Inc.
14.	OMG XHD	Insulation fastener for steel and wood decks		OMG, Inc.
15.	Trufast #15 EHD Fastener	Insulation fastener for steel and wood decks		Altenloh, Brinck & Co. U.S., Inc.
16.	Dekfast Galvalume Steel 3 in. Round	3" round galvalume AZ50 steel plate	3" round	SFS Group USA, Inc.

APPROVED FASTENERS/ADHESIVES:

TABLE 3

Fastener Number	Product Name	Product Description	Dimensions	Manufacturer (With Current NOA)
17.	OMG Accutrac Hextra	Insulation fastener for steel and wood decks	Various	OMG, Inc.
18.	3 in. Ribbed Galvalume Plate (Flat)	3" round galvalume AZ50 steel plate	3" round	OMG, Inc.
19.	Dekfast PLT-R-3	Galvalume stress plate.		SFS Group USA, Inc.

EVIDENCE SUBMITTED:

Test Agency	Test Identifier	Description	Date
NEMO ETC, LLC.	4p-GRL-21-SSLAP-01.A	Physical Properties	07/23/21
	4i-GRL-23-SSCRT-01.A	FM 4470	05/22/23
	4a-GRL-23-LSWUS-02.A.R1	FM 4474 & TAS 114	08/30/23
	4a-GRL-LSWUS-002.A	FM 4474 & TAS 114	01/06/25
	4i-GRL-SSCRT-001.A	ASTM D1876	04/04/25
	4a-GRL-LSWUS-003.A	FM 4474 & TAS 114	05/29/25
	4a-GRL-LSWUS-004.A	FM 4474 & TAS 114	10/24/25
Dynatech Engineering Corporation	#4530.05.95-1	TAS 114	05/31/95
Factory Mutual Research Corporation	0Y5A6.AM	FM 4470	09/08/97
	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
	3031839	FM 4470	12/07/07
	3032471	FM 4470	04/18/08
	3032165	FM 4470	04/22/08
	3032163	FM 4470	07/21/08
	3032647	FM 4470	07/28/08
	3054493	FM 4470	01/04/16
	PR454771	FM4470	01/29/21
	PR464416	FM 4470	12/21/23
PRI Construction Materials Technologies LLC	GRD-051-02-01	ASTM D2178	10/28/11
	GRD-052-02-01	ASTM D2178	10/28/11
	GRD-054-02-01	ASTM D2626	11/17/11
Trinity | ERD	4544.11.06	TAS 114-J	11/02/06
	C8500SC.11.07-R1	TAS 117 / ASTM D6862	08/07/09

EVIDENCE SUBMITTED:

Test Agency	Test Identifier	Description	Date
	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
	GRL-SC8185.05.16	ASTM D6163/D4798	05/31/16
Atlantic & Caribbean Roof Consulting, LLC	ACRC 08-036	TAS 114-J	06/03/08
	ACRC 08-042	TAS 114-J	06/12/08

DECK STRESS ANALYSIS CALCULATIONS/REPORTS

Engineer/Agency	Identifier	Assemblies	Date
Robert Nieminen, P.E.	Signed/Sealed Calculations	B(2), B(3), B(4), B(5), B(6), B(7), B(8), B(9), B(10) D(1), D(2), D(3), D(4)	11/02/16
Robert Nieminen, P.E.	Signed/Sealed Calculations	C(3), C(4), C(8)	12/01/16
FM Approval Deck Limitation	N/A	B(11), B(12), B(13), B(1), B(15), C(2), C(5), C(6), C(9), C(10)	11/02/16

APPROVED ASSEMBLIES:

Membrane Type: SBS/SIS/SEBS

Deck Type 2I: Steel, Insulated

Deck Description: 18-22 ga., Type B, Grade 33 steel deck.

System Type B(1): Thermal Barrier layer mechanically fastened, top layers adhered

All General and System Limitations apply.

Vapor Barrier Layer: 0.045" thick VaporSmart SA*, self-adhered with a 3-inch lap primed with SA Primer at a rate of 0.5 gal./sq.

One or more layers of any of the following insulations.

Thermal Barrier Layer:	**Insulation Fasteners (Table 3)**	**Fastener Density/ft²**
SECUROCK Gypsum-Fiber Roof Board, DensDeck Prime Minimum ½" thick	**6, 18**	**1:4 ft²**

Note: Thermal barrier 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**
ACFoam-II Minimum 1.5" thick	**N/A**	**N/A**

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

Note: Middle and top layer of insulation shall be adhered with Insul-Lock HR at a rate of ½" 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 StressBase 80 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 Plus 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 mineral surfaced Membranes. Required for smooth surfaced membranes. Apply one of the below:

1. Black Knight Cold applied at 4-5 gal./sq.. Broadcast 400 lbs./sq. (181 kg/9.29m²) of clean roof gravel immediately into the wet adhesive.
2. One coat of Garla-Block 2K applied at a rate of 0.5 gal./sq. Apply two coats of Cool-Sil HB or Cool-Sil SG at a rate of 2.0 gal/sq./coat.
3. Two coats of Garla-Brite applied at 0.5 gal./sq./coat
4. Green-Lock Plus Membrane Adhesive applied at 4-5 gal/sq. Broadcast 400 lbs./sq. of clean roof gravel immediately into the wet adhesive.
5. One coat of Pyramic Base applied at 1 gal/sq followed by one coat of Pyramic applied at 1 gal/sq.
6. One coat of Pyramic Plus LO Base Coat applied at 1 gal./sq. followed by one coat of Pyramic Plus LO applied at 1 gal./sq.
7. StrataMax Gray applied in two coats at 1 gal/sq./coat.
8. StrataMax White applied in two coats at 1 gal/sq./coat.
9. WeatherScreen applied at 4-5 gal./sq. Broadcast 400 lbs./sq. (181 kg/9.29m²) of clean roof gravel immediately into the wet adhesive.

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

Membrane Type: SBS/SIS/SEBS

Deck Type 2I: Steel, Insulated

Deck Description: 22 ga., Type B, Grade 40 steel deck attached with #12 HWH Teks 5 fasteners 6" o.c. to steel supports spaced 6' o.c. Steel deck side laps attached 24" o.c. with #10 HWH Teks 1 fasteners.
This Tested Assembly has been analyzed for allowable deck stress. See Deck Stress Analysis Table.

System Type B(2): Thermal Barrier layer mechanically fastened, top layers adhered

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**
H-Shield Minimum 1.5" thick	**14, 18**	**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).

Top Insulation Layer:	**Insulation Fasteners (Table 3)**	**Fastener Density/ft²**
SECUROCK Gypsum-Fiber Roof Board Minimum ½" thick	**N/A**	**N/A**

Note: Top layer of insulation shall be adhered with Insul-Lock HR at a rate of ½" 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: One ply of FlexBase Plus 80 adhered with Green-Lock Plus Membrane Adhesive or Weatherking applied at a rate of 2-2.5 gal./sq., or Garlastic KM Plus applied at a rate of 25 lbs./sq.

Membrane:

One ply of StressPly Legacy FR Mineral, OptiMax FR Mineral, StressPly EUV FR Mineral, StressPly FR Mineral, StressPly Max FR Mineral, VersiPly Mineral adhered with Green-Lock Plus Membrane Adhesive applied at a rate of 2-2.5 gal/sq.

Or

OptiMax, StressPly, StressPly EUV, StressPly EUV FR Mineral, StressPly FR Mineral, StressPly Legacy, StressPly Legacy FR Mineral, StressPly Max FR Mineral, StressPly Max, StressPly Plus, StressPly Plus FR Mineral, VersiPly 80, or VersiPly Mineral adhered with WeatherKing adhesive applied at a rate of 2-2.5 gal./sq.

Or

StressPly Legacy adhered with Garlastic KM Plus applied at a rate of 25 lbs./sq.

Or

StressPly EUV, StressPly EUV FR Mineral, StressPly FR Mineral, StressPly Mineral, StressPly Plus, StressPly Plus FR Mineral, Versiply 80, VersiPly Mineral adhered with hot asphalt at a rate of 25 lbs./sq.

Surfacing:

Optional for mineral surfaced Membranes. Required for smooth surfaced membranes. Apply one of the below:

1. Black Knight Cold applied at 4-5 gal./sq.. Broadcast 400 lbs./sq. (181 kg/9.29m²) of clean roof gravel immediately into the wet adhesive.
2. WeatherScreen applied at 4-5 gal./sq. Broadcast 400 lbs./sq. (181 kg/9.29m²) of clean roof gravel immediately into the wet adhesive.
3. Two coats of Garla-Brite applied at 0.5 gal./sq./coat.
4. Green-Lock Plus Membrane Adhesive applied at 4-5 gal/sq. Broadcast 400 lbs./sq. of clean roof gravel immediately into the wet adhesive.
5. One coat of Pyramic, Pyramic Plus LO, Pyramic LO Base Coat or Pyramic Base applied at 1 gal/sq followed by one coat of Pyramic applied at 1 gal/sq.
6. One coat of Pyramic Plus LO Base Coat applied at 1 gal./sq. followed by one coat of Pyramic Plus LO applied at 1 gal./sq.
7. StrataMax Gray applied in two coats at 1 gal/sq./coat.
8. StrataMax White applied in two coats at 1 gal/sq./coat.

Maximum Design Pressure:

-45.0 psf. (See General Limitation #9.)

Membrane Type: SBS/SIS/SEBS

Deck Type 2I: Steel, Insulated

Deck Description: 22 ga., Type B, Grade 40 steel deck attached with #12 HWH Teks 5 fasteners 6" o.c. to steel supports spaced 6' o.c. Steel deck side laps attached 24" o.c. with #10 HWH Teks 1 fasteners.
This Tested Assembly has been analyzed for allowable deck stress. See Deck Stress Analysis Table.

System Type B(3): Thermal Barrier layer mechanically fastened, top layers adhered

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**
H-Shield Minimum 1.5" thick	**1, 4**	**1:1.33 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**
Structodek High Density Fiberboard Roof Insulation Minimum ½" thick	**N/A**	**N/A**

Note: Top layer of insulation shall be adhered with Insul-Lock HR at a rate of ½" 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: One ply of FlexBase Plus 80 adhered with Green-Lock Plus Membrane Adhesive applied at a rate of 2-2.5 gal/sq.

Membrane:

One ply of StressPly Max FR Mineral, OptiMax FR Mineral, StressPly EUV FR Mineral, StressPly FR Mineral, StressPly Max FR Mineral, VersiPly Mineral adhered with Green-Lock Plus Membrane Adhesive applied at a rate of 2-2.5 gal/sq.

Or

OptiMax, StressPly, StressPly EUV, StressPly EUV FR Mineral, StressPly FR Mineral, StressPly Legacy, StressPly Legacy FR Mineral, StressPly Max FR Mineral, StressPly Max, StressPly Plus, StressPly Plus FR Mineral, VersiPly 80, or VersiPly Mineral adhered with WeatherKing adhesive applied at a rate of 2-2.5 gal./sq.
Or
StressPly Legacy adhered with Garlastic KM Plus applied at a rate of 25 lbs./sq.
Or
StressPly EUV,StressPly EUV FR Mineral, StressPly FR Mineral, StressPly Mineral, StressPly Plus, StressPly Plus FR Mineral, Versiply 80, VersiPly Mineral adhered hot asphalt at a rate of 25 lbs./sq.

Surfacing:

Optional for mineral surfaced Membranes. Required for smooth surfaced membranes. Apply one of the below:

1. Black Knight Cold applied at 4-5 gal./sq.. Broadcast 400 lbs./sq. (181 kg/9.29m²) of clean roof gravel immediately into the wet adhesive.
2. WeatherScreen applied at 4-5 gal./sq. Broadcast 400 lbs./sq. (181 kg/9.29m²) of clean roof gravel immediately into the wet adhesive.
3. Two coats of Garla-Brite applied at 0.5 gal./sq./coat.
4. Green-Lock Plus Membrane Adhesive applied at 4-5 gal/sq. Broadcast 400 lbs./sq. of clean roof gravel immediately into the wet adhesive.
5. One coat of Pyramic, Pyramic Plus LO, Pyramic LO Base Coat or Pyramic Base applied at 1 gal/sq followed by one coat of Pyramic applied at 1 gal/sq.
6. One coat of Pyramic Plus LO Base Coat applied at 1 gal./sq. followed by one coat of Pyramic Plus LO applied at 1 gal./sq.
7. StrataMax Gray applied in two coats at 1 gal/sq./coat.
8. StrataMax White applied in two coats at 1 gal/sq./coat.

Maximum Design Pressure:

-45.0 psf. (See General Limitation #9.)

Membrane Type: SBS/SIS/SEBS

Deck Type 2I: Steel, Insulated

Deck Description: 22 ga., Type B, Grade 40 steel deck attached with #12 HWH Teks 5 fasteners 6" o.c. to steel supports spaced 6' o.c. Steel deck side laps attached 24" o.c. with #10 HWH Teks 1 fasteners. **This Tested Assembly has been analyzed for allowable deck stress. See Deck Stress Analysis Table.**

System Type B(4): Thermal Barrier layer mechanically fastened, top layers adhered.

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**
H-Shield Minimum 1.5" thick	**14, 18**	**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**
SECUROCK Gypsum-Fiber Roof Board Minimum ½" thick	**N/A**	**N/A**

Note: Top layer of insulation shall be adhered with Insul-Lock HR at a rate of ½" 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: One ply of FlexBase Plus 80 adhered with Green-Lock Plus Membrane Adhesive applied at a rate of 2-2.5 gal/sq.

Membrane:

One ply of StressPly Max FR Mineral, OptiMax FR Mineral, StressPly Max FR Mineral, StressPly Max, or VersiPly Mineral adhered with Green-Lock Plus Membrane Adhesive applied at a rate of 2-2.5 gal/sq.

Or

One ply of StressPly Max FR Mineral, OptiMax, StressPly, StressPly EUV, StressPly EUV FR Mineral, StressPly FR Mineral, StressPly Legacy, StressPly Legacy FR Mineral, StressPly Max, StressPly Plus, StressPly Plus FR Mineral, VersiPly 80, VersiPly Mineral adhered with WeatherKing adhesive applied at a rate of 2-2.5 gal./sq.

Or

One ply of StressPly Legacy adhered with Garlastic KM Plus applied at a rate of 25 lbs./sq.

Or

StressPly EUV, StressPly EUV FR Mineral, StressPly EUV Mineral, StressPly FR Mineral, StressPly Plus, StressPly Plus FR Mineral, VersiPly 80, VersiPly Mineral adhered hot asphalt at a rate of 25 lbs./sq.

Surfacing:

Optional for mineral surfaced Membranes. Required for smooth surfaced membranes. Apply one of the below:

1. Black Knight Cold applied at 4-5 gal./sq.. Broadcast 400 lbs./sq. (181 kg/9.29m²) of clean roof gravel immediately into the wet adhesive.
2. WeatherScreen applied at 4-5 gal./sq. Broadcast 400 lbs./sq. (181 kg/9.29m²) of clean roof gravel immediately into the wet adhesive.
3. Two coats of Garla-Brite applied at 0.5 gal./sq./coat.
4. Green-Lock Plus Membrane Adhesive applied at 4-5 gal/sq. Broadcast 400 lbs./sq. of clean roof gravel immediately into the wet adhesive.
5. One coat of Pyramic, Pyramic Plus LO, Pyramic LO Base Coat or Pyramic Base applied at 1 gal/sq followed by one coat of Pyramic applied at 1 gal/sq.
6. One coat of Pyramic Plus LO Base Coat applied at 1 gal./sq. followed by one coat of Pyramic Plus LO applied at 1 gal./sq.
7. StrataMax Gray applied in two coats at 1 gal/sq./coat.
8. StrataMax White applied in two coats at 1 gal/sq./coat.

Maximum Design Pressure:

-67.5 psf. (See General Limitation #9.)

Membrane Type: SBS/SIS/SEBS

Deck Type 2I: Steel, Insulated

Deck Description: 18-22 ga., Type B, Grade 33 steel deck attached 6" o.c. (every flute) using ¾"puddle welds to steel supports spaced maximum 5 ft. o.c. Steel deck side laps attached 20" o.c. with Traxx/1 fasteners.
This Tested Assembly has been analyzed for allowable deck stress. See Deck Stress Analysis Table.

System Type B(5): Base layer 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, H-Shield Minimum 1.5" thick	**6, 7**	**1:1.33 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**
ACFoam-II Minimum 1.5" thick	**N/A**	**N/A**

Top Insulation Layer:	**Insulation Fasteners (Table 3)**	**Fastener Density/ft²**
Structodek High Density Fiberboard Roof Insulation Minimum ½" 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 Asphalt or Garlastic KM Plus within the EVT range and at a rate of 25 lbs./sq. 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: Two or more plies of HPR 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 25 lbs./sq.

Membrane: One ply of 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 mineral surfaced Membranes. Required for smooth surfaced membranes. Apply one of the below:

1. Black Knight Cold applied at 4-5 gal./sq.. Broadcast 400 lbs./sq. (181 kg/9.29m²) of clean roof gravel immediately into the wet adhesive.
2. WeatherScreen applied at 4-5 gal./sq. Broadcast 400 lbs./sq. (181 kg/9.29m²) of clean roof gravel immediately into the wet adhesive.
3. Two coats of Garla-Brite applied at 0.5 gal./sq./coat.
4. Green-Lock Plus Membrane Adhesive applied at 4-5 gal/sq. Broadcast 400 lbs./sq. of clean roof gravel immediately into the wet adhesive.
5. One coat of Pyramic, Pyramic Plus LO, Pyramic LO Base Coat or Pyramic Base applied at 1 gal/sq followed by one coat of Pyramic applied at 1 gal/sq.
6. One coat of Pyramic Plus LO Base Coat applied at 1 gal./sq. followed by one coat of Pyramic Plus LO applied at 1 gal./sq.
7. StrataMax Gray applied in two coats at 1 gal/sq./coat.
8. StrataMax White applied in two coats at 1 gal/sq./coat.

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

Membrane Type: SBS/SIS/SEBS

Deck Type 2I: Steel, Insulated

Deck Description: 18-22 ga., Type B, Grade 33steel deck attached 6" o.c. (every flute) using ¾"puddle welds to steel supports spaced maximum 5 ft. o.c. Steel deck side laps attached 20" o.c. with Traxx/1 fasteners.
This Tested Assembly has been analyzed for allowable deck stress. See Deck Stress Analysis Table.

System Type B(6): Base layer 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, H-Shield Minimum 1.5" thick	**6, 7**	**1:1.33 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**
ACFoam-II Minimum 1.5" thick	**N/A**	**N/A**

Top Insulation Layer:	**Insulation Fasteners (Table 3)**	**Fastener Density/ft²**
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 Asphalt or Garlastic KM Plus within the EVT range and at a rate of 25 lbs./sq. 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 ply of HPR Torch Base Sheet torch applied to DensDeck or DensDeck Prime.

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

Surfacing: Optional for mineral surfaced Membranes. Required for smooth surfaced membranes. Apply one of the below:

1. Two coats of Garla-Brite applied at 0.5 gal./sq./coat.
2. Black Knight Cold applied at 4-5 gal./sq.. Broadcast 400 lbs./sq. (181 kg/9.29m²) of clean roof gravel immediately into the wet adhesive.
3. Green-Lock Plus Membrane Adhesive applied at 4-5 gal/sq. Broadcast 400 lbs./sq. of clean roof gravel immediately into the wet adhesive.

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

Membrane Type: SBS/SIS/SEBS

Deck Type 2I: Steel, Insulated

Deck Description: 22 ga., Type B, Grade 40 steel deck attached with #12 HWH Teks 5 fasteners 6" o.c. to steel supports spaced 6' o.c. Steel deck side laps attached 24" o.c. with #10 HWH Teks 1 fasteners.
This Tested Assembly has been analyzed for allowable deck stress. See Deck Stress Analysis Table.

System Type B(7): Base layer of insulation mechanically fastened, top layer adhered with approved adhesive.

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**
ENRGY 3, ACFoam-II		
Minimum 1.5" thick	**13, 15**	**1:1.33 ft²**
ENRGY 3, ACFoam-II, H-Shield		
Minimum 2" thick	**13, 15**	**1:1.33 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**
DEXcell FA Glass Mat Roof Board, SECUROCK Gypsum-Fiber Roof Board		
Minimum ½" thick	**N/A**	**N/A**

Note: Top Insulation layer shall be shall be adhered with Insul-Lock HR applied in continuous ¾ to 1 inch wide beads 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 ply of FlexBase Plus 80, StressBase 80*, StressPly Max, or adhered with Green-Lock Plus Membrane Adhesive applied at a rate of 2-2.5 gal/sq.

*StressBase 80 not used with DEXcell FA Glass Mat Roof Board.

Membrane:

One ply of StressPly Max FR Mineral, OptiMax, StressPly, StressPly EUV, StressPly EUV FR Mineral, StressPly FR Mineral, StressPly Legacy, StressPly Legacy FR Mineral, StressPly Max, StressPly Plus, StressPly Plus FR Mineral, VersiPly 80, VersiPly Mineral adhered with WeatherKing adhesive applied at a rate of 2-2.5 gal./sq.

Or

One ply of StressPly Legacy adhered with Garlastic KM Plus applied at a rate of 25 lbs./sq.

Or

StressPly EUV, StressPly EUV FR Mineral, StressPly EUV Mineral, StressPly FR Mineral, StressPly Plus, StressPly Plus FR Mineral, VersiPly 80, VersiPly Mineral adhered hot asphalt at a rate of 25 lbs./sq.

Or

One ply of StressPly Max FR Mineral adhered with Green-Lock Plus Membrane Adhesive applied at a rate of 2-2.5 gal/sq.

Surfacing:

Optional for mineral surfaced Membranes. Required for smooth surfaced membranes. Apply one of the below:

1. Black Knight Cold applied at 4-5 gal./sq.. Broadcast 400 lbs./sq. (181 kg/9.29m²) of clean roof gravel immediately into the wet adhesive.
2. WeatherScreen applied at 4-5 gal./sq. Broadcast 400 lbs./sq. (181 kg/9.29m²) of clean roof gravel immediately into the wet adhesive.
3. Two coats of Garla-Brite applied at 0.5 gal./sq./coat.
4. Green-Lock Plus Membrane Adhesive applied at 4-5 gal/sq. Broadcast 400 lbs./sq. of clean roof gravel immediately into the wet adhesive.
5. One coat of Pyramic, Pyramic Plus LO, Pyramic LO Base Coat or Pyramic Base applied at 1 gal/sq followed by one coat of Pyramic applied at 1 gal/sq.
6. One coat of Pyramic Plus LO Base Coat applied at 1 gal./sq. followed by one coat of Pyramic Plus LO applied at 1 gal./sq.
7. StrataMax Gray applied in two coats at 1 gal/sq./coat.
8. StrataMax White applied in two coats at 1 gal/sq./coat.

Maximum Design Pressure:

-82.5 psf. (See General Limitation #7.)

Membrane Type: SBS/SIS/SEBS

Deck Type 2I: Steel, Insulated

Deck Description: 18-22 ga., Type B, Grade 33, steel deck attached with Traxx/5 fasteners 6" o.c. (every flute) to steel supports spaced 6' o.c. Steel deck side laps attached 24" o.c. with Traxx/1 fasteners. **This Tested Assembly has been analyzed for allowable deck stress. See Deck Stress Analysis Table.**

System Type B(8): Base layer of insulation mechanically fastened, top layer adhered with approved asphalt or adhesive.

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, H-Shield Minimum 2" thick	**1, 2, 3 & 4; 5, 9 & 12; 10, 11 & 13**	**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./sq. 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: Two or more plies of HPR 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 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 Plus, StressPly IV Plus Mineral or StressPly IV Plus UV Mineral torch applied.

Surfacing:

Optional for mineral surfaced Membranes. Required for smooth surfaced membranes. Apply one of the below:

1. Black Knight Cold applied at 4-5 gal./sq.. Broadcast 400 lbs./sq. (181 kg/9.29m²) of clean roof gravel immediately into the wet adhesive.
2. WeatherScreen applied at 4-5 gal./sq. Broadcast 400 lbs./sq. (181 kg/9.29m²) of clean roof gravel immediately into the wet adhesive.
3. Two coats of Garla-Brite applied at 0.5 gal./sq./coat.
4. Green-Lock Plus Membrane Adhesive applied at 4-5 gal/sq. Broadcast 400 lbs./sq. of clean roof gravel immediately into the wet adhesive.
5. One coat of Pyramic, Pyramic Plus LO, Pyramic LO Base Coat or Pyramic Base applied at 1 gal/sq followed by one coat of Pyramic applied at 1 gal/sq.
6. One coat of Pyramic Plus LO Base Coat applied at 1 gal./sq. followed by one coat of Pyramic Plus LO applied at 1 gal./sq.
7. StrataMax Gray applied in two coats at 1 gal/sq./coat.
8. StrataMax White applied in two coats at 1 gal/sq./coat.

Maximum Design Pressure:

-85.3 psf. (See General Limitation #7)

Membrane Type:	SBS/SIS/SEBS
Deck Type 2I:	Steel, Insulated
Deck Description:	18-22 ga., Type B, Grade 80, steel deck attached with Traxx/5 fasteners 6" o.c. (every flute) to steel supports spaced 6' o.c. Steel deck side laps attached 24" o.c. with Traxx/1 fasteners. **This Tested Assembly has been analyzed for allowable deck stress. See Deck Stress Analysis Table.**
System Type B(9):	Base layer of insulation mechanically fastened, top layer adhered with approved asphalt or adhesive.

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, H-Shield Minimum 2" thick	**1, 2, 3 & 4; 5, 9 & 12; 10, 11 & 13**	**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./sq. 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:	Two or more plies of HPR 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 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 Plus, StressPly IV Plus Mineral or StressPly IV Plus UV Mineral torch applied.

Or

One ply of StressPly, StressPly EUV,StressPly EUV FR Mineral, StressPly EUV Mineral, StressPly FR Mineral, StressPly Mineral, StressPly Plus, StressPly Plus FR Mineral, VersiPly 60, VersiPly 80, or VersiPly Mineral adhered hot asphalt at a rate of 25 lbs./sq.

Or

One ply of Stressply, OptiMax, StressPly EUV, StressPly EUV FR Mineral, StressPly FR Mineral, StressPly Legacy, StressPly Legacy FR Mineral, StressPly Max, StressPly Max FR Mineral, StressPly Plus, StressPly Plus FR Mineral, VersiPly 80, VersiPly Mineral adhered with WeatherKing adhesive applied at a rate of 2-2.5 gal./sq.

Or

OptiMax FR Mineral, StressPly EUV FR Mineral, StressPly Legacy FR Mineral, StressPly Max, StressPly Max FR Mineral, VersiPly mineral adhered with Green-Lock Plus Membrane Adhesive applied at a rate of 2-2.5 gal/sq.

Or

StressPly Legacy adhered with Garlastic KM Plus membrane adhesive applied at a rate of 25 lbs./sq.

Surfacing:

Optional for mineral surfaced Membranes. Required for smooth surfaced membranes. Apply one of the below:

1. Black Knight Cold applied at 4-5 gal./sq.. Broadcast 400 lbs./sq. (181 kg/9.29m²) of clean roof gravel immediately into the wet adhesive.
2. WeatherScreen applied at 4-5 gal./sq. Broadcast 400 lbs./sq. (181 kg/9.29m²) of clean roof gravel immediately into the wet adhesive.
3. Two coats of Garla-Brite applied at 0.5 gal./sq./coat.
4. Green-Lock Plus Membrane Adhesive applied at 4-5 gal/sq. Broadcast 400 lbs./sq. of clean roof gravel immediately into the wet adhesive.
5. One coat of Pyramic, Pyramic Plus LO, Pyramic LO Base Coat or Pyramic Base applied at 1 gal/sq followed by one coat of Pyramic applied at 1 gal/sq.
6. One coat of Pyramic Plus LO Base Coat applied at 1 gal./sq. followed by one coat of Pyramic Plus LO applied at 1 gal./sq.
7. StrataMax Gray applied in two coats at 1 gal/sq./coat.
8. StrataMax White applied in two coats at 1 gal/sq./coat.

Maximum Design Pressure:

-112.5 psf. (See General Limitation #7)

Membrane Type: SBS/SIS/SEBS

Deck Type 2I: Steel, Insulated

Deck Description: Minimum 33 ksi, 22 ga. thick steel deck fastened to the purlins spaced maximum 72" o.c. with two #12 HWH Teks 5, 6". o.c., using a 0.065" thick 0.75" diameter washer with each fastener. Side laps are fastened with #10 HWH Teks 1, maximum 12" o.c.

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

System Type B(10): Base layer of insulation mechanically fastened, top layer adhered with approved adhesive.

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, H-Shield Minimum 1.5" thick	**14 & 18; 15 & 13; 3 & 19**	**1:1.33 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**
SECUROCK Gypsum-Fiber Roof Board Minimum ½" thick	**N/A**	**N/A**

Note: Top layer of insulation shall be adhered with Insul-Lock HR, Insul-Lock E HR or Insul-Lock II insulation Adhesive at a rate of ¾" wide ribbons spaced 8" o.c. Please refer to Roofing Application Standard RAS 117 for insulation attachment. Insulations listed as the base layer shall only be used as the base layer with a second layer of approved top layer insulation installed as the final membrane substrate. Composite insulation panels may be used as a top layer placed with the polyisocyanurate side face down.

Base/Ply Sheet: FlexBase 80, FlexBase E 80, or FlexBase Plus 80 with a 4" wide lap adhered with Green-Lock Plus Membrane Adhesive applied at a rate of 2-2.5 gal./sq.

Membrane: StressPly EUV Mineral, StressPly FR, StressPly FR Mineral, StressPly Mineral, StressPly Plus FR, StressPly Plus FR Mineral, StressPly Plus Mineral, StressPly Legacy, or StressPly Legacy FR Mineral with a 4" wide lap adhered with Green-Lock Plus Membrane Adhesive applied at a rate of 2-2.5 gal./sq.

Surfacing: Optional for mineral surfaced Membranes. Required for smooth surfaced membranes. Apply one of the below:

1. Black Knight Cold applied at 4-5 gal./sq.. Broadcast 400 lbs./sq. (181 kg/9.29m²) of clean roof gravel immediately into the wet adhesive.
2. One coat of Garla-Block 2K applied at a rate of 0.5 gal./sq. Apply two coats of Cool-Sil HB or Cool-Sil SG at a rate of 2.0 gal/sq./coat.
3. Two coats of Garla-Brite applied at 0.5 gal./sq./coat
4. Green-Lock Plus Membrane Adhesive applied at 4-5 gal/sq. Broadcast 400 lbs./sq. of clean roof gravel immediately into the wet adhesive.
5. One coat of Pyramic Base applied at 1 gal/sq followed by one coat of Pyramic applied at 1 gal/sq.
6. One coat of Pyramic Plus LO Base Coat applied at 1 gal./sq. followed by one coat of Pyramic Plus LO applied at 1 gal./sq.
7. StrataMax Gray applied in two coats at 1 gal/sq./coat.
8. StrataMax White applied in two coats at 1 gal/sq./coat.

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

Membrane Type: SBS/SIS/SEBS

Deck Type 2I: Steel, Insulated

Deck Description: Minimum 50 ksi, 22 ga. thick steel deck fastened to the purlins spaced maximum 72" o.c. with two #12 HWH Teks 5, 6". o.c., using a 0.065" thick 0.75" diameter washer with each fastener. Side laps are fastened with #10 HWH Teks 1, maximum 12" o.c.

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

System Type B(11): Base layer of insulation mechanically fastened, top layer adhered with approved adhesive.

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, H-Shield		
Minimum 1.5" thick	**14 & 18; 15 & 13; 3 & 19**	**1:1.33 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**
SECUROCK Gypsum-Fiber Roof Board		
Minimum ½" thick	**N/A**	**N/A**

Note: Top layer of insulation shall be adhered with Insul-Lock HR, Insul-Lock E HR or Insul-Lock II insulation Adhesive at a rate of ¾" wide ribbons spaced 8" o.c. Please refer to Roofing Application Standard RAS 117 for insulation attachment. Insulations listed as the base layer shall only be used as the base layer with a second layer of approved top layer insulation installed as the final membrane substrate. Composite insulation panels may be used as a top layer placed with the polyisocyanurate side face down.

Base/Ply Sheet: FlexBase 80, FlexBase E 80, or FlexBase Plus 80 with a 4" wide lap adhered with Green-Lock Plus Membrane Adhesive applied at a rate of 2-2.5 gal./sq.

Membrane: StressPly EUV Mineral, StressPly FR, StressPly FR Mineral, StressPly Mineral, StressPly Plus FR, StressPly Plus FR Mineral, StressPly Plus Mineral, StressPly Legacy, or StressPly Legacy FR Mineral with a 4" wide lap adhered with Green-Lock Plus Membrane Adhesive applied at a rate of 2-2.5 gal./sq.

Surfacing: Optional for mineral surfaced Membranes. Required for smooth surfaced membranes. Apply one of the below:

1. Black Knight Cold applied at 4-5 gal./sq.. Broadcast 400 lbs./sq. (181 kg/9.29m²) of clean roof gravel immediately into the wet adhesive.
2. One coat of Garla-Block 2K applied at a rate of 0.5 gal./sq. Apply two coats of Cool-Sil HB or Cool-Sil SG at a rate of 2.0 gal/sq./coat.
3. Two coats of Garla-Brite applied at 0.5 gal./sq./coat
4. Green-Lock Plus Membrane Adhesive applied at 4-5 gal/sq. Broadcast 400 lbs./sq. of clean roof gravel immediately into the wet adhesive.
5. One coat of Pyramic Base applied at 1 gal/sq followed by one coat of Pyramic applied at 1 gal/sq.
6. One coat of Pyramic Plus LO Base Coat applied at 1 gal./sq. followed by one coat of Pyramic Plus LO applied at 1 gal./sq.
7. StrataMax Gray applied in two coats at 1 gal/sq./coat.
8. StrataMax White applied in two coats at 1 gal/sq./coat.

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

Membrane Type: SBS/SIS/SEBS

Deck Type 2I: Steel, Insulated

Deck Description: Minimum 33 ksi, 22 ga. thick steel deck fastened to the purlins spaced maximum 72" o.c. with two #12 HWH Teks 5, 6". o.c., using a 0.065" thick 0.75" diameter washer with each fastener. Side laps are fast
ened with #10 HWH Teks 1, maximum 12" o.c.
This Tested Assembly has been analyzed for allowable deck stress. See Deck Stress Analysis Table.

System Type B(12): Base layer of insulation mechanically fastened, top layer adhered with approved adhesive.

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, H-Shield Minimum 1.5" thick	**N/A**	**N/A**

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**
SECUROCK Gypsum-Fiber Roof Board Minimum ½" thick	**14 & 18; 15 & 13; 3 & 19**	**1:1.33 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).

Base/Ply Sheet: FlexBase 80, FlexBase E 80, or FlexBase Plus 80 with a 4" wide lap adhered with Green-Lock Plus Membrane Adhesive applied at a rate of 2-2.5 gal./sq.

Membrane: StressPly EUV Mineral, StressPly FR, StressPly FR Mineral, StressPly Mineral, StressPly Plus FR, StressPly Plus FR Mineral, StressPly Plus Mineral, StressPly Legacy, or StressPly Legacy FR Mineral with a 4" wide lap adhered with Green-Lock Plus Membrane Adhesive applied at a rate of 2-2.5 gal./sq.

Surfacing: Optional for mineral surfaced Membranes. Required for smooth surfaced membranes. Apply one of the below:

1. Black Knight Cold applied at 4-5 gal./sq.. Broadcast 400 lbs./sq. (181 kg/9.29m²) of clean roof gravel immediately into the wet adhesive.
2. One coat of Garla-Block 2K applied at a rate of 0.5 gal./sq. Apply two coats of Cool-Sil HB or Cool-Sil SG at a rate of 2.0 gal/sq./coat.
3. Two coats of Garla-Brite applied at 0.5 gal./sq./coat
4. Green-Lock Plus Membrane Adhesive applied at 4-5 gal/sq. Broadcast 400 lbs./sq. of clean roof gravel immediately into the wet adhesive.
5. One coat of Pyramic Base applied at 1 gal/sq followed by one coat of Pyramic applied at 1 gal/sq.
6. One coat of Pyramic Plus LO Base Coat applied at 1 gal./sq. followed by one coat of Pyramic Plus LO applied at 1 gal./sq.
7. StrataMax Gray applied in two coats at 1 gal/sq./coat.
8. StrataMax White applied in two coats at 1 gal/sq./coat.

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

Membrane Type: SBS/SIS/SEBS

Deck Type 2I: Steel, Insulated

Deck Description: Minimum 33 ksi, 22 ga. thick steel deck fastened to the purlins spaced maximum 72" o.c. with two #12 HWH Teks 5, 6". o.c., using a 0.065" thick 0.75" diameter washer with each fastener. Side laps are fastened with #10 HWH Teks 1, maximum 12" o.c.

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

System Type B(13): Top layer of insulation mechanically fastened, base sheet and membrane fully 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	**N/A**	**N/A**

Top Insulation Layer:	**Insulation Fasteners (Table 3)**	**Fastener Density/ft²**
SECUROCK Gypsum-Fiber Roof Board Minimum ½" thick	**11 & 13**	**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).

Base/Ply Sheet: Two Plies of HPR Glasfelt fully adhered with hot asphalt at a rate of 25 lbs./sq.

Membrane: StressPly Legacy FR Mineral adhered with hot asphalt at 25 lbs./sq.

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

Membrane Type: SBS/SIS/SEBS

Deck Type 2I: Steel, Insulated

Deck Description: Minimum 80 ksi, 22 ga. thick steel deck fastened to the purlins spaced maximum 72" o.c. with two #12 HWH Teks 5, 6". o.c., using a 0.065" thick 0.75" diameter washer with each fastener. Side laps are fastened with #10 HWH Teks 1, maximum 12" o.c.

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

System Type B(14): Base layer 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**	**N/A**	**N/A**

Top Insulation Layer:	**Insulation Fasteners (Table 3)**	**Fastener Density/ft²**
SECUROCK Gypsum-Fiber Roof Board **Minimum ½" thick**	**11 & 13**	**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).

Base/Ply Sheet: Two Plies of HPR Glasfelt fully adhered with hot asphalt at a rate of 25 lbs./sq.

Membrane: StressPly Legacy FR Mineral adhered with hot asphalt at 25 lbs./sq.

Maximum Design Pressure: -112.5 psf. (See General Limitation #7)

Membrane Type: SBS/SIS/SEBS

Deck Type 2I: Steel, Insulated

Deck Description: 18-22 ga Grade 33 steel deck

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

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, H-Shield 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/ft²**
Structodek High Density Fiberboard Roof Insulation, Fesco Board, Retro-Fit Board, DensDeck, DensDeck Prime Minimum ½" thick	**1, 2, 3, 5, 6, 7, 10, 11**	**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: Two or more plies of HPR 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 25 lbs./sq.
Or
Two or more plies of HPR Premium Glasbase or HPR Tri-Base Premium adhered with Weatherking or Weatherking Plus WC applied at 2-2.5 gal./sq.

Membrane: One ply of 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 with Weatherking or Weatherking Plus WC applied at 2-2.5 gal./sq.

Surfacing:

Optional for mineral surfaced Membranes. Required for smooth surfaced membranes. Apply one of the below:

1. Black Knight Cold applied at 4-5 gal./sq.. Broadcast 400 lbs./sq. (181 kg/9.29m²) of clean roof gravel immediately into the wet adhesive.
2. WeatherScreen applied at 4-5 gal./sq. Broadcast 400 lbs./sq. (181 kg/9.29m²) of clean roof gravel immediately into the wet adhesive.
3. Two coats of Garla-Brite applied at 0.5 gal./sq./coat.
4. Green-Lock Plus Membrane Adhesive applied at 4-5 gal/sq. Broadcast 400 lbs./sq. of clean roof gravel immediately into the wet adhesive.
5. One coat of Pyramic, Pyramic Plus LO, Pyramic LO Base Coat or Pyramic Base applied at 1 gal/sq followed by one coat of Pyramic applied at 1 gal/sq.
6. One coat of Pyramic Plus LO Base Coat applied at 1 gal./sq. followed by one coat of Pyramic Plus LO applied at 1 gal./sq.
7. StrataMax Gray applied in two coats at 1 gal/sq./coat.
8. StrataMax White applied in two coats at 1 gal/sq./coat.

Maximum Design Pressure:

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

Membrane Type: SBS/SIS/SEBS

Deck Type 2I: Steel, Insulated

Deck Description: 18-22 ga., Type B, Grade 33 steel deck attached with Traxx/5 fasteners and ¾" diameter washers spaced 6" o.c. (every flute) to steel supports spaced 6' o.c. Steel deck side laps attached 12" o.c. with Traxx/1 fasteners.

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

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

All General and System Limitations apply.

One or more layers of any of the following insulations.

Insulation Base Layer:	**Insulation Fasteners (Table 3)**	**Fastener Density/ft²**
ENRGY 3, ACFoam-II, H-Shield, ENRGY 3 25 PSI 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**
SECUROCK Gypsum-Fiber Roof Board Minimum 1/2" thick	**13 & 15**	**1:1 ft²**

Note: All layers of insulation shall be mechanically attached using the fastener density listed above unless noted in the maximum design pressure. 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 StressBase 80, StressBase 120, FlexBase 80, FlexBase Plus 80, or FlexBase E 80 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 StressBase 80, StressBase 120, FlexBase 80, FlexBase Plus 80, FlexBase E 80 or VersiPly 80 adhered with Green-Lock Plus Membrane Adhesive applied at 2-2.5 gal./sq.

Membrane: One ply of OptiMax, OptiMax 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 with Green-Lock Plus Membrane Adhesive applied at 2-2.5 gal./sq.

Surfacing:

Optional for mineral surfaced Membranes. Required for smooth surfaced membranes. Apply one of the below:

1. Black Knight Cold applied at 4-5 gal./sq.. Broadcast 400 lbs./sq. (181 kg/9.29m²) of clean roof gravel immediately into the wet adhesive.
2. WeatherScreen applied at 4-5 gal./sq. Broadcast 400 lbs./sq. (181 kg/9.29m²) of clean roof gravel immediately into the wet adhesive.
3. Two coats of Garla-Brite applied at 0.5 gal./sq./coat.
4. Green-Lock Plus Membrane Adhesive applied at 4-5 gal/sq. Broadcast 400 lbs./sq. of clean roof gravel immediately into the wet adhesive.
5. One coat of Pyramic, Pyramic Plus LO, Pyramic LO Base Coat or Pyramic Base applied at 1 gal/sq followed by one coat of Pyramic applied at 1 gal/sq.
6. One coat of Pyramic Plus LO Base Coat applied at 1 gal./sq. followed by one coat of Pyramic Plus LO applied at 1 gal./sq.
7. StrataMax Gray applied in two coats at 1 gal/sq./coat.
8. StrataMax White applied in two coats at 1 gal/sq./coat.

Maximum Design Pressure:

-75 psf. (See General Limitation #7)

Membrane Type: SBS/SIS/SEBS

Deck Type 2I: Steel, Insulated

Deck Description: 18-22 ga., 1.5" Type B, Grade 33, G-90 steel deck attached to steel channel-framing joists. Steel supports spaced 6' o.c. Deck fastened 5/8" puddle welds, 6" o.c. and along the side laps at 12" o.c. with #12 self-drilling screws.

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

System Type C(3): All layers of insulation simultaneously attached.

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**
ENRGY 3		
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**
SECUROCK Gypsum-Fiber Roof Board		
Minimum 1/2" thick	**9 & 14**	**1:1 ft²**

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

Primer: Prime SECUROCK Gypsum-Fiber Roof Board insulation board with ASTM D-41 asphalt primer at 1 gallon per square.

Base/Ply Sheet: One ply of StressBase 80, StressBase 120, FlexBase 80, FlexBase Plus 80, or FlexBase E 80, 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 OptiMax, OptiMax 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 mineral surfaced Membranes. Required for smooth surfaced membranes. Apply one of the below:

1. Black Knight Cold applied at 4-5 gal./sq.. Broadcast 400 lbs./sq. (181 kg/9.29m²) of clean roof gravel immediately into the wet adhesive.
2. WeatherScreen applied at 4-5 gal./sq. Broadcast 400 lbs./sq. (181 kg/9.29m²) of clean roof gravel immediately into the wet adhesive.
3. Two coats of Garla-Brite applied at 0.5 gal./sq./coat.
4. Green-Lock Plus Membrane Adhesive applied at 4-5 gal/sq. Broadcast 400 lbs./sq. of clean roof gravel immediately into the wet adhesive.
5. One coat of Pyramic, Pyramic Plus LO, Pyramic LO Base Coat or Pyramic Base applied at 1 gal/sq followed by one coat of Pyramic applied at 1 gal/sq.
6. One coat of Pyramic Plus LO Base Coat applied at 1 gal./sq. followed by one coat of Pyramic Plus LO applied at 1 gal./sq.
7. StrataMax Gray applied in two coats at 1 gal/sq./coat.
8. StrataMax White applied in two coats at 1 gal/sq./coat.

Maximum Design Pressure:

-85.3 psf. (See General Limitation #7)

Membrane Type: SBS/SIS/SEBS

Deck Type 2I: Steel, Insulated

Deck Description: 18-22 ga., Type B, Grade 33 steel deck attached with Traxx/5 fasteners 6" o.c. (every flute) to steel supports spaced 6' o.c. Steel deck side laps attached 24" o.c. with Traxx/1 fasteners. **This Tested Assembly has been analyzed for allowable deck stress. See Deck Stress Analysis Table.**

System Type C(4): All layers of insulation simultaneously attached.

All General and System Limitations apply.

One or more layers of any of the following insulations.

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**

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	**1, 2, 3 & 4; 5, 9 & 12; 10 11 & 14**	**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: Two or more plies of HPR 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 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 Plus, StressPly IV Plus Mineral or Stressply IV Plus UV Mineral torch applied.

Surfacing: Optional for mineral surfaced Membranes. Required for smooth surfaced membranes. Apply one of the below:

1. Black Knight Cold applied at 4-5 gal./sq.. Broadcast 400 lbs./sq. (181 kg/9.29m²) of clean roof gravel immediately into the wet adhesive.
2. WeatherScreen applied at 4-5 gal./sq. Broadcast 400 lbs./sq. (181 kg/9.29m²) of clean roof gravel immediately into the wet adhesive.
3. Two coats of Garla-Brite applied at 0.5 gal./sq./coat.
4. Green-Lock Plus Membrane Adhesive applied at 4-5 gal/sq. Broadcast 400 lbs./sq. of clean roof gravel immediately into the wet adhesive.
5. One coat of Pyramic, Pyramic Plus LO, Pyramic LO Base Coat or Pyramic Base applied at 1 gal/sq followed by one coat of Pyramic applied at 1 gal/sq.
6. One coat of Pyramic Plus LO Base Coat applied at 1 gal./sq. followed by one coat of Pyramic Plus LO applied at 1 gal./sq.
7. StrataMax Gray applied in two coats at 1 gal/sq./coat.
8. StrataMax White applied in two coats at 1 gal/sq./coat.

Maximum Design Pressure: -85.3 psf. (See General Limitation #7)

Membrane Type: SBS/SIS/SEBS

Deck Type 2I: Steel, Insulated

Deck Description: 18-22 ga., Type B, Grade 80 steel deck attached with Traxx/5 fasteners and ¾" diameter washers spaced 6" o.c. (every flute) to steel supports spaced 6' o.c. Steel deck side laps attached 12" o.c. with Traxx/1 fasteners.
This Tested Assembly has been analyzed for allowable deck stress. See Deck Stress Analysis Table.

System Type C(5): All layers of insulation are simultaneously fastened

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**
ENRGY 3, H-Shield, ENRGY 3 25 PSI, ACFoam-II 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**
SECUROCK Gypsum-Fiber Roof Board Minimum 0.5" thick	**13 & 15**	**1:1.33 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: Two to four plies HPR Polyscrim Plus adhered in full mopping of approved Type I or Type III Coal Tar Pitch at a rate of 30 lbs./sq.

Cap Sheet: One ply of Millennium FR Mineral adhered in full mopping of approved Type I or Type III Coal Tar Pitch at a rate of 30 lbs./sq.

Surfacing: Optional for mineral surfaced Membranes. Required for smooth surfaced membranes. Apply one of the below:

1. Black Knight Cold applied at 4-5 gal./sq.. Broadcast 400 lbs./sq. (181 kg/9.29m²) of clean roof gravel immediately into the wet adhesive.
2. Two coats of Garla-Brite applied at 0.5 gal./sq./coat.
3. Green-Lock Plus Membrane Adhesive applied at 4-5 gal/sq. Broadcast 400 lbs./sq. of clean roof gravel immediately into the wet adhesive.

Maximum Design Pressure: -112.5 psf. (See General Limitation # 7)

Membrane Type: SBS/SIS/SEBS

Deck Type 2I: Steel, Insulated

Deck Description: 18-22 ga., Type B, Grade 80 steel deck attached with Traxx/5 fasteners and ¾" diameter washers spaced 6" o.c. (every flute) to steel supports spaced 6' o.c. Steel deck side laps attached 12" o.c. with Traxx/1 fasteners.

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

System Type C(6): All layers of insulation simultaneously attached.

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, H-Shield, ENRGY 3 25 PSI 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	**13 & 15**	**1:1.33 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: Two or more plies of or HPR 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 FR Mineral, StressPly Plus, StressPly Plus FR Mineral or 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 mineral surfaced Membranes. Required for smooth surfaced membranes. Apply one of the below:

1. Black Knight Cold applied at 4-5 gal./sq.. Broadcast 400 lbs./sq. (181 kg/9.29m²) of clean roof gravel immediately into the wet adhesive.
2. WeatherScreen applied at 4-5 gal./sq. Broadcast 400 lbs./sq. (181 kg/9.29m²) of clean roof gravel immediately into the wet adhesive.
3. Two coats of Garla-Brite applied at 0.5 gal./sq./coat.
4. Green-Lock Plus Membrane Adhesive applied at 4-5 gal/sq. Broadcast 400 lbs./sq. of clean roof gravel immediately into the wet adhesive.
5. One coat of Pyramic, Pyramic Plus LO, Pyramic LO Base Coat or Pyramic Base applied at 1 gal/sq followed by one coat of Pyramic applied at 1 gal/sq.
6. StrataMax Gray applied in two coats at 1 gal/sq./coat.
7. StrataMax White applied in two coats at 1 gal/sq./coat.

Maximum Design Pressure:

-112.5 psf. (See General Limitation #7)

Membrane Type: SBS/SIS/SEBS

Deck Type 2I: Steel, Insulated

Deck Description: 18-22 ga., 1.5" Type B, Grade 50, G-90 steel deck attached to steel channel-framing joists. Steel supports spaced 6' o.c. Deck fastened 5/8" puddle welds, 6" o.c. and along the side laps at 12" o.c. with #12 self-drilling screws.

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

System Type C(7): All layers of insulation simultaneously attached.

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**
ENRGY 3 **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**
SECUROCK Gypsum-Fiber Roof Board **Minimum 1/2" thick**	**9 & 14**	**1:1 ft²**

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

Primer: Prime SECUROCK Gypsum-Fiber Roof Board insulation board with ASTM D-41 asphalt primer at 1 gallon per square.

Base/Ply Sheet: One ply of StressBase 80, StressBase 120, FlexBase 80, FlexBase Plus 80, or FlexBase E 80, 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 OptiMax, OptiMax 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 mineral surfaced Membranes. Required for smooth surfaced membranes. Apply one of the below:

1. Black Knight Cold applied at 4-5 gal./sq.. Broadcast 400 lbs./sq. (181 kg/9.29m²) of clean roof gravel immediately into the wet adhesive.
2. WeatherScreen applied at 4-5 gal./sq. Broadcast 400 lbs./sq. (181 kg/9.29m²) of clean roof gravel immediately into the wet adhesive.
3. Two coats of Garla-Brite applied at 0.5 gal./sq./coat.
4. Green-Lock Plus Membrane Adhesive applied at 4-5 gal/sq. Broadcast 400 lbs./sq. of clean roof gravel immediately into the wet adhesive.
5. One coat of Pyramic, Pyramic Plus LO, Pyramic LO Base Coat or Pyramic Base applied at 1 gal/sq followed by one coat of Pyramic applied at 1 gal/sq.
6. One coat of Pyramic Plus LO Base Coat applied at 1 gal./sq. followed by one coat of Pyramic Plus LO applied at 1 gal./sq.
7. StrataMax Gray applied in two coats at 1 gal/sq./coat.
8. StrataMax White applied in two coats at 1 gal/sq./coat.

Maximum Design Pressure:

-127.5psf. (See General Limitation #7)

Membrane Type: SBS/SIS/SEBS

Deck Type 2I: Steel, Insulated

Deck Description: 18-22 ga., Type B, Grade 80 steel deck attached with Traxx/5 fasteners 6" o.c. (every flute) to steel supports spaced 6' o.c. Steel deck side laps attached 24" o.c. with Traxx/1 fasteners. **This Tested Assembly has been analyzed for allowable deck stress. See Deck Stress Analysis Table.**

System Type C(8): All layers of insulation simultaneously attached.

All General and System Limitations apply.

One or more layers of any of the following insulations.

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**

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	**1, 2, 3 & 4; 5, 9 & 12; 10 11 & 14**	**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: Two or more plies of or HPR 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 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 Plus, StressPly IV Plus Mineral or Stressply IV Plus UV Mineral torch applied.

Surfacing: Optional for mineral surfaced Membranes. Required for smooth surfaced membranes. Apply one of the below:

1. Black Knight Cold applied at 4-5 gal./sq.. Broadcast 400 lbs./sq. (181 kg/9.29m²) of clean roof gravel immediately into the wet adhesive.
2. WeatherScreen applied at 4-5 gal./sq. Broadcast 400 lbs./sq. (181 kg/9.29m²) of clean roof gravel immediately into the wet adhesive.
3. Two coats of Garla-Brite applied at 0.5 gal./sq./coat.
4. Green-Lock Plus Membrane Adhesive applied at 4-5 gal/sq. Broadcast 400 lbs./sq. of clean roof gravel immediately into the wet adhesive.
5. One coat of Pyramic, Pyramic Plus LO, Pyramic LO Base Coat or Pyramic Base applied at 1 gal/sq followed by one coat of Pyramic applied at 1 gal/sq.
6. One coat of Pyramic Plus LO Base Coat applied at 1 gal./sq. followed by one coat of Pyramic Plus LO applied at 1 gal./sq.
7. StrataMax Gray applied in two coats at 1 gal/sq./coat.
8. StrataMax White applied in two coats at 1 gal/sq./coat.

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

Membrane Type: SBS/SIS/SEBS

Deck Type 2I: Steel, Insulated

Deck Description: 18-20 ga., Type B, Grade 80 steel deck attached with Traxx/5 fasteners and ¾" diameter washers spaced 6" o.c. (every flute) to steel supports spaced 6' o.c. Steel deck side laps attached 12" o.c. with Traxx/1 fasteners.

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

System Type C(9): All layers of insulation simultaneously attached.

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, H-Shield, ENRGY 3 25 PSI 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	**14 & 16**	**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: Two or more plies of HPR 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 FR Mineral, StressPly Plus, StressPly Plus FR Mineral or 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 mineral surfaced Membranes. Required for smooth surfaced membranes. Apply one of the below:

1. Black Knight Cold applied at 4-5 gal./sq.. Broadcast 400 lbs./sq. (181 kg/9.29m²) of clean roof gravel immediately into the wet adhesive.
2. WeatherScreen applied at 4-5 gal./sq. Broadcast 400 lbs./sq. (181 kg/9.29m²) of clean roof gravel immediately into the wet adhesive.
3. Two coats of Garla-Brite applied at 0.5 gal./sq./coat.
4. Green-Lock Plus Membrane Adhesive applied at 4-5 gal/sq. Broadcast 400 lbs./sq. of clean roof gravel immediately into the wet adhesive.
5. One coat of Pyramic, Pyramic Plus LO, Pyramic LO Base Coat or Pyramic Base applied at 1 gal/sq followed by one coat of Pyramic applied at 1 gal/sq.
6. One coat of Pyramic Plus LO Base Coat applied at 1 gal./sq. followed by one coat of Pyramic Plus LO applied at 1 gal./sq.
7. StrataMax Gray applied in two coats at 1 gal/sq./coat.
8. StrataMax White applied in two coats at 1 gal/sq./coat.

Maximum Design Pressure:

-157.5 psf. (See General Limitation #7)

Membrane Type: SBS/SIS/SEBS

Deck Type 2I: Steel, Insulated

Deck Description: 18-20 ga., Type B, Grade 80 steel deck attached with Traxx/5 fasteners and ¾" diameter washers spaced 6" o.c. (every flute) to steel supports spaced 6' o.c. Steel deck side laps attached 12" o.c. with Traxx/1 fasteners.

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

System Type C(10): All layers of insulation simultaneously attached.

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, H-Shield, ENRGY 3 25 PSI 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**
SECUROCK Gypsum-Fiber Roof Board Minimum ½" thick	**13 & 15**	**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: Two or more plies of or HPR 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 FR Mineral, StressPly Plus, StressPly Plus FR Mineral or 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 mineral surfaced Membranes. Required for smooth surfaced membranes. Apply one of the below:

1. Black Knight Cold applied at 4-5 gal./sq.. Broadcast 400 lbs./sq. (181 kg/9.29m²) of clean roof gravel immediately into the wet adhesive.
2. WeatherScreen applied at 4-5 gal./sq. Broadcast 400 lbs./sq. (181 kg/9.29m²) of clean roof gravel immediately into the wet adhesive.
3. Two coats of Garla-Brite applied at 0.5 gal./sq./coat.
4. Green-Lock Plus Membrane Adhesive applied at 4-5 gal/sq. Broadcast 400 lbs./sq. of clean roof gravel immediately into the wet adhesive.
5. One coat of Pyramic, Pyramic Plus LO, Pyramic LO Base Coat or Pyramic Base applied at 1 gal/sq followed by one coat of Pyramic applied at 1 gal/sq.
6. One coat of Pyramic Plus LO Base Coat applied at 1 gal./sq. followed by one coat of Pyramic Plus LO applied at 1 gal./sq.
7. StrataMax Gray applied in two coats at 1 gal/sq./coat.
8. StrataMax White applied in two coats at 1 gal/sq./coat.

Maximum Design Pressure:

-172.5 psf. (See General Limitation #7)

Membrane Type: SBS/SIS/SEBS

Deck Type 2I: Steel, Insulated

Deck Description: Minimum 33 ksi, 22 ga in. thick steel deck fastened to the purlins spaced maximum 72 in. o.c. with two #12 HWH Teks 5, 6 in. o.c., using a 0.065 in. thick 0.75 diameter washer with each fasteners. Side laps are fastened with #10 HWH Teks 1, maximum 12 in. o.c.
This Tested Assembly has been analyzed for allowable deck stress. See Deck Stress Analysis Table.

System Type C(11): Base insulation mechanically fastened, top layer adhered with approved adhesives

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, H-Shield **Minimum 1.5" thick**	**14 & 18; 15 & 13; 3 & 19**	**1:1.33 ft²**

Top Insulation Layer:	**Insulation Fasteners (Table 3)**	**Fastener Density/ft²**
SECUROCK Gypsum-Fiber Roof Board **Minimum ½" thick**	**N/A**	**N/A**

Note: Top layer of insulation shall be adhered with Insul-Lock HR, Insul-Lock E HR or Insul-Lock II insulation Adhesive at a rate of ¾" wide ribbons spaced 8" o.c. Please refer to Roofing Application Standard RAS 117 for insulation attachment. Insulations listed as the base layer shall only be used as the base layer with a second layer of approved top layer insulation installed as the final membrane substrate. Composite insulation panels may be used as a top layer placed with the polyisocyanurate side face down.

Base/Ply Sheet: FlexBase 80, FlexBase E 80, FlexBase Plus 80, or a lap 4 in. wide adhered Green-Lock Plus Membrane Adhesive applied at a rate of 2.0 – 2.5 gal/sq or WeatherKing applied at a rate of 2-2.5 gal./sq.

Membrane: One ply of StressPly EUV Mineral, StressPly FR, StressPly FR Mineral, StressPly Mineral, StressPly Plus FR, StressPly Plus FR Mineral, StressPly Plus Mineral, StressPly Legacy, or Stressply Legacy FR Mineral with a lap 4 in. wide adhered with Green-Lock Plus Membrane Adhesive applied at a rate of 2-2.5 gal./sq. or WeatherKing applied at a rate of 2.0-2.5 gal./sq.

Surfacing:

Optional for mineral surfaced Membranes. Required for smooth surfaced membranes. Apply one of the below:

1. Black Knight Cold applied at 4-5 gal./sq.. Broadcast 400 lbs./sq. (181 kg/9.29m²) of clean roof gravel immediately into the wet adhesive.
2. WeatherScreen applied at 4-5 gal./sq. Broadcast 400 lbs./sq. (181 kg/9.29m²) of clean roof gravel immediately into the wet adhesive.
3. Two coats of Garla-Brite applied at 0.5 gal./sq./coat.
4. Green-Lock Plus Membrane Adhesive applied at 4-5 gal/sq. Broadcast 400 lbs./sq. of clean roof gravel immediately into the wet adhesive.
5. One coat of Pyramic, Pyramic Plus LO, Pyramic LO Base Coat or Pyramic Base applied at 1 gal/sq followed by one coat of Pyramic applied at 1 gal/sq.
6. One coat of Pyramic Plus LO Base Coat applied at 1 gal./sq. followed by one coat of Pyramic Plus LO applied at 1 gal./sq.
7. StrataMax Gray applied in two coats at 1 gal/sq./coat.
8. StrataMax White applied in two coats at 1 gal/sq./coat.

Maximum Design Pressure:

-172.5 psf. (See General Limitation #7)

Membrane Type: SBS/SIS/SEBS

Deck Type 2I: Steel, Insulated

Deck Description: 18-22 ga., Type B, Grade 33 steel deck attached 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.
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 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, H-Shield Minimum 1" thick	**N/A**	**N/A**

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: 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 Premium Glasbase, HPR Tri-Base Premium fastened to the deck using OMG AccuTrac Hextra and AccuTrac 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: (Optional) 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 25 lbs./sq.

Ply Sheet: Two or more plies of, HPR 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 25 lbs./sq.

Membrane: One ply of 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 mineral surfaced Membranes. Required for smooth surfaced membranes. Apply one of the below:

1. Black Knight Cold applied at 4-5 gal./sq.. Broadcast 400 lbs./sq. (181 kg/9.29m²) of clean roof gravel immediately into the wet adhesive.
2. WeatherScreen applied at 4-5 gal./sq. Broadcast 400 lbs./sq. (181 kg/9.29m²) of clean roof gravel immediately into the wet adhesive.
3. Two coats of Garla-Brite applied at 0.5 gal./sq./coat.
4. Green-Lock Plus Membrane Adhesive applied at 4-5 gal/sq. Broadcast 400 lbs./sq. of clean roof gravel immediately into the wet adhesive.
5. One coat of Pyramic, Pyramic Plus LO, Pyramic LO Base Coat or Pyramic Base applied at 1 gal/sq followed by one coat of Pyramic applied at 1 gal/sq.
6. One coat of Pyramic Plus LO Base Coat applied at 1 gal./sq. followed by one coat of Pyramic Plus LO applied at 1 gal./sq.
7. StrataMax Gray applied in two coats at 1 gal/sq./coat.
8. StrataMax White applied in two coats at 1 gal/sq./coat.

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

Membrane Type: SBS/SIS/SEBS

Deck Type 2I: Steel, Insulated

Deck Description: 18-22 ga., Type B, Grade 33 steel deck attached 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.
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 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, H-Shield Minimum 1" thick	**N/A**	**N/A**

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

Ply Sheet: One ply of HPR Torch Base torch applied to base sheet

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

Surfacing: Optional for mineral surfaced Membranes. Required for smooth surfaced membranes. Apply one of the below:

1. Two coats of Garla-Brite applied at 0.5 gal./sq./coat.
2. Black Knight Cold applied at 4-5 gal./sq.. Broadcast 400 lbs./sq. (181 kg/9.29m²) of clean roof gravel immediately into the wet adhesive.
3. Green-Lock Plus Membrane Adhesive applied at 4-5 gal/sq. Broadcast 400 lbs./sq. of clean roof gravel immediately into the wet adhesive.

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

Membrane Type: SBS/SIS/SEBS

Deck Type 2I: Steel, Insulated

Deck Description: 18-22 ga., Type B, Grade 33 steel deck attached with Traxx/5 fasteners 6" o.c. (every flute) to steel supports spaced 6' o.c. Steel deck side laps attached 24" o.c. with Traxx/1 fasteners.

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

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

All General and System Limitations apply.

One or more layers of any of the following insulations.

Insulation Layer:	**Insulation Fasteners (Table 3)**	**Fastener Density/ft^2**
ACFoam-II, ENRGY 3, H-Shield, Multi-Max FA-3 Minimum 1.5" thick	**N/A**	**N/A**
DensDeck, DensDeck Prime Minimum ¼" thick	**N/A**	**N/A**
Structodek High Density Fiberboard Roof Insulation Minimum ½" 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

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: Two or more plies of HPR 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 or more plies of HPR Torch Base Sheet torch applied

Membrane:

One ply of 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.

StressPly IV Plus, StressPly IV Plus Mineral or StressPly IV Plus UV Mineral torch applied.

Surfacing:

Optional for mineral surfaced Membranes. Required for smooth surfaced membranes. Apply one of the below:

1. Black Knight Cold applied at 4-5 gal./sq.. Broadcast 400 lbs./sq. (181 kg/9.29m²) of clean roof gravel immediately into the wet adhesive.
2. WeatherScreen applied at 4-5 gal./sq. Broadcast 400 lbs./sq. (181 kg/9.29m²) of clean roof gravel immediately into the wet adhesive.
3. Two coats of Garla-Brite applied at 0.5 gal./sq./coat.
4. Green-Lock Plus Membrane Adhesive applied at 4-5 gal/sq. Broadcast 400 lbs./sq. of clean roof gravel immediately into the wet adhesive.
5. One coat of Pyramic, Pyramic Plus LO, Pyramic LO Base Coat or Pyramic Base applied at 1 gal/sq followed by one coat of Pyramic applied at 1 gal/sq.
6. One coat of Pyramic Plus LO Base Coat applied at 1 gal./sq. followed by one coat of Pyramic Plus LO applied at 1 gal./sq.
7. StrataMax Gray applied in two coats at 1 gal/sq./coat.
8. StrataMax White applied in two coats at 1 gal/sq./coat.

Maximum Design Pressure:

-85.3 psf. (See General Limitation #7)

Membrane Type: SBS/SIS/SEBS

Deck Type 2I: Steel, Insulated

Deck Description: 18-22 ga., Type B, Grade 50 steel deck attached with Traxx/5 fasteners 6" o.c. (every flute) to steel supports spaced 6' o.c. Steel deck side laps attached 24" o.c. with Traxx/1 fasteners. **This Tested Assembly has been analyzed for allowable deck stress. See Deck Stress Analysis Table.**

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

All General and System Limitations apply.

One or more layers of any of the following insulations.

Insulation Layer:	**Insulation Fasteners (Table 3)**	**Fastener Density/ft^2**
ACFoam-II, ENRGY 3, H-Shield, Multi-Max FA-3 Minimum 1.5" thick	**N/A**	**N/A**
DensDeck, DensDeck Prime Minimum ¼" thick	**N/A**	**N/A**
Structodek High Density Fiberboard Roof Insulation Minimum ½" 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

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: Two or more plies of or HPR 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 or more plies of HPR Torch Base Sheet torch applied

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

Surfacing: Optional for mineral surfaced Membranes. Required for smooth surfaced membranes. Apply one of the below:

1. Black Knight Cold applied at 4-5 gal./sq.. Broadcast 400 lbs./sq. (181 kg/9.29m²) of clean roof gravel immediately into the wet adhesive.
2. WeatherScreen applied at 4-5 gal./sq. Broadcast 400 lbs./sq. (181 kg/9.29m²) of clean roof gravel immediately into the wet adhesive.
3. Two coats of Garla-Brite applied at 0.5 gal./sq./coat.
4. Green-Lock Plus Membrane Adhesive applied at 4-5 gal/sq. Broadcast 400 lbs./sq. of clean roof gravel immediately into the wet adhesive.
5. One coat of Pyramic, Pyramic Plus LO, Pyramic LO Base Coat or Pyramic Base applied at 1 gal/sq followed by one coat of Pyramic applied at 1 gal/sq.
6. One coat of Pyramic Plus LO Base Coat applied at 1 gal./sq. followed by one coat of Pyramic Plus LO applied at 1 gal./sq.
7. StrataMax Gray applied in two coats at 1 gal/sq./coat.
8. StrataMax White applied in two coats at 1 gal/sq./coat.

Maximum Design Pressure: -112.5 psf. (See General Limitation #7)

STEEL DECK SYSTEM LIMITATIONS:

1. If mechanical attachment to the structural deck through the lightweight insulating concrete is proposed, a field withdrawal resistance testing shall be performed to determine equivalent or enhanced fastener patterns and density. All testing and fastening design shall be in compliance with Testing Application Standard TAS 105 and Roofing Application Standard RAS 117, calculations shall be signed and sealed by a Florida Registered Engineer, Architect, or Registered Roof Consultant.
2. For steel deck application where specific deck construction is not referenced: The deck shall be a minimum 22 gage attached with 5/8" puddle welds with weld washers at every flute with maximum deck spans of 6 ft. o.c.

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