



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

NOTICE OF ACCEPTANCE (NOA)

MIAMI-DADE COUNTY
PRODUCT CONTROL SECTION

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www.miamidade.gov/economy

Soprema, Inc.
310 Quadral Drive
Wadsworth, OH 44281

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: Soprema Modified Bitumen Roofing Systems over Concrete Decks.

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

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

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

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

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

This NOA revises NOA No. 10-0408.04 and consists of pages 1 through 80.
The submitted documentation was reviewed by Jorge L. Acebo.



NOA No.: 11-0119.04
Expiration Date: 12/31/14
Approval Date: 06/27/13
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ROOFING SYSTEM APPROVAL

Category: Roofing
Sub-Category: Modified Bitumen
Material: SBS
Deck Type: Concrete
Maximum Design Pressure: -525 psf

TRADE NAMES OF PRODUCTS MANUFACTURED OR LABELED BY APPLICANT:

TABLE 1

<u>Product</u>	<u>Dimensions</u>	<u>Test Specification</u>	<u>Product Description</u>
Sopra G	39" x 108' (3.5 sq.)	ASTM D4601	Fiberglass reinforced oxidized asphalt base sheet for bonding or mechanically attaching to substrate. For use as a base/ply sheet only.
Modified Sopra G	39" x 108' (3.5 sq.)	ASTM D4601	Fiberglass reinforced modified asphalt base sheet for bonding or mechanically attaching to substrate. For use as a base/ply sheet only.
Soprabase	39" x 99' (3 sq.)	ASTM D4601	Oxidized asphalt, polyester reinforced, sand-surfaced base sheet. For use as a base/ply sheet only.
Soprabase S	39" x 65' (2 sq.)	ASTM D4601	SBS modified bitumen, polyester reinforced, sand-surfaced base sheet. For use as a base/ply sheet only.
Sopra IV	36" x 180' (5 sq.)	ASTM D2178 Type IV	Type IV fiberglass reinforced, smooth surfaced plysheet used in multi-ply systems and complies with ASTM and UL Standards. Applied in hot asphalt or cold adhesive.
Sopra VI	36" x 180' (5 sq.)	ASTM D2178 Type VI	Type VI fiberglass reinforced, smooth surfaced plysheet used in multi-ply systems and complies with ASTM and UL Standards. Applied in hot asphalt or cold adhesive.
Colvent TG	39" x 49' (1.5 sq.)	ASTM D6163	Fiberglass reinforced, modified bitumen membrane with 1" wide factory applied heat weldable strips on back side.
Colvent 180 TG	39" x 33' (1 sq.)	ASTM D6164	Polyester reinforced, modified bitumen membrane with 1" wide factory applied heat weld strips on back side.
Elastophene Sanded	39" x 49' (1.5 sq.)	ASTM D6163	Fiberglass reinforced modified bitumen membrane sanded on both sides. Applied in hot asphalt, cold adhesive or ribbon stripping.
Elastophene Sanded 3.0	39" x 33' (1sq.)	ASTM D6163	Fiberglass reinforced modified bitumen membrane sanded on both sides. Applied in hot asphalt, cold adhesive or ribbon stripped.
Elastophene HS Sanded	39" x 66' (2 sq.)	ASTM D6163	Fiberglass reinforced modified bitumen membrane with fire retardants and sanded on both sides. Applied in hot asphalt, cold adhesive or ribbon stripping.



<u>Product</u>	<u>Dimensions</u>	<u>Test Specification</u>	<u>Product Description</u>
Elastophene PS	39" x 49' (1.5sq.)	ASTM D6163	Glass reinforced modified bitumen membrane with a plastic burn-off film for heat weld bonding to the top side. Applied in hot asphalt, cold adhesive or ribbon stripping.
Elastophene PS 3.0	39" x 49' (1.5sq.)	ASTM D6163	Glass reinforced modified bitumen membrane with a plastic burn-off film for heat weld bonding to the top side. Applied in hot asphalt, cold adhesive or ribbon stripping.
Elastophene SP	39" x 49' (1.5 sq.)	ASTM D6163	Glass reinforced modified bitumen membrane with a plastic burn-off film on the bottom and sanded on the top. Applied b heat welding or ribbon stripping (after removal of plastic burn-off film).
Elastophene SP 3.0	39" x 49' (1 sq.)	ASTM D6163	Glass reinforced modified bitumen membrane with a plastic burn-off film on the bottom and sanded on the top. Applied b heat welding or ribbon stripping (after removal of plastic burn-off film).
Elastophene Flam	39" x 33' (1 sq.)	ASTM D6163	Fiberglass reinforced modified bitumen membrane covered on both sides with a plastic burn-off film. Applied by heat welding.
Elastophene Flam 2.2	39" x 49' (1.5 sq.)	ASTM D6163	Fiberglass reinforced modified bitumen membrane covered on both sides with a plastic burn-off film. Applied by heat welding.
Elastophene Flam HS	39" x 33' (1 sq.)	ASTM D6162	Woven fiberglass/polyester composite reinforced modified bitumen membrane with fire retardants and plastic burn-off film on both sides. Applied by heat welding.
Elastophene 180 Sanded	39" x 49' (1.5 sq.)	ASTM D6164	Non-woven polyester reinforced modified bitumen membrane sanded on both sides. Applied in hot asphalt, cold adhesive or ribbon stripping.
Elastophene 180 PS	39" x 49' (1.5 sq.)	ASTM D6164	Non-woven polyester reinforced modified bitumen membrane with a sanded bottom and a plastic burn-off film on the top. Applied in hot asphalt, cold adhesive or ribbon stripping.
Elastophene GR	39" x 33' (1 sq.)	ASTM D6163	Fiberglass reinforced modified bitumen membrane with fire retardants, sanded on the bottom and mineral granules on the top. Applied in hot asphalt, cold adhesive or ribbon stripping.
Elastophene LS FR GR	39" x 33' (1 sq.)	ASTM D6163	Fiberglass reinforced modified bitumen membrane with fire retardants, sanded on the bottom and mineral granules on the top. Applied in hot asphalt, cold adhesive or ribbon stripping.
Elastophene FR GR	39" x 33' (1 sq.)	ASTM D6163	Fiberglass reinforced modified bitumen membrane with fire retardants, sanded on the bottom and mineral granules on the top. Applied in hot asphalt, cold adhesive or ribbon stripping.



<u>Product</u>	<u>Dimensions</u>	<u>Test Specification</u>	<u>Product Description</u>
Elastophene FR+ GR	39" x 33' (1 sq.)	ASTM D6163	Fiberglass reinforced modified bitumen membrane with fire retardants, sanded on the bottom and mineral granules on the top. Applied in hot asphalt, cold adhesive or ribbon stripping.
Elastophene HS FR GR	39" x 33' (1 sq.)	ASTM D6162	Woven fiberglass/polyester composite reinforced modified bitumen membrane with fire retardants, sanded on the bottom and mineral granules on the top. Applied in hot asphalt, cold adhesive or ribbon stripping.
Elastophene Flam GR	39" x 33' (1 sq.)	ASTM D6163	Fiberglass reinforced modified bitumen membrane with fire retardants, a plastic burn-off film on the bottom and mineral granules on the top. Applied by heat welding.
Elastophene Flam LS FR GR	39" x 33' (1 sq.)	ASTM D6163	Fiberglass reinforced modified bitumen membrane with fire retardants, a plastic burn-off film on the bottom and mineral granules on the top. Applied by heat welding.
Elastophene Flam FR GR	39" x 33' (1 sq.)	ASTM D6163	Fiberglass reinforced modified bitumen membrane with fire retardants a plastic burn-off film on the bottom and mineral granules on the top. Applied by heat welding.
Elastophene Flam FR+ GR	39" x 33' (1 sq.)	ASTM D6163	Fiberglass reinforced modified bitumen membrane with fire retardants a plastic burn-off film on the bottom and mineral granules on the top. Applied by heat welding.
Elastophene Flam HS FR GR	39" x 33' (1 sq.)	ASTM D6162	Woven fiberglass composite reinforced modified bitumen membrane with fire retardants, a plastic burn-off film on the bottom and mineral granules on the top. Applied by heat welding or ribbon stripping (after removal of plastic burn-off film).
Sopralene 180 Sanded	39" x 33' (1 sq.) 39" x 26' (¾ sq.)	ASTM D6164	Non-woven polyester reinforced modified bitumen membrane sanded on both sides. Applied in hot asphalt, cold adhesive or ribbon stripping.
Sopralene 250 Sanded	39" x 33' (1 sq.) 39" x 26' (¾ sq.)	ASTM D6164	Non-woven polyester reinforced modified bitumen membrane sanded on both sides. Applied in hot asphalt, cold adhesive or ribbon stripping.
Sopralene 180 Sanded 2.2	39" x 33' (1 sq.)	ASTM D6164	Non-woven polyester reinforced modified bitumen membrane sanded on both sides. Applied in hot asphalt or cold adhesive.
Sopralene 180 PS	39" x 33' (1 sq.)	ASTM D6164	Non-woven polyester reinforced modified bitumen membrane with a plastic burn-off film on the top and sanded on the bottom.
Sopralene 180 PS 2.2	39" x 49' (1.5 sq.)	ASTM D6164	Non-woven polyester reinforced modified bitumen membrane with a sanded bottom and a plastic burn-off film on the top. Applied in hot asphalt, cold adhesive or ribbon stripping.

Sopralene 180 SP 3.5	39" x 33' (1 sq.)	ASTM D6164	Non-woven polyester reinforced modified bitumen membrane with a plastic burn-off film on the bottom and sanded on the top. Applied by heat welding or ribbon stripping (after removal of plastic burn-off film).
Sopralene 180 SP	39" x 33' (1 sq.)	ASTM D6164	Non-woven polyester reinforced modified bitumen membrane with a plastic burn-off film on the bottom and sanded on the top
Sopralene 250 SP	39" x 33' (1 sq.)	ASTM D6164	Non-woven polyester reinforced modified bitumen membrane with a plastic burn-off film on the bottom and sanded on the top
Soprafix [S]	39" x 33' (1 sq.)	ASTM D6164	Non-woven polyester reinforced modified bitumen membrane. Applied by mechanical attachment.
Soprafix Base 612	39" x 33' (1 sq.)	ASTM D6164	Non-woven polyester reinforced modified bitumen membrane. Applied by mechanical attachment.
Soprafix [F]	39" x 33' (1 sq.)	ASTM D6164	Non-woven polyester reinforced modified bitumen membrane. Applied by mechanical attachment.
Soprafix Base 613	39" x 33' (1 sq.)	ASTM D6164	Non-woven polyester reinforced modified bitumen membrane. Applied by mechanical attachment.
Soprafix [X]	39" x 33' (1 sq.)	ASTM D6164	Non-woven polyester reinforced modified bitumen membrane. Applied by mechanical attachment.
Soprafix Base 614	39" x 33' (1 sq.)	ASTM D6164	Non-woven polyester reinforced modified bitumen membrane. Applied by mechanical attachment.
Soprafix	39" x 33' (1 sq.)	ASTM D6164	Non-woven polyester reinforced modified bitumen membrane with a 4-inch or 5-inch wide side lap with a plastic burn-off film on the bottom and sanded on the top. Applied by mechanical attachment. Lap heat welded or sealed with an approved cold adhesive.
Soprafix Base 622	39" x 33' (1 sq.)	ASTM D6164	Non-woven polyester reinforced modified bitumen membrane with a 4-inch or 5-inch wide side lap with a plastic burn-off film on the bottom and sanded on the top. Applied by mechanical attachment. Lap heat welded or sealed with an approved cold adhesive.
Soprafix-e	39" x 33' (1 sq.)	ASTM D6164	Non-woven polyester reinforced modified bitumen membrane with a 5-inch wide side lap with a self-adhering compound and release film and sanded on the bottom and top surfaces. Applied by mechanical attachment. Lap self-adhered or sealed with approved cold adhesive.

Soprafix Base 641	39" x 33' (1 sq.)	ASTM D6164	Non-woven polyester reinforced modified bitumen membrane with a 5-inch wide side lap with a self-adhering compound and release film and sanded on the bottom and top surfaces. Applied by mechanical attachment. Lap self-adhered or sealed with approved cold adhesive.
Sopralene Flam 180	39" x 33' (1 sq.)	ASTM D6164	Non-woven polyester reinforced SBS modified bitumen membrane, both sides covered with a plastic burn-off film. Applied by heat welding or ribbon stripping (after removal of plastic burn-off film).
Sopralene Flam 250	39" x 33' (1 sq.)	ASTM D6164	Non-woven polyester reinforced SBS modified bitumen membrane, both sides covered with a plastic burn-off film. Applied by heat welding or ribbon stripping (after removal of plastic burn-off film).
Sopralene 180 FR GR	39" x 33' (1 sq.)	ASTM D6164	Non-woven polyester reinforced modified bitumen membrane with fire retardants a sanded bottom and a mineral granules top. Applied in hot asphalt, cold applied adhesive or ribbon stripping (after removal of plastic burn-off film).
Sopralene 250 FR GR	39" x 33' (1 sq.)	ASTM D6164	Non-woven polyester reinforced modified bitumen membrane with fire retardants a sanded bottom and a mineral granules top. Applied in hot asphalt, cold applied adhesive or ribbon stripping (after removal of plastic burn-off film).
Sopralene Flam 180 GR	39" x 33' (1 sq.)	ASTM D6164	Non-woven polyester reinforced modified bitumen membrane with a plastic burn-off film on the bottom and mineral granules on the top. Applied by heat welding or ribbon stripping (after removal of plastic burn-off film).
Sopralene Flam 180 FR GR	39" x 33' (1 sq.)	ASTM D6164	Non-woven polyester reinforced modified bitumen membrane with fire retardants a plastic burn-off film on the bottom and mineral granules on the top. Applied by heat welding or ribbon stripping (after removal of plastic burn-off film).
Sopralene Flam 250 FR GR	39" x 33' (1 sq.)	ASTM D6164	Non-woven polyester reinforced modified bitumen membrane with fire retardants a plastic burn-off film on the bottom and mineral granules on the top. Applied by heat welding or ribbon stripping (after removal of plastic burn-off film).
Sopralene Flam 180 FR+ GR	39" x 33' (1 sq.)	ASTM D6164	Non-woven polyester reinforced modified bitumen membrane with fire retardants a plastic burn-off film on the bottom and mineral granules on the top. Applied by heat welding or ribbon stripping (after removal of plastic burn-off film).

Sopralene Flam 250 FR+ GR	39" x 33' (1 sq.)	ASTM D6164	Non-woven polyester reinforced modified bitumen membrane with fire retardants a plastic burn-off film on the bottom and mineral granules on the top. Applied by heat welding or ribbon stripping (after removal of plastic burn-off film).
Sopralast 50 TV Alu	various	ASTM D6298	Fiberglass reinforced modified bitumen sheeting faced with aluminum foil. Applied by heat welding of ribbon stripping (after removal of plastic burn-off film).
Soprastar Flam	39" x 33' (1 sq.)	ASTM D6162	Polyester reinforced SBS modified bitumen membrane with a plastic burn-off film on the bottom side and a reflective white top surface. Applied by heat welding.
Soprastar Sanded	39" x 33' (1 sq.)	ASTM D6162	Stabilized polyester mat reinforced SBS modified bitumen membrane with a sanded bottom side and a reflective white top surface. Applied by hot asphalt or cold adhesive.
UNILAY	39" x 33' (1 sq.)	ASTM D6164	Non-woven polyester reinforced modified bitumen membrane with fire retardants and surfaced with mineral granules. Applied by mechanical attachment, heat welding or ribbon stripping (after removal of plastic burn-off film).
Elastocol 500	various	ASTM D41	Asphalt primer.
Elastocol Stick	various	ASTM D41	Asphalt primer.
ALSAN Flashing™	1.25 gallon pail or 3.75 gallon pail	Proprietary	One part polyurethane/bitumen resin, moisture cure compound.
ALSAN Polyfleece	4", 8" or 39" wide by 50' long	Proprietary	Non-woven polyester reinforcement used in the ALSAN Flashing system.
SBS Elastic Cement	5 gallon pail	Proprietary	Elastomeric bitumen based mastic compound.
Soprawalk	39" x 26' (3/4 sq.)	Proprietary	Non-woven polyester reinforced modified bitumen membrane with a sanded bottom and mineral granules on the top. Applied by hot asphalt, cold adhesive or ribbon stripping.
High Velocity® Insulation Adhesive II (HVIA-II)	3 gal pail	Proprietary	One part elastomeric urethane foam adhesive.
High Velocity® Insulation Adhesive III (HVIA-III)	4 dual cartridges per carton	Proprietary	Two part elastomeric urethane foam adhesive.
High Velocity® Insulation Adhesive III – Green	4 dual cartridges per carton	Proprietary	Two part elastomeric urethane foam adhesive.
High Velocity Insulation Adhesive PG	5 gal or 50 gal	Proprietary	Two part elastomeric urethane foam adhesive.



FM Adhesive	5 gallon pail, 55 gallon drum or 350 gallon tote	Proprietary	Plastomeric bitumen based cold adhesive.
FM Adhesive Trowel Grade	5 gallon pail	Proprietary	Plastomeric bitumen based cold adhesive.
FM Adhesive (VOC)	5 gallon pail, 55 gallon drum or 350 gallon tote	Proprietary	Elastomeric bitumen based cold adhesive.
COLPLY Modified Adhesive	5 gallon pail, 55 gallon drum or 350 gallon tote	Proprietary	Elastomeric bitumen based cold adhesive.
Soprastar Adhesive	5 gallon pail or 55 gallon drum	Proprietary	SBS modified bitumen based cold adhesive.

APPROVED INSULATIONS:

TABLE 2

Product Name	Product Description	Manufacturer (With Current NOA)
ACFoam-II, ACFoam-III	Polyisocyanurate foam insulation	Atlas Roofing Corporation
ACFoam Composite	Composite polyisocyanurate insulation board	Atlas Roofing Corporation
ISO 95+ GL	Polyisocyanurate foam insulation	Firestone Building Products Company, LLC
EnergyGuard Isocyanurate Composite	Composite polyisocyanurate insulation	GAF Materials Corp.
EPS	Type IX 1.8 pcf. Polystyrene Insulation	Generic
XPS	Type IV 1.6 pcf. Polystyrene Insulation	Generic
High Density Wood Fiberboard	Wood fiber insulation board	Generic
Perlite Insulation	Perlite insulation board	Generic
DensDeck, DensDeck Prime, DensDeck DuraGuard Fireguard	Water resistant gypsum board	Georgia Pacific Gypsum LLC
Type X Gypsum Board, DensDeck DuraGuard		
Sopra-ISO s, Sopra-ISO+ s	Polyisocyanurate foam insulation	Soprema, Inc.
M-Shield	Polyisocyanurate foam insulation	Soprema, Inc.
Sopra-ISO r	Polyisocyanurate foam insulation	Soprema, Inc.
H-Shield	Polyisocyanurate foam insulation	Hunter Panels, LLC
ENRGY 3, ENRGY 3 25 PSI	Polyisocyanurate foam insulation	Johns Manville Corp.
Multi-Max-3, Multi-Max FA-3	Polyisocyanurate foam insulation	RMax Operating, LLC
SECUROCK Gypsum-Fiber Roof Board	Gypsum board	USG Corp.
Structodek High Density Fiberboard Roof Insulation	High Density wood fiber insulation board	Blue Ridge Fiberboard, Inc.
Fesco Board	Expanded mineral fiber insulation	Johns Manville Corp.
Sopraboard	Mineral fortified asphaltic cored coverboard	Soprema, Inc.



APPROVED FASTENERS:

Table 3

Fastener Number	Product Name	Product Description	Dimensions	Manufacturer (With Current NOA)
1.	Soprema #12, #14 & #15 Fasteners	Fasteners for membrane or insulation attachment to wood, steel or concrete decks.		Soprema, Inc.
2.	Dekfast #12, #14 & #15 HS Fastener	Insulation fastener		SFS Intec, Inc.
3.	Dekfast Galvalume Steel Hex Plate	Galvalume AZ50 steel plate	2 7/8" x 3 1/4"	SFS Intec, Inc.
4.	Dekfast DekFlat Round Plastic Lock Plate	Polypropylene locking plate.	3" x 3 1/4"	SFS Intec, Inc.
5.	OMG AccuTrac Hextra Fastener	Insulation fastener for wood and steel.		OMG, Inc.
6.	OMG 3" Galvalume Steel Plate	Galvalume stress plate.	3" diameter	OMG, Inc.
7.	OMG Flat Bottom Metal Plate	Galvalume stress plate.	3" square	OMG, Inc.
8.	OMG Fastener #12, #14 & #15	Insulation fastener.		OMG, Inc.
9.	OMG CD-10	Insulation fastener.		OMG, Inc.
10.	OMG Fluted Nail	Insulation fastener.		OMG, Inc.
11.	OMG 3 in. Round Metal Plates	Galvalume AZ50 steel plate	3" diameter	OMG, Inc.
12.	OMG Plastic Plate	Polypropylene stress plate	3.25" diameter	OMG, Inc.
13.	Trufast #14 HD Fastener	Insulation fastener for wood, steel and concrete.		Altenloh, Brinck & Co. U.S., Inc.
14.	Trufast #15 EHD Fastener	Insulation fastener for wood, steel and concrete.		Altenloh, Brinck & Co. U.S., Inc.
15.	Trufast 3" Metal Insulation Plate	Galvalume AZ50 steel plate	3" diameter	Altenloh, Brinck & Co. U.S., Inc.
16.	OMG Polymer Batten Strip-TL	Modified polymer batten bar		OMG, Inc.
17.	Dekfast Galvalume Steel 3" Round Insulation Plate	Galvalume AZ50 steel plate	3" diameter	SFS Intec, Inc.
18.	Dekfast Coiled Batten Strip	Batten bar		SFS Intec, Inc.
19.	Soprema 3" Round Insulation Plate	Stress plate	3" diameter	Soprema, Inc.
20.	Soprafix 2" SB Stress Plate	Stress plate	2" diameter	Soprema, Inc.



APPROVED FASTENERS:

Table 3

Fastener Number	Product Name	Product Description	Dimensions	Manufacturer (With Current NOA)
21.	Soprafix 2-3/8" SB Stress Plate	Stress plate	2-3/8" diameter	Soprema, Inc.
22.	Soprafix MBB-R	Metal Batten Bar		Soprema, Inc.
23.	Soprema #12 DP, #14 MP, #15 HD Fastener	Insulation and membrane fasteners		Soprema, Inc.
24.	Trufast Flat Batten Bar	Galvalume AZ55 steel batten bar		Altenloh, Brinck & Co. U.S., Inc.
25.	Trufast Recessed Batten Bar	Galvalume AZ55 steel batten bar with recessed holes		Altenloh, Brinck & Co. U.S., Inc.
26.	#15 Roofgrip Large Head	Carbon steel fasteners used in steel, wood and concrete decks	Various	OMG, Inc.
27.	Dekfast Galvalume Steel Round 2-3/8" 20 ga. Barbed plates	Galvalume AZ55 steel barbed plate	2.37" diameter	SFS Intec, Inc.
28.	Trufast 2" Barbed Metal Seam Plates	Galvalume steel barbed plate	2" diameter	Altenloh, Brinck & Co. U.S., Inc.
29.	Trufast 2.4" Barbed Seam Plates	Galvalume steel barbed plate	2.4" diameter	Altenloh, Brinck & Co. U.S., Inc.
30.	Dekfast IF-2-SB	Galvalume AZ55 steel plate	2" diameter	SFS Intec, Inc.
31.	Soprema 2" Seam Plate	Stress plate	2" diameter	Soprema, Inc.
32.	Soprema 3" Metal Installation Plate	Stress plate	3" diameter	Soprema, Inc.
33.	Trufast 3" Recessed Metal Insulation Plate	Galvalume AZ50 steel plate	3" diameter	Altenloh, Brinck & Co. U.S., Inc.



APPROVED SURFACING/COATING OPTIONS:

TABLE 4

Chosen components must be applied according to manufacturer's application instructions. Any coating, listed below, used as a surfacing, must be listed within a current NOA.

System Number	Manufacturer	Application
1.	Generic	Gravel applied at 400 lbs./sq., adhered with flood coat of asphalt at 60 lbs./sq.
2.	Generic	Slag applied at 300 lbs./sq., adhered with flood coat of asphalt at 60 lbs./sq.
3.	Soprema, Inc.	Gravel applied at 400 lbs./sq., adhered with FM Adhesive, FM Adhesive (VOC), COLPLY Modified Adhesive or Soprastar Adhesive at 4 gal./sq.
4.	Karnak Corporation	Karnak #97 Fibrated Aluminum Roof Coating applied at an application rate of 1.5 gal./sq.
5.	Soprema, Inc.	Cural Aluminizer applied at an application rate of 2 gal./sq.
6.	Thermo Manufacturing Systems, LLC	Super Prep Roof Coating applied in two coats at an application rate of 1.5 gal./sq./coat.
7.	United Coatings Manufacturing Company	Roof Mate Coating, applied in one base coat at a rate of 1.5 gal./sq., and one finish coat at a rate of 1.5 gal./sq.
8.	Insulating Coatings Corporation	Astec 2000 Finish Coat applied in two base coats at a rate of 0.75 gal./sq./coat and two finish coats at a rate of 0.75 gal./sq./coat.
9.	Henry Company	HE280DC White Elastomeric Roof Coating applied in two coats at an application rate of 1 gal./sq./coat.
10.	National Coating Corp.	Acryshield® A500 applied in two coats at an application rate of 1 gal./sq./coat.
11.	Soprema, Inc.	R-Nova Roof Coating
12.	Generic	Semi-ceramic coated colored granules.

EVIDENCE SUBMITTED:

<u>Test Agency/Identifier</u>	<u>Report</u>	<u>Name</u>	<u>Date</u>
Florida Testing Engineering & Consulting Inc.	TAS 114-D	GL0904-02	05/01/09
	TAS 114-D	GL0409-03	05/01/09
Factory Mutual Research Corp.	1W8A1.AM	FM 4470	07/15/93
	1Z3A6.AM	FM 4470	04/27/95
	3000507	FM 4450	02/16/00
	3009610	FM 4450	10/22/01
	3008869	FM 4470	03/19/01
	3002351	FM 4470	02/28/03
	3017614	FM 4470	02/27/06
	3025860	FM 4470	04/17/06
	3029098	FM 4470	10/25/07
	3032109	FM 4470	07/21/08
	3026128	FM 4470	08/04/06
	3024311	FM 4470	11/01/06
	3036182	FM 4470	07/31/09
	3014751	FM 4470	08/27/03
	3023458	FM 4470	07/18/06
	3031818	FM 4470	02/20/09
	3X3A7.AM	FM 4470	09/08/94
	3045101	FM 4470	11/05/12
	Underwriters Laboratories	R11436	UL 790
Dynatech Engineering Corp.	10.94.27	TAS 114	10/27/94
	2491-04.95	TAS 114	01/04/95
Exterior Research & Design, LLC	2003.02.97-1	TAS 114	02/15/97
	2003-2.04.97-1	TAS 114	04/15/97
	2002.07.97-1	TAS 114	08/15/97
	2755.09.02	TAS 114	10/19/02
	2760.01.05-3	TAS 114	02/22/05
	2761.09.03	TAS 114	09/02/03
	2777.09.05	TAS 114	09/29/05
	2774.04.05-R1	TAS 114	04/18/07
Trinity ERD	S6740.11.07	ASTM D6163	11/02/07
	S12370.03.09-1	ASTM D6164	03/06/09
	S12370.03.09-2	ASTM D6164	03/06/09
	S12370.03.09-3	ASTM D6162	03/06/09
	C8500SC.11.07-R1	TAS 117(B)	08/07/09
		ASTM D6862	
	S11440.06.10	ASTM D4798	06/01/10
		TAS 110	
	S11440.01.11-R1	ASTM D6164	06/07/12
	S11440.11.10-4	ASTM D2178	11/17/10
	S11440.11.10-3-R1	ASTM D4601	01/30/13
	S11440.12.10-1-R1	ASTM D6163	06/07/12



EVIDENCE SUBMITTED: (CONT.)

<u>Test Agency/Identifier</u>	<u>Report</u>	<u>Name</u>	<u>Date</u>
Trinity ERD	S32700.12.10	ASTM D6162	12/15/10
	S35860.12.11-1	ASTM D2178	12/12/11
	S35860.12.11-2	ASTM D4601	12/12/11
	S35860.05.12-1-R1	ASTM D6163	06/07/12
	S35860.05.12-2-R1	ASTM D6164	06/07/12
	S35860.05.12-3	ASTM D6164	05/08/12
	S14000.08.09-R2	TAS 114	10/09/09
ITS / Warnock Hersey		ASTM D5147	05/27/93
IRT of S. Florida	990028	TAS 114	09/30/99
PRI Construction Materials Technologies, LLC	SOP-049-02-01	ASTM D1644	05/31/12
		ASTM D2196	
	SOP-043-02-01	ASTM D4601	02/27/12
	SOP-042-02-01	ASTM D4601	02/27/12
	SOP-041-02-01	ASTM D2178	02/27/12
	SOP-040-02-01	ASTM D2178	02/27/12
	SOP-010-02-01.03	TAS-138	07/26/11
	SOP-050-02-01	ASTM D3019	07/12/12



APPROVED ASSEMBLIES:

Membrane Type: SBS

Deck Type 3I: Concrete Deck, Insulated

Deck Description: 2500 psi structural concrete or concrete plank

System Type A(1): One or more layers of insulation adhered with approved asphalt.

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
ENRGY 3		
Minimum 1.4” thick	N/A	N/A

Note: Concrete deck shall be primed with ASTM D 41 asphalt primer and allowed to dry prior to application of vapor barrier or insulation. All insulation shall be adhered to the vapor barrier or primed deck in full moppings of approved hot asphalt within the EVT range and at a rate of 20-40 lbs./100 ft² or High Velocity[®] Insulation Adhesive II (HVIA-II), High Velocity[®] Insulation Adhesive III (HVIA-III), High Velocity[®] Insulation Adhesive III – Green or High Velocity Insulation Adhesive PG applied in continuous 3/4” to 1” wide ribbons at a maximum spacing of 12” o.c. Please refer to Roofing Application Standard RAS 117 for insulation attachment. Insulations listed as base layer only shall be used only as base layers with a second layer of approved top layer insulation installed as the final membrane substrate. Composite insulation panels may be used as a top layer placed with the polyisocyanurate side facing down.

Base Sheet: One ply of Elastophene Sanded, Elastophene 180 Sanded, Sopralene 180 Sanded 2.2, Elastophene PS*, Elastophene PS 3.0*, Elastophene 180 PS*, Sopralene 180 PS 2.2*, Sopralene 180 PS*, Sopralene 180 Sanded, Sopralene 250 Sanded adhered with in full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs./sq.

*Requires heat welded cap membrane.

Ply Sheet: None.

Membrane: Elastophene Flam GR, Elastophene Flam FR GR, Elastophene Flam FR+ GR, Elastophene Flam LS FR GR, SopraStar Flam, Sopralene Flam 180 GR, Sopralene Flam 180 FR GR, Sopralene Flam 250 FR GR, Sopralene Flam 180 FR+ GR, Sopralene Flam 250 FR+ GR, Sopralast 50 TV Alu, heat welded.

Or

Elastophene FR GR, Elastophene FR+ GR, Elastophene LS FR GR, SopraStar Sanded, Sopralene 180 FR GR, Sopralene 250 FR GR, adhered in full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs./sq. to sand surfaced base membrane.



Surfacing: Surfacing is Optional on granular surfaced field cap membranes.
Surfacing is Required for smooth or sanded surfaced field cap membranes.
Refer to Underwriters Laboratories or Intertek Testing Services listings for applicable fire classifications
Apply any coating listed in Table 4 above, or any Miami-Dade approved coating system.

Maximum Design Pressure: -52.5 psf; (See General Limitation #9.)



Membrane Type: SBS
Deck Type 3I: Concrete Deck, Insulated
Deck Description: 2500 psi structural concrete or concrete plank
System Type A(2): One or more layers of insulation 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, ACFoam III, Sopra-ISO s, Sopra-ISO+ s, ENRGY 3, H-Shield, Sopra-ISO r, M-Shield		
Minimum 1.4” thick	N/A	N/A
Top Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft²
DensDeck		
Minimum ¼” thick	N/A	N/A

Note: All insulation shall be adhered with High Velocity® Insulation Adhesive II (HVIA-II), High Velocity® Insulation Adhesive III (HVIA-III), High Velocity® Insulation Adhesive III – Green or High Velocity Insulation Adhesive PG applied in continuous ¾” wide ribbons spaced 12” o.c. Please refer to Roofing Application Standard RAS 117 for insulation attachment.

Primer: Elastocol 500, Elastocol Stick or AquaTac applied at a rate of 1sq.al/sq., to top surface of any insulation, base or ply sheet prior to application of next layer
(Optional)

Base Sheet: One ply of Sopra G, Modified Sopra G, Soprabase, Soprabase S, Elastophene Sanded, Elastophene Sanded 3.0, Elastophene HS Sanded, Elastophene PS*, Elastophene PS 3.0*, Elastophene 180 Sanded, Sopralene 180 Sanded 2.2, Elastophene 180 PS*, Sopralene 180 PS 2.2*, Sopralene 180 Sanded, Sopralene 180 PS*, Sopralene 250 Sanded, adhered in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs./sq. or FM Adhesive, FM Adhesive (VOC), COLPLY Modified Adhesive or Soprapstar Adhesive at 1.5 – 2.0 gallon / square.
(Optional)

*Requires heat welded ply or cap membrane.



Ply Sheet: One or more layers of Elastophene Flam*, Elastophene Flam 2.2*, Elastophene Flam HS*, Elastophene SP, Elastophene SP 3.0, Sopralene Flam 180*, Sopralene 180 SP 3.5, Soprafix, Soprafix Base 622, Sopralene Flam 250*, Sopralene 250 SP, heat welded

or

Elastophene Sanded, Elastophene Sanded 3.0, Elastophene HS Sanded, Elastophene PS*, Elastophene PS 3.0*, Elastophene 180 Sanded, Sopralene 180 Sanded 2.2, Elastophene 180 PS*, Sopralene 180 PS 2.2*, Sopralene 180 Sanded, Sopralene 180 PS*, Sopralene 250 Sanded, adhered in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs./sq. or FM Adhesive, FM Adhesive (VOC), COLPLY Modified Adhesive or SopraStar Adhesive at 1.5 – 2.0 gallon / square.

*Requires heat welded cap membrane.

Membrane: One layer of Elastophene Flam GR, Elastophene Flam FR GR, Elastophene Flam LS FR GR, Elastophene Flam FR+ GR, Elastophene Flam HS FR GR, SopraStar Flam, Sopralene Flam 180 GR, Sopralene Flam 180 FR GR, Sopralene Flam 180 FR+ GR, Sopralene Flam 250 FR GR, Sopralene Flam 250 FR+ GR, Sopralast 50 TV Alu, heat welded.

or

One layer of Elastophene GR, Elastophene FR GR, Elastophene LS FR GR, Elastophene FR+ GR, Elastophene HS FR GR, SopraStar Sanded, Sopralene 180 FR GR, Sopralene 250 FR GR, adhered in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs./sq. or FM Adhesive at 1.5 – 2.0 gallon / square to sand surfaced ply membrane.

Surfacing: Surfacing is Optional on granular surfaced field cap membranes. Surfacing is Required for smooth or sanded surfaced field cap membranes. Refer to Underwriters Laboratories or Intertek Testing Services listings for applicable fire classifications. Apply any coating listed in Table 4 above, or any Miami-Dade approved coating system.

Maximum Design Pressure: -60 psf; (See General Limitation #9.)

Membrane Type: SBS
Deck Type 3I: Concrete Decks, Insulated
Deck Description: 2500 psi structural concrete or concrete plank
System Type A(3): One or more layers of insulation adhered with approved asphalt.

All General and System Limitations apply.

One or more layers of any of the following insulations.

Base Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft²
Tapered ENRGY 3, Tapered ACFoam-II, Tapered ACFoam-III, Sopra-ISO s Tapered, Tapered H-Shield, M-Shield Tapered, Sopra-ISO r Tapered Minimum ½” thick	N/A	N/A
Top Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft²
DensDeck Minimum ¼” thick	N/A	N/A

Note: Concrete deck shall be primed with ASTM D 41 asphalt primer and allowed to dry prior to application of vapor barrier or insulation. All insulation shall be adhered to the vapor barrier or primed deck in full moppings of approved hot asphalt within the EVT range and at a rate of 20-40 lbs./100 ft² or High Velocity[®] Insulation Adhesive II (HVIA-II), High Velocity[®] Insulation III (HVIA-III), High Velocity[®] Insulation Adhesive III – Green or High Velocity Insulation Adhesive PG applied in continuous ¾” to 1” wide ribbons at a maximum spacing of 12” o.c. Please refer to Roofing Application Standard RAS 117 for insulation attachment. Insulations listed as base layer only shall be used only as base layers with a second layer of approved top layer insulation installed as the final membrane substrate. Composite insulation panels may be used as a top layer placed with the polyisocyanurate side facing down.

Base Sheet: One ply of Elastophene Sanded, Elastophene 180 Sanded, Sopralene 180 Sanded 2.2, Elastophene PS*, Elastophene PS 3.0*, Elastophene 180 PS*, Sopralene 180 PS 2.2*, Sopralene 180 PS*, Sopralene 180 Sanded, Sopralene 250 Sanded adhered in full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs./sq.

*Requires heat welded cap membrane.

Ply Sheet: None.

Membrane: Elastophene Flam GR, Elastophene Flam FR GR, Elastophene Flam FR+ GR, Elastophene Flam LS FR GR, Soprastar Flam, Sopralene Flam 180 GR, Sopralene Flam 180 FR GR, Sopralene Flam 250 FR GR, Sopralene Flam 180 FR+ GR, Sopralene Flam 250 FR+ GR, Sopralast 50 TV Alu, heat welded.

or

Elastophene FR GR, Elastophene FR+ GR, Elastophene LS FR GR, Soprastar Sanded, Sopralene 180 FR GR, Sopralene 250 FR GR, adhered in full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs./sq. to sand surfaced base membrane.



Surfacing: Surfacing is Optional on granular surfaced field cap membranes.
Surfacing is Required for smooth or sanded surfaced field cap membranes.
Refer to Underwriters Laboratories or Intertek Testing Services listings for applicable fire classifications
Apply any coating listed in Table 4 above, or any Miami-Dade approved coating system.

Maximum Design Pressure: -60 psf; (for all other insulations) (See General Limitation #9.)
-82.5 psf; (for tapered ACFoam-II, ACFoam-III) (See General Limitation #9.)



Membrane Type: SBS
Deck Type 3I: Concrete Decks, Insulated
Deck Description: 2500 psi structural concrete or concrete plank
System Type A(4): One or more layers of insulation adhered with approved asphalt.

All General and System Limitations apply.

One or more layers of any of the following insulations.

Base Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft²
ACFoam-II, ACFoam-III, Sopra-ISO s, Sopra-ISO+ s, ENRGY 3, H-Shield, M-Shield, Sopra-ISO r Minimum 1.4" thick	N/A	N/A
Top Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft²
Approved High Density Fiberboard, Structodek High Density Fiberboard Roof Insulation Minimum 1/2" thick	N/A	N/A
Fesco Board Minimum 3/4" thick	N/A	N/A
DensDeck Minimum 1/4" thick	N/A	N/A
DensDeck DuraGuard Fireguard Type X Gypsum Board Minimum 5/8" thick	N/A	N/A

Note: Concrete deck shall be primed with ASTM D 41 asphalt primer and allowed to dry prior to application of vapor barrier or insulation. All insulation shall be adhered to the vapor barrier or primed deck in full moppings of approved hot asphalt within the EVT range and at a rate of 20-40 lbs./100 ft². Please refer to Roofing Application Standard RAS 117 for insulation attachment. Insulations listed as base layer only shall be used only as base layers with a second layer of approved top layer insulation installed as the final membrane substrate. Composite insulation panels may be used as a top layer placed with the polyisocyanurate side facing down.

Base Sheet: One or more plies of Sopra G, Modified Sopra G, Sopra-IV, Sopra-VI,
(Optional) Soprabase, Soprabase S adhered in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs./sq.

Ply Sheet: **(Required if no base sheet used)** One or more plies of Elastophene Flam*,
(Optional) Elastophene Flam 2.2*, Sopralene Flam 180*, Sopralene Flam 250*, Sopralene 180 SP, Sopralene 250 SP, heat welded (not allowed on perlite or wood fiberboard coverboards)



Ply Sheet: (Optional) (Cont.)	<p>Or</p> <p>One or more plies of Elastophene Sanded, Elastophene 180 Sanded, Sopralene 180 Sanded 2.2, Elastophene PS*, Elastophene PS 3.0*, Elastophene 180 PS*, Sopralene 180 PS 2.2*, Sopralene 180 PS*, Sopralene 180 Sanded, Sopralene 250 Sanded or one or more plies of Type IV or Type VI ply sheets, adhered in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs./sq.</p> <p>*Requires heat welded cap membrane.</p>
Membrane:	<p>Elastophene Flam GR, Elastophene Flam FR GR, Elastophene Flam FR+ GR, Elastophene Flam LS FR GR, Soprastar Flam, Sopralene Flam 180 GR, Sopralene Flam 180 FR GR, Sopralene Flam 250 FR GR, Sopralene Flam 180 FR+ GR, Sopralene Flam 250 FR+ GR, Sopralast 50 TV Alu, heat welded</p> <p>or</p> <p>Elastophene FR GR, Elastophene FR+ GR, Elastophene LS FR GR, Elastophene GR, Soprastar Sanded, Sopralene 180 FR GR, Sopralene 250 FR GR, adhered in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs./sq.</p>
Surfacing:	<p>Surfacing is Optional on granular surfaced field cap membranes.</p> <p>Surfacing is Required for smooth or sanded surfaced field cap membranes.</p> <p>Refer to Underwriters Laboratories or Intertek Testing Services listings for applicable fire classifications</p> <p>Apply any coating listed in Table 4 above, or any Miami-Dade approved coating system.</p>
Maximum Design Pressure:	<p>-60 psf ;(for all other applications) (See General Limitation #9.)</p> <p>-420 psf; (for min. 1.5” thick Approved polyisocyanurate in asphalt followed by min. ¾” FescoBoard in asphalt.) (See General Limitation #9.)</p>



Membrane Type: SBS
Deck Type 3I: Concrete Decks, Insulated
Deck Description: 2500 psi structural concrete or concrete plank
System Type A(5): One or more layers of insulation adhered with approved asphalt.

All General and System Limitations apply.

One or more layers of any of the following insulations.

Base Insulation Layer (Optional)	Insulation Fasteners (Table 3)	Fastener Density/ft²
Tapered ACFoam-II, Tapered ACFoam-III, Sopra-ISO s Tapered, Tapered H-Shield, M-Shield Tapered, Sopra-ISO r Tapered Minimum ½” thick	N/A	N/A
Top Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft²
ACFoam Composite Minimum 2” thick	N/A	N/A

Note: Concrete deck shall be primed with ASTM D 41 asphalt primer and allowed to dry prior to application of vapor barrier or insulation. All insulation shall be adhered to the vapor barrier or primed deck in full moppings of approved hot asphalt within the EVT range and at a rate of 20-40 lbs./100 ft² or High Velocity[®] Insulation Adhesive II (HVIA-II), High Velocity[®] Insulation Adhesive III (HVIA-III), High Velocity[®] Insulation Adhesive III – Green or High Velocity Insulation Adhesive PG applied in continuous ¾” to 1” wide ribbons at a maximum spacing of 12” o.c. Please refer to Roofing Application Standard RAS 117 for insulation attachment. Insulations listed as base layer only shall be used only as base layers with a second layer of approved top layer insulation installed as the final membrane substrate. Composite insulation panels may be used as a top layer placed with the polyisocyanurate side facing down.

Base Sheet: One ply of Elastophene Sanded, Elastophene 180 Sanded, Sopralene 180 Sanded 2.2, Elastophene PS*, Elastophene PS 3.0*, Elastophene 180 PS*, Sopralene 180 PS 2.2*, Sopralene 180 PS*, Sopralene 180 Sanded, Sopralene 250 Sanded adhered in full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs./sq.

*Requires heat welded cap membrane.

Ply Sheet: None.

Membrane: Elastophene Flam GR, Elastophene Flam FR GR, Elastophene Flam FR+ GR, Elastophene Flam LS FR GR, Soprastar Flam, Sopralene Flam 180 GR, Sopralene Flam 180 FR GR, Sopralene Flam 250 FR GR, Sopralene Flam 180 FR+ GR, Sopralene Flam 250 FR+ GR, Sopralast 50 TV Alu, heat welded.

or

Elastophene FR GR or Elastophene FR+ GR, Elastophene LS FR GR, Soprastar Sanded, Sopralene 180 FR GR, Sopralene 250 FR GR, adhered in full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs./sq. to sand surfaced base membrane.



Surfacing: Surfacing is Optional on granular surfaced field cap membranes.
Surfacing is Required for smooth or sanded surfaced field cap membranes.
Refer to Underwriters Laboratories or Intertek Testing Services listings for applicable fire classifications
Apply any coating listed in Table 4 above, or any Miami-Dade approved coating system.

Maximum Design Pressure: -67.5 psf; (See General Limitation #9.)



Membrane Type: SBS
Deck Type 3I: Concrete Decks, Insulated
Deck Description: 2500 psi structural concrete or concrete plank
System Type A(6): One or more layers of insulation adhered with approved adhesive or 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, ACFoam-III, Sopra-ISO s, Sopra-ISO+ s, H-Shield, M-Shield, Sopra-ISO r Minimum 2” thick	N/A	N/A
Top Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft²
DensDeck Minimum ¼” thick	N/A	N/A

Note: Concrete deck shall be primed with ASTM D 41 asphalt primer and allowed to dry prior to application of vapor barrier or insulation. All insulation shall be adhered to the vapor barrier or primed deck in full moppings of approved hot asphalt within the EVT range and at a rate of 20-40 lbs./100 ft² or Insta-Stik Adhesive applied in continuous ¾” to 1” wide ribbons at a maximum spacing of 12” o.c. Please refer to Roofing Application Standard RAS 117 for insulation attachment. Insulations listed as base layer only shall be used only as base layers with a second layer of approved top layer insulation installed as the final membrane substrate. Composite insulation panels may be used as a top layer placed with the polyisocyanurate side facing down.

Base Sheet: (Optional) One or more plies of Sopra G, Modified Sopra G, Sopra-IV, Sopra-VI, Soprabase, Soprabase S, adhered in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs./sq.

Ply Sheet: (Optional) **(Required if no base sheet used)** One or more plies of Elastophene Flam*, Elastophene Flam 2.2*, Sopralene Flam 180*, Sopralene Flam 250*, Sopralene 180 SP, Sopralene 250 SP, heat welded

or

One or more plies of Elastophene Sanded, Elastophene 180 Sanded, Sopralene 180 Sanded 2.2, Elastophene PS*, Elastophene PS 3.0*, Elastophene 180 PS*, Sopralene 180 PS 2.2*, Sopralene 180 PS*, Sopralene 180 Sanded, Sopralene 250 Sanded or one or more plies of Type IV or Type VI ply sheets adhered in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs./sq.

*Requires heat welded cap membrane.



Membrane: Elastophene Flam GR, Elastophene Flam FR GR, Elastophene Flam FR+ GR, Elastophene Flam LS FR GR, Soprastar Flam, Sopralene Flam 180 GR, Sopralene Flam 180 FR GR, Sopralene Flam 250 FR GR, Sopralene Flam 180 FR+ GR, Sopralene Flam 250 FR+ GR, Sopralast 50 TV Alu, heat welded
Or
Elastophene FR GR, Elastophene LS FR GR, Elastophene GR, Elastophene FR+ GR, Soprastar Sanded, Sopralene 180 FR GR, Sopralene 250 FR GR, adhered in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs./sq. to sand surfaced base or ply membrane.

Surfacing: Surfacing is Optional on granular surfaced field cap membranes.
Surfacing is Required for smooth or sanded surfaced field cap membranes.
Refer to Underwriters Laboratories or Intertek Testing Services listings for applicable fire classifications
Apply any coating listed in Table 4 above, or any Miami-Dade approved coating system.

Maximum Design Pressure: -90 psf; (See General Limitation #9.)

Membrane Type: SBS
Deck Type 3I: Concrete Decks, Insulated
Deck Description: 2500 psi structural concrete or concrete plank
System Type A(7): One or more layers of insulation 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, ACFoam-III, Sopra-ISO s, Sopra-ISO+ s, ENRGY 3, H-Shield, Sopra-ISO r, M-Shield		
Minimum 1.4" thick	N/A	N/A
Top Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft²
DensDeck		
Minimum ¼" thick	N/A	N/A

Note: All insulation shall be adhered to the primed or unprimed deck with Insta-Stik Adhesive applied in continuous ¾" to 1" wide ribbons at a maximum spacing of 18" o.c. Please refer to Roofing Application Standard RAS 117 for insulation attachment.

Primer: Elastocol 500, Elastocol Stick or AquaTac applied at a rate of 1 gal./sq., to top surface of any insulation, base or ply sheet prior to application of next layer
(Optional)

Base Sheet: One ply of Sopra G, Modified Sopra G, Sopra IV, Sopra VI, Soprabase, Soprabase S, Elastophene Sanded, Elastophene Sanded 3.0, Elastophene HS Sanded, Elastophene PS*, Elastophene PS 3.0*, Elastophene 180 Sanded, Sopralene 180 Sanded 2.2, Elastophene 180 PS*, Sopralene 180 PS 2.2*, Sopralene 180 Sanded, Sopralene 180 PS*, Sopralene 250 Sanded, adhered in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs./sq. or in FM Adhesive (VOC), COLPLY Modified Adhesive or Soprastar Adhesive at 1.5 – 2.0 gallons / square.

*Requires heat welded ply membrane.

Ply Sheet: One or two plies of Elastophene Flam*, Elastophene Flam 2.2*, Elastophene Flam HS*, Elastophene SP, Elastophene SP 3.0, Sopralene Flam 180*, Sopralene 180 SP 3.5, Soprafix, Soprafix Base 622, Sopralene Flam 250*, Sopralene 250 SP, heat welded.

Colvent TG, Colvent 180 TG, heat welded (not permitted if base membrane is used)

or



**Ply Sheet:
(Cont.)** One ply of Elastophene Sanded, Elastophene Sanded 3.0, Elastophene HS Sanded, Elastophene PS*, Elastophene PS 3.0*, Elastophene 180 Sanded, Sopralene 180 Sanded 2.2, Elastophene 180 PS*, Sopralene 180 PS 2.2*, Sopralene 180 Sanded, Sopralene 180 PS*, Sopralene 250 Sanded, or one to three plies of ASTM D2178 type IV or VI ply sheet adhered in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs./sq. or in FM Adhesive (VOC), COLPLY Modified Adhesive or Soprastar Adhesive at 1.5 – 2.0 gallons / square

*Requires heat welded cap membrane.

Membrane: One layer of Elastophene Flam GR, Elastophene Flam FR GR, Elastophene Flam LS FR GR, Elastophene Flam FR+ GR, Elastophene Flam HS FR GR, Soprastar Flam, Sopralene Flam 180 GR, Sopralene Flam 180 FR GR, Sopralene Flam 180 FR+ GR, Sopralene Flam 250 FR GR, Sopralene Flam 250 FR+ GR, Sopralast 50 TV Alu, heat welded.

or

One layer of Elastophene GR, Elastophene FR GR, Elastophene LS FR GR, Elastophene FR+ GR, Elastophene HS FR GR, Soprastar Sanded, Sopralene 180 FR GR, Sopralene 250 FR GR, adhered in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs./sq. or in FM Adhesive (VOC), COLPLY Modified Adhesive or Soprastar Adhesive at 1.5 – 2.0 gallons / square to sand surfaced ply membrane.

Surfacing: Surfacing is Optional on granular surfaced field cap membranes.
Surfacing is Required for smooth or sanded surfaced field cap membranes.
Refer to Underwriters Laboratories or Intertek Testing Services listings for applicable fire classifications
Apply any coating listed in Table 4 above, or any Miami-Dade approved coating system.

Maximum Design Pressure: -90 psf; (See General Limitation #9.)

Membrane Type: SBS
Deck Type 3I: Concrete Decks, Insulated
Deck Description: Min. 2500 psi structural concrete or concrete plank
System Type A(8): One or more layers of insulation adhered with approved adhesive

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, Sopra-ISO s, H-Shield, M-Shield, Sopra-ISO r, ENRGY 3 or Multi-Max 3 Minimum 1.5” thick	N/A	N/A
Top Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft²
DensDeck Prime Minimum 0.25” thick	N/A	N/A

Note: All insulation shall be adhered to the deck with 0.75” wide beads of High Velocity Insulation Adhesive II (HVIA-II), High Velocity[®] Insulation III (HVIA-III), High Velocity[®] Insulation Adhesive III – Green or High Velocity Insulation Adhesive PG spaced maximum 12” o.c. Please refer to Roofing Application Standard RAS 117 for insulation attachment. Insulations listed as base layer only shall be used only as base layers with a second layer of approved top layer insulation installed as the final membrane substrate.

Base Sheet: (Optional) One or more plies of Elastophene Sanded, Elastophene Sanded 3.0, Elastophene HS Sanded, Elastophene 180 Sanded, Sopralene 180 Sanded 2.2, Sopralene 180 Sanded, Sopralene 250 Sanded, fully adhered in FM Adhesive, FM Adhesive (VOC), COLPLY Modified Adhesive or Soprapstar Adhesive at 1.5 – 2.0 gallon / square.

Ply Sheet: (Optional) **(Required if no Base Sheet used)** One or more plies Elastophene Sanded, Elastophene Sanded 3.0, Elastophene HS Sanded, Elastophene 180 Sanded, Sopralene 180 Sanded 2.2, Sopralene 180 Sanded, Sopralene 250 Sanded, fully adhered in FM Adhesive, FM Adhesive (VOC), COLPLY Modified Adhesive or Soprapstar Adhesive at 1.5 – 2.0 gallon / square.

Membrane: One layer of Elastophene GR, Elastophene FR GR, Elastophene LS FR GR, Elastophene FR+ GR, Elastophene HS FR GR, Soprapstar Sanded, Sopralene 180 FR GR, Sopralene 250 FR GR fully adhered in FM Adhesive, FM Adhesive (VOC), COLPLY Modified Adhesive or Soprapstar Adhesive at 1.5 – 2.0 gallon / square.

Surfacing: Surfacing is Optional on granular surfaced field cap membranes. Surfacing is Required for smooth or sanded surfaced field cap membranes. Refer to Underwriters Laboratories or Intertek Testing Services listings for applicable fire classifications. Apply any coating listed in Table 4 above, or any Miami-Dade approved coating system.

Maximum Design Pressure: -97.5 psf; (for systems in FM Adhesive) (See General Limitation #9)
 -135 psf;(for systems in FM Adhesive (VOC), COLPLY Modified Adhesive or Soprapstar Adhesive)(See General Limitation #9)



Membrane Type: SBS
Deck Type 3I: Concrete Decks, Insulated
Deck Description: Min. 2500 psi structural concrete or concrete plank
System Type A(9): One or more layers of insulation 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, Sopra-ISO s, H-Shield, ENRGY 3, M-Shield, Sopra-ISO r Minimum 1.5” thick	N/A	N/A
Top Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft²
SECUROCK Gypsum-Fiber Roof Board Minimum 0.25” thick	N/A	N/A

Note: All insulation shall be adhered to the deck with full mopping of approved hot asphalt within the EVT range and at a rate of 20-40 lbs./100 ft² or 0.75” wide beads of Insta-Stik, OlyBond 500, TITASET Roofing Adhesive, 3M Polyurethane Foam Insulation Adhesive CR-20, Millennium One Step Foamable Adhesive, Millennium One Step Green Foamable Adhesive, Millennium PG-1 Pump Grade Adhesive, High Velocity Insulation Adhesive III (HVIA-III), High Velocity Insulation Adhesive III – Green or High Velocity Insulation Adhesive PG, spaced maximum 12” o.c. or Permastic applied at a rate of 1.5 gal./sq. Please refer to Roofing Application Standard RAS 117 for insulation attachment. Insulations listed as base layer only shall be used only as base layers with a second layer of approved top layer insulation installed as the final membrane substrate.

Base Sheet: Elastophene Sanded, Elastophene Sanded 3.0, Elastophene HS Sanded, Elastophene PS*, Elastophene PS 3.0*, Elastophene 180 Sanded, Sopralene 180 Sanded 2.2, Elastophene 180 PS*, Sopralene 180 PS 2.2*, Sopralene 180 Sanded, Sopralene 180 PS*, Sopralene 250 Sanded, adhered in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs./sq. or in FM Adhesive, FM Adhesive (VOC), COLPLY Modified Adhesive or Soprastar Adhesive at 1.5 – 2.0 gallons / square.

*Requires heat welded ply membrane.

**Ply Sheet:
(Optional)** One or two plies of Elastophene Flam*, Elastophene Flam 2.2*, Elastophene Flam HS*, Elastophene SP, Elastophene SP 3.0, Sopralene Flam 180*, Sopralene 180 SP 3.5, Soprafix, Soprafix Base 622, Sopralene Flam 250*, Sopralene 250 SP, heat welded.

Or



**Ply Sheet:
(Optional)
(Cont.)** One ply of Elastophene Sanded, Elastophene Sanded 3.0, Elastophene HS Sanded, Elastophene PS*, Elastophene PS 3.0*, Elastophene 180 Sanded, Sopralene 180 Sanded 2.2, Elastophene 180 PS*, Sopralene 180 PS 2.2*, Sopralene 180 Sanded, Sopralene 180 PS*, Sopralene 250 Sanded, or one to three plies of ASTM D2178 Type IV or VI ply sheet adhered in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs./sq. or in FM Adhesive, FM Adhesive (VOC), COLPLY Modified Adhesive or Soprastar Adhesive at 1.5 – 2.0 gallons / square. to sand surfaced base membrane

*Requires heat welded cap membrane.

Membrane: One layer of Elastophene Flam GR, Elastophene Flam FR GR, Elastophene Flam LS FR GR, Elastophene Flam FR+ GR, Elastophene Flam HS FR GR, Soprastar Flam, Sopralene Flam 180 GR, Sopralene Flam 180 FR GR, Sopralene Flam 180 FR+ GR, Sopralene Flam 250 FR GR, Sopralene Flam 250 FR+ GR, Sopralast 50 TV Alu, heat welded.

Or

One layer of Elastophene GR, Elastophene FR GR, Elastophene LS FR GR, Elastophene FR+ GR, Elastophene HS FR GR, Soprastar Sanded, Sopralene 180 FR GR, Sopralene 250 FR GR, adhered in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs./sq. or in FM Adhesive, FM Adhesive (VOC), COLPLY Modified Adhesive or Soprastar Adhesive at 1.5 – 2.0 gallons / square. to sand surfaced base or ply membrane

Surfacing: Surfacing is Optional on granular surfaced field cap membranes.
Surfacing is Required for smooth or sanded surfaced field cap membranes.
Refer to Underwriters Laboratories or Intertek Testing Services listings for applicable fire classifications
Apply any coating listed in Table 4 above, or any Miami-Dade approved coating system

Maximum Design Pressure: -105 psf (See General Limitation #9)

Membrane Type: SBS
Deck Type 3I: Concrete Decks, Insulated
Deck Description: Min. 2500 psi structural concrete or concrete plank
System Type A(10): One or more layers of insulation adhered with approved adhesive

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
ISO 95+GL, H-Shield, M-Shield, Sopra-ISO r Minimum 1.5” thick	N/A	N/A
Top Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft²
SECUROCK Gypsum-Fiber Roof Board Minimum 0.25” thick	N/A	N/A

Note: All insulation shall be adhered to the deck with full mopping of approved hot asphalt within the EVT range and at a rate of 20-40 lbs./100 ft² or 0.75” wide beads of Insta-Stik, Millennium One Step Foamable Adhesive, Millennium One Step Green Foamable Adhesive, Millennium PG-1 Pump Grade Adhesive, High Velocity Insulation Adhesive III (HVIA-III), High Velocity[®] Insulation Adhesive III – Green or High Velocity Insulation Adhesive PG spaced maximum 12” o.c. Please refer to Roofing Application Standard RAS 117 for insulation attachment. Insulations listed as base layer only shall be used only as base layers with a second layer of approved top layer insulation installed as the final membrane substrate.

Base Sheet: Elastophene Sanded, Elastophene Sanded 3.0, Elastophene HS Sanded, Elastophene PS*, Elastophene PS 3.0*, Elastophene 180 Sanded, Sopralene 180 Sanded 2.2, Elastophene 180 PS*, Sopralene 180 PS 2.2*, Sopralene 180 Sanded, Sopralene 180 PS*, Sopralene 250 Sanded, adhered in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs./sq. or in FM Adhesive, FM Adhesive (VOC), COLPLY Modified Adhesive or Soprastar Adhesive at 1.5 – 2.0 gallons / square.

*Requires heat welded ply membrane.

**Ply Sheet:
(Optional)** One or two plies of Elastophene Flam*, Elastophene Flam 2.2*, Elastophene Flam HS*, Elastophene SP, Elastophene SP 3.0, Sopralene Flam 180*, Sopralene 180 SP 3.5, Soprafix, Soprafix Base 622, Sopralene Flam 250*, Sopralene 250 SP, heat welded.

Or



**Ply Sheet:
(Optional)
(Cont.)**

One ply of Elastophene Sanded, Elastophene Sanded 3.0, Elastophene HS Sanded, Elastophene PS*, Elastophene PS 3.0*, Elastophene 180 Sanded, Sopralene 180 Sanded 2.2, Elastophene 180 PS*, Sopralene 180 PS 2.2*, Sopralene 180 Sanded, Sopralene 180 PS*, Sopralene 250 Sanded, or one to three plies of ASTM D2178 Type IV or VI ply sheet adhered in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs./sq. or in FM Adhesive, FM Adhesive (VOC), COLPLY Modified Adhesive or Soprastar Adhesive at 1.5 – 2.0 gallons / square. to sand surfaced base membrane

*Requires heat welded cap membrane.

Membrane:

One layer of Elastophene Flam GR, Elastophene Flam FR GR, Elastophene Flam LS FR GR, Elastophene Flam FR+ GR, Elastophene Flam HS FR GR, Soprastar Flam, Sopralene Flam 180 GR, Sopralene Flam 180 FR GR, Sopralene Flam 180 FR+ GR, Sopralene Flam 250 FR GR, Sopralene Flam 250 FR+ GR, Sopralast 50 TV Alu, heat welded.

Or

One layer of Elastophene GR, Elastophene FR GR, Elastophene LS FR GR, Elastophene FR+ GR, Elastophene HS FR GR, Soprastar Sanded, Sopralene 180 FR GR, Sopralene 250 FR GR, adhered in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs./sq. or in FM Adhesive, FM Adhesive (VOC), COLPLY Modified Adhesive or Soprastar Adhesive at 1.5 – 2.0 gallons / square. to sand surfaced base or ply membrane.

Surfacing:

Surfacing is Optional on granular surfaced field cap membranes.

Surfacing is Required for smooth or sanded surfaced field cap membranes.

Refer to Underwriters Laboratories or Intertek Testing Services listings for applicable fire classifications

Apply any coating listed in Table 4 above, or any Miami-Dade approved coating system

**Maximum Design
Pressure:**

-105 psf (See General Limitation #9)

Membrane Type: SBS
Deck Type 3I: Concrete Decks, Insulated
Deck Description: 2500 psi structural concrete or concrete plank
System Type A(11): One or more layers of insulation adhered with approved adhesive or 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, ACFoam-III, Sopra-ISO s, Sopra-ISO+ s, ENRGY 3, H-Shield, M-Shield, Sopra-ISO r Minimum 1.5” thick	N/A	N/A
Top Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft²
DensDeck Minimum ¼” thick	N/A	N/A
Approved High Density Wood Fiberboard Minimum ½” thick	N/A	N/A

Note: Concrete deck shall be primed with ASTM D 41 asphalt primer and allowed to dry prior to application of insulation. All insulation shall be adhered to the vapor barrier or primed deck in full moppings of approved hot asphalt within the EVT range and at a rate of 20-40 lbs./100 ft² or High Velocity[®] Insulation Adhesive II (HVIA-II), High Velocity[®] Insulation Adhesive III (HVIA-III), High Velocity[®] Insulation Adhesive III – Green or High Velocity Insulation Adhesive PG applied in continuous ¾” to 1” wide ribbons at a maximum spacing of 12” o.c. Please refer to Roofing Application Standard RAS 117 for insulation attachment. Insulations listed as base layer only shall be used only as base layers with a second layer of approved top layer insulation installed as the final membrane substrate. Composite insulation panels may be used as a top layer placed with the polyisocyanurate side facing down.

Base Sheet: One or more plies of Sopra G, Modified Sopra G, Sopra-IV, Sopra-VI,
(Optional) Soprabase, Soprabase S adhered in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs./sq.

Ply Sheet: One or more plies of Elastophene Flam*, Elastophene Flam 2.2*, Sopralene Flam 180*, Sopralene Flam 250*, Sopralene 180 SP, Sopralene 250 SP, heat welded (not permitted as first layer on wood fiber)

or

One or more plies of Elastophene Sanded, Elastophene 180 Sanded, Sopralene 180 Sanded 2.2, Elastophene PS*, Elastophene PS 3.0*, Elastophene 180 PS*, Sopralene 180 PS 2.2*, Sopralene 180 PS*, Sopralene 180 Sanded, Sopralene 250 Sanded or one or more plies of Type IV or Type VI ply sheets adhered in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs./sq.

*Requires heat welded cap membrane.



- Membrane:** Elastophene Flam GR, Elastophene Flam FR GR, Elastophene Flam FR+ GR, Elastophene Flam LS FR GR, Soprastar Flam, Sopralene Flam 180 GR, Sopralene Flam 180 FR GR, Sopralene Flam 250 FR GR, Sopralene Flam 180 FR+ GR, Sopralene Flam 250 FR+ GR, Sopralast 50 TV Alu, heat welded
or
Elastophene FR GR, Elastophene LS FR GR, Elastophene GR, Elastophene FR+ GR, Soprastar Sanded, Sopralene 180 FR GR, Sopralene 250 FR GR, adhered in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs./sq. to sand surfaced ply membrane.
- Surfacing:** Surfacing is Optional on granular surfaced field cap membranes.
Surfacing is Required for smooth or sanded surfaced field cap membranes.
Refer to Underwriters Laboratories or Intertek Testing Services listings for applicable fire classifications
Apply any coating listed in Table 4 above, or any Miami-Dade approved coating system.
- Maximum Design Pressure:** -105 psf; (for ½” thick High Density Fiberboard)(See General Limitation #9.)
-127.5 psf; (for ¼” thick DensDeck) (See General Limitation #9.)



Membrane Type: SBS
Deck Type 3I: Concrete Decks, Insulated
Deck Description: 2500 psi structural concrete or concrete plank
System Type A(12): One or more layers of insulation 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, ACFoam-III, Sopra-ISO s, Sopra-ISO+ s, ENRGY 3, Sopra-ISO r, M-Shield or H-Shield		
Minimum 1.4" thick	N/A	N/A
Top Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft²
DensDeck		
Minimum ¼" thick	N/A	N/A
Approved High Density Wood Fiberboard		
Minimum ½" thick	N/A	N/A

Note: All insulation shall be adhered to the deck with High Velocity® Insulation Adhesive II (HVIA-II), High Velocity® Insulation Adhesive III (HVIA-III), High Velocity® Insulation Adhesive III – Green or High Velocity Insulation Adhesive PG applied in continuous ¾" wide ribbons at a maximum spacing of 12" o.c. Please refer to Roofing Application Standard RAS 117 for insulation attachment.

Primer: Elastocol 500, Elastocol Stick or AquaTac applied at a rate of 1 gal./sq., to top surface of any insulation, base or ply sheet prior to application of next layer
(Optional)

Base Sheet: One ply of Sopra G, Modified Sopra G, Soprabase, Soprabase S, Elastophene Sanded, Elastophene Sanded 3.0, Elastophene HS Sanded, Elastophene PS*, Elastophene PS 3.0*, Elastophene 180 Sanded, Sopralene 180 Sanded 2.2, Elastophene 180 PS*, Sopralene 180 PS 2.2*, Sopralene 180 Sanded, Sopralene 180 PS*, Sopralene 250 Sanded, adhered in FM Adhesive (VOC), COLPLY Modified Adhesive or Soprastar Adhesive at 1.5 – 2.0 gallon / square.

*Requires heat welded ply membrane.

Ply Sheet: One ply of Elastophene Flam*, Elastophene Flam 2.2*, Elastophene Flam HS*, Elastophene SP, Elastophene SP 3.0, Sopralene Flam 180*, Sopralene 180 SP 3.5, Soprafix, Soprafix Base 622, Sopralene Flam 250*, Sopralene 250 SP, heat welded. (not permitted as first layer on wood fiberboard)

or

Colvent TG, Colvent 180 TG, heat welded (not permitted if base membrane is used) (not permitted as first layer on wood fiberboard)

or



- Ply Sheet:** One ply of Elastophene Sanded, Elastophene Sanded 3.0, Elastophene HS Sanded, Elastophene PS*, Elastophene PS 3.0*, Elastophene 180 Sanded, Sopralene 180 Sanded 2.2, Elastophene 180 PS*, Sopralene 180 PS 2.2*, Sopralene 180 Sanded, Sopralene 180 PS*, Sopralene 250 Sanded, adhered in FM Adhesive (VOC), COLPLY Modified Adhesive or Soprastar Adhesive at 1.5 – 2.0 gallon / square.
*Requires heat welded cap membrane.
- Membrane:** One layer of Elastophene Flam GR, Elastophene Flam FR GR, Elastophene Flam LS FR GR, Elastophene Flam FR+ GR, Elastophene Flam HS FR GR, Soprastar Flam, Sopralene Flam 180 GR, Sopralene Flam 180 FR GR, Sopralene Flam 180 FR+ GR, Sopralene Flam 250 FR GR, Sopralene Flam 250 FR+ GR, Sopralast 50 TV Alu, heat welded.
or
One layer of Elastophene GR, Elastophene FR GR, Elastophene LS FR GR, Elastophene FR+ GR, Elastophene HS FR GR, Soprastar Sanded, Sopralene 180 FR GR, Sopralene 250 FR GR, adhered in FM Adhesive (VOC), COLPLY Modified Adhesive or Soprastar Adhesive at 1.5 – 2.0 gallon / square to sand surfaced ply membrane.
- Surfacing:** Surfacing is Optional on granular surfaced field cap membranes.
Surfacing is Required for smooth or sanded surfaced field cap membranes.
Refer to Underwriters Laboratories or Intertek Testing Services listings for applicable fire classifications
Apply any coating listed in Table 4 above, or any Miami-Dade approved coating system.
- Maximum Design Pressure:** -105 psf; (using High Density Wood Fiber) (See General Limitation #9.)
-127.5 psf; (using DensDeck) (See General Limitation #9.)

Membrane Type: SBS
Deck Type 3I: Concrete Decks, Insulated
Deck Description: 2500 psi structural concrete or concrete plank
System Type A(13): One or more layers of insulation adhered with approved asphalt.

All General and System Limitations apply.
 One or more layers of any of the following insulations.

Base Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft²
ENRGY 3, H-Shield, M-Shield, Sopra-ISO r Minimum 1.4" thick	N/A	N/A
Top Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft²
DensDeck Minimum ¼" thick	N/A	N/A

Note: Concrete deck shall be primed with ASTM D 41 asphalt primer and allowed to dry prior to application of vapor barrier or insulation. All insulation shall be adhered to the vapor barrier or primed deck in full moppings of approved hot asphalt within the EVT range and at a rate of 20-40 lbs./100 ft² or High Velocity[®] Insulation Adhesive II (HVIA-II), High Velocity[®] Insulation Adhesive III (HVIA-III), High Velocity[®] Insulation Adhesive III – Green or High Velocity Insulation Adhesive PG applied in continuous ¾" to 1" wide ribbons at a maximum spacing of 12" o.c. Please refer to Roofing Application Standard RAS 117 for insulation attachment. Insulations listed as base layer only shall be used only as base layers with a second layer of approved top layer insulation installed as the final membrane substrate. Composite insulation panels may be used as a top layer placed with the polyisocyanurate side facing down.

Base Sheet: One ply of Elastophene Sanded, Elastophene 180 Sanded, Sopralene 180 Sanded 2.2, Elastophene PS*, Elastophene PS 3.0*, Elastophene 180 PS*, Sopralene 180 PS 2.2*, Sopralene 180 PS*, Sopralene 180 Sanded, Sopralene 250 Sanded adhered in full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs./sq.

*Requires heat welded cap membrane.

Ply Sheet: None.

Membrane: Elastophene Flam GR, Elastophene Flam FR GR, Elastophene Flam FR+ GR, Elastophene Flam LS FR GR, Soprastar Flam, Sopralene Flam 180 GR, Sopralene Flam 180 FR GR, Sopralene Flam 250 FR GR, Sopralene Flam 180 FR+ GR, Sopralene Flam 250 FR+ GR, Sopralast 50 TV Alu, heat welded.

(Maximum Design Pressure –120 psf, See General Limitation #9.)

Or



Membrane: Elastophene FR GR, Elastophene FR+ GR, Elastophene LS FR GR, Soprastar Sanded, Sopralene 180 FR GR, Sopralene 250 FR GR, adhered in full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs./sq. to sand surfaced base membrane.

(Maximum Design Pressure –112.5 psf, See General Limitation #9.)

Surfacing: Surfacing is Optional on granular surfaced field cap membranes. Surfacing is Required for smooth or sanded surfaced field cap membranes. Refer to Underwriters Laboratories or Intertek Testing Services listings for applicable fire classifications. Apply any coating listed in Table 4 above, or any Miami-Dade approved coating system.

Maximum Design Pressure: See Membrane Options Above.

Membrane Type: SBS

Deck Type 3I: Concrete Decks, Insulated

Deck Description: 2500 psi structural concrete or concrete plank

System Type A(14): One or more layers of insulation adhered with approved adhesive

Substrate Preparation: All surfaces must be dry, smooth, free of depressions, voids and protrusions, and clean and free of any non-compatible curing compounds, foam release agents and other surface contaminants.

Primer: Substrate primed with approved ASTM D41 primer

Vapor Retarder: (Optional)
 One layer of Elastophene SP, Elastophene SP 3.0, Sopralene 180 SP 3.5, Soprafix, Soprafix Base 622, Sopralene 250 SP, heat welded
 Or
 Elastophene Sanded, Elastophene Sanded 3.0, Elastophene HS Sanded, Elastophene 180 Sanded, Sopralene 180 Sanded 2.2, Sopralene 180 Sanded, Sopralene 250 Sanded, adhered in hot asphalt at 25 lbs./sq.

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
Any approved EPS Minimum 1.5" thick	N/A	N/A
Top Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft²
Sopraboard Minimum 1/4" thick	N/A	N/A

Note: Concrete deck shall be primed with ASTM D 41 asphalt primer and allowed to dry prior to application of vapor barrier or insulation. All insulation shall be adhered to the vapor barrier or primed deck in full mopping of approved hot asphalt within the EVT range and at a rate of 20-40 lbs./10ft² or High Velocity Insulation Adhesive III (HVIA III), High Velocity[®] Insulation Adhesive III – Green or High Velocity Insulation Adhesive PG in 3/4" ribbons spaced 12" o.c. Please refer to Roofing Application Standard RAS 117 for insulation attachment. Insulations listed as base layer only shall be used only as base layers with a second layer of approved top layer insulation installed as the final membrane substrate. Composite insulation panels may be used as a top layer placed with the polyisocyanurate side facing down.

Primer: Elastocol 500, Elastocol Stick or AquaTac applied at a rate of 1 gal./sq., to top surface of any insulation, base or ply sheet prior to application of next layer
(Optional)

Base Sheet: One layer of Colvent TG, Colvent 180 TG, Elastophene Flam*, Elastophene Flam 2.2*, Elastophene Flam HS*, Elastophene SP, Elastophene SP 3.0, Sopralene Flam 180*, Sopralene 180 SP 3.5, Soprafix, Soprafix Base 622, Sopralene Flam 250*, Sopralene 250 SP, heat welded
 Or



- Base Sheet:
(Cont.)** Elastophene Sanded, Elastophene Sanded 3.0, Elastophene HS Sanded, Elastophene PS*, Elastophene PS 3.0*, Elastophene 180 Sanded, Sopralene 180 Sanded 2.2, Elastophene 180 PS*, Sopralene 180 PS 2.2*, Sopralene 180 Sanded, Sopralene 180 PS*, Sopralene 250 Sanded, adhered in hot asphalt at 25 lbs./sq. *Requires heat welded ply or cap membrane.
- Ply Sheet:
(Optional)** One or more layers of Elastophene Flam*, Elastophene Flam 2.2*, Elastophene Flam HS*, Elastophene SP, Elastophene SP 3.0, Sopralene Flam 180*, Sopralene 180 SP 3.5, Soprafix, Soprafix Base 622, Sopralene Flam 250*, Sopralene 250 SP, heat welded
- Or
- Elastophene Sanded, Elastophene Sanded 3.0, Elastophene HS Sanded, Elastophene PS*, Elastophene PS 3.0*, Elastophene 180 Sanded, Sopralene 180 Sanded 2.2, Elastophene 180 PS*, Sopralene 180 PS 2.2*, Sopralene 180 Sanded, Sopralene 180 PS*, Sopralene 250 Sanded, adhered in hot asphalt at 25 lbs./sq. to sand surfaced base membrane.
- *Requires heat welded cap membrane.
- Membrane:** One layer of Elastophene Flam GR, Elastophene Flam FR GR, Elastophene Flam LS FR GR, Elastophene Flam FR+ GR, Elastophene Flam HS FR GR, Soprastar Flam, Sopralene Flam 180 GR, Sopralene Flam 180 FR GR, Sopralene Flam 180 FR+ GR, Sopralene Flam 250 FR GR, Sopralene Flam 250 FR+ GR, Sopralast 50 TV Alu, heat welded.
- Or
- One layer of Elastophene GR, Elastophene FR GR, Elastophene LS FR GR, Elastophene FR+ GR, Elastophene HS FR GR, Soprastar Sanded, Sopralene 180 FR GR, Sopralene 250 FR GR, adhered in hot asphalt at 25 lbs./sq. to sand surfaced base or ply membrane.
- Surfacing:** Surfacing is Optional on granular surfaced field cap membranes. Surfacing is Required for smooth or sanded surfaced field cap membranes. Refer to Underwriters Laboratories or Intertek Testing Services listings for applicable fire classifications. Apply any coating listed in Table 4 above, or any Miami-Dade approved coating system.
- Maximum Design Pressure:** -152.5 psf (See General Limitation #9.)

Membrane Type: SBS
Deck Type 3I: Concrete Decks, Insulated
Deck Description: 2500 psi structural concrete or concrete plank
System Type A(15): One or more layers of insulation adhered with approved adhesive

All General and System Limitations apply.

Substrate Preparation: All surfaces must be dry, smooth, free of depressions, voids and protrusions, and clean and free of any non-compatible curing compounds, foam release agents and other surface contaminants.

Primer: Elastocol 500, Elastocol Stick or AquaTac applied at a rate of 1 gal./sq.

Vapor Retarder: (Optional)
 Elastophene SP, Elastophene SP 3.0, Sopralene 180 SP 3.5, Soprafix, Soprafix Base 622, Sopralene 250 SP, Colvent TG or Colvent 180 TG, heat welded.
 Or
 Elastophene Sanded, Elastophene Sanded 3.0, Elastophene HS Sanded, Elastophene 180 Sanded, Sopralene 180 Sanded 2.2, Sopralene 180 Sanded, Sopralene 250 Sanded, adhered in hot asphalt at 25 lbs./sq.

One or more layers of any of the following insulations.

Base Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft²
Approved EPS or XPS Minimum 1.5" thick	N/A	N/A
Top Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft²
Sopraboard Minimum 1/8" thick	N/A	N/A
Minimum 1/4" thick	N/A	N/A

Note: All insulation shall be adhered to the deck with High Velocity® Insulation Adhesive III (HVIA-III), High Velocity® Insulation Adhesive III – Green or High Velocity Insulation Adhesive PG applied in continuous 1/2" – 3/4" wide ribbons at a maximum spacing of 6" o.c. or High Velocity® Insulation Adhesive III (HVIA-III), High Velocity® Insulation Adhesive III – Green or High Velocity Insulation Adhesive PG applied in continuous 1/2" – 3/4" wide ribbons at a maximum spacing of 12" o.c. Please refer to Roofing Application Standard RAS 117 for insulation attachment.

Primer: (Optional) Elastocol 500, Elastocol Stick or AquaTac applied at a rate of 1 gal./sq., to top surface of base or ply sheet prior to application of next layer.

Base Sheet: One layer of Elastophene Flam*, Elastophene Flam 2.2*, Elastophene Flam HS*, Elastophene SP, Elastophene SP 3.0, Sopralene Flam 180*, Sopralene 180 SP 3.5, Soprafix, Soprafix Base 622, Sopralene Flam 250*, Sopralene 250 SP, Colvent TG, Colvent 180 TG, heat welded.

Or



- Base Sheet:
(Cont.)** One layer of Elastophene Sanded, Elastophene Sanded 3.0, Elastophene HS Sanded, Elastophene PS*, Elastophene PS 3.0*, Elastophene 180 Sanded, Sopralene 180 Sanded 2.2, Elastophene 180 PS*, Sopralene 180 PS 2.2, Sopralene 180 Sanded, Sopralene 180 PS*, Sopralene 250 Sanded, adhered in hot asphalt at 25 lbs./sq.
*Requires heat welded ply or cap membrane.
- Ply Sheet:
(Optional)** Elastophene Flam* Elastophene Flam 2.2*, Elastophene Flam HS*, Elastophene SP, Elastophene SP 3.0, Sopralene Flam 180*, Sopralene 180 SP 3.5, Soprafix, Soprafix Base 622, Sopralene Flam 250*, Sopralene 250 SP, heat welded.
Or
Elastophene Sanded, Elastophene Sanded 3.0, Elastophene HS Sanded, Elastophene PS*, Elastophene PS 3.0*, Elastophene 180 Sanded, Sopralene 180 Sanded 2.2, Elastophene 180 PS*, Sopralene 180 PS 2.2*, Sopralene 180 Sanded, Sopralene 180 PS*, Sopralene 250 Sanded, adhered in hot asphalt at 25 lbs./sq.
*Requires heat welded cap membrane.
- Membrane:** One layer of Elastophene Flam GR, Elastophene Flam FR GR, Elastophene Flam LS FR GR, Elastophene Flam FR+ GR, Elastophene Flam HS FR GR, Soprastar Flam, Soprastar Flam, Sopralene Flam 180 GR, Sopralene Flam 180 FR GR, Sopralene Flam 180 FR+ GR, Sopralene Flam 250 FR GR, Sopralene Flam 250 FR+ GR, Sopralast 50 TV Alu, heat welded.
Or
One layer of Elastophene GR, Elastophene FR GR, Elastophene LS FR GR, Elastophene FR+ GR, Elastophene HS FR GR, Soprastar Sanded, Sopralene 180 FR GR, Sopralene 250 FR GR, adhered in hot asphalt at 25 lbs./sq. to sand surfaced base or ply membrane.
- Surfacing:** Surfacing is Optional on granular surfaced field cap membranes.
Surfacing is Required for smooth or sanded surfaced field cap membranes.
Refer to Underwriters Laboratories or Intertek Testing Services listings for applicable fire classifications
Apply any coating listed in Table 4 above, or any Miami-Dade approved coating system.
- Maximum Design Pressure:** -152.5 psf for insulation/coverboard in beads of adhesive spaced 12”o.c.)
(See General Limitation #9.)
-215 psf (for insulation/coverboard in beads of adhesive spaced 6”o.c.)
(See General Limitation #9.)

Membrane Type: SBS
Deck Type 3I: Concrete Decks, Insulated
Deck Description: Min. 2500 psi structural concrete or concrete plank
System Type A(16): One or more layers of insulation adhered with approved adhesive
Primer: Substrate primed with approved ASTM D41 primer.
Dry In Sheet: One layer of Sopralene 180 Sanded, Sopralene 250 Sanded, adhered in hot asphalt at 20-25 lbs./sq.

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, Sopra-ISO s, H-Shield, M-Shield, Sopra-ISO r Minimum 1.5" thick	N/A	N/A
Top Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft²
Sopraboard Minimum 1/8" thick	N/A	N/A

Note: Concrete deck shall be primed with ASTM D 41 asphalt primer and allowed to dry prior to application of vapor barrier/dry in sheet. All insulation shall be adhered to the vapor barrier/dry in sheet in full mopping of approved hot asphalt within the EVT range and at a rate of 20-40 lbs./100 ft². Please refer to Roofing Application Standard RAS 117 for insulation attachment. Insulations listed as base layer only shall be used only as base layers with a second layer of approved top layer insulation installed as the final membrane substrate. Composite insulation panels may be used as a top layer placed with the polyisocyanurate side facing down.

Base Sheet: (Optional) One or more plies of Elastophene Sanded, Elastophene Sanded 3.0, Elastophene HS Sanded, Elastophene 180 Sanded, Sopralene 180 Sanded 2.2, Sopralene 180 Sanded, Sopralene 250 Sanded, adhered in hot asphalt at 25 lbs./sq. adhered in hot asphalt at 25 lbs./sq.

Ply Sheet: (Optional) **(Required if no Base Sheet used)** One or more plies Elastophene Sanded, Elastophene Sanded 3.0, Elastophene HS Sanded, Elastophene 180 Sanded, Sopralene 180 Sanded 2.2, Sopralene 180 Sanded, Sopralene 250 Sanded, adhered in hot asphalt at 25 lbs./sq.

Membrane: One layer of Elastophene GR, Elastophene FR GR, Elastophene LS FR GR, Elastophene FR+ GR, Elastophene HS FR GR, Soprastar Sanded, Sopralene 180 FR GR, Sopralene 250 FR GR, adhered in hot asphalt at 25 lbs./sq. to sand surfaced base or ply membrane.

Surfacing: Surfacing is Optional on granular surfaced field cap membranes.
 Surfacing is Required for smooth or sanded surfaced field cap membranes.
 Refer to Underwriters Laboratories or Intertek Testing Services listings for applicable fire classifications
 Apply any coating listed in Table 4 above, or any Miami-Dade approved coating system

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



Membrane Type: SBS
Deck Type 3I: Concrete Decks, Insulated
Deck Description: Min. 2500 psi structural concrete or concrete plank
System Type A(17): One or more layers of insulation 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
ISO 95+GL, H-Shield, M-Shield, Sopra-ISO r Minimum 2” thick	N/A	N/A
Top Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft²
SECUROCK Gypsum-Fiber Roof Board Minimum 0.25” thick	N/A	N/A

Note: All insulation shall be adhered to the deck with full mopping of approved hot asphalt within the EVT range and at a rate of 20-40 lbs./100 ft² or 0.75” wide beads of Pliodeck Insulation Adhesive, Insta-Stik, Millennium One Step Foamable Adhesive, Millennium One Step Green Foamable Adhesive, Millennium PG-1 Pump Grade Adhesive, High Velocity Insulation Adhesive III (HVIA-III), High Velocity[®] Insulation Adhesive III – Green or High Velocity Insulation Adhesive PG, spaced maximum 12” o.c. Please refer to Roofing Application Standard RAS 117 for insulation attachment. Insulations listed as base layer only shall be used only as base layers with a second layer of approved top layer insulation installed as the final membrane substrate.

Base Sheet: One or more plies of Elastophene Sanded, Elastophene Sanded 3.0, Elastophene HS Sanded, Elastophene PS*, Elastophene PS 3.0*, Elastophene 180 Sanded, Sopralene 180 Sanded 2.2, Elastophene 180 PS*, Sopralene 180 PS 2.2*, Sopralene 180 Sanded, Sopralene 180 PS*, Sopralene 250 Sanded, adhered in hot asphalt at 25 lbs./sq.

*Requires heat welded ply or cap membrane.

**Ply Sheet:
(Optional)** One or more layers of Elastophene Flam*, Elastophene Flam 2.2*, Elastophene Flam HS*, Elastophene SP, Elastophene SP 3.0, Sopralene Flam 180*, Sopralene 180 SP 3.5, Soprafix, Soprafix Base 622, Sopralene Flam 250*, Sopralene 250 SP, heat welded.

Or

Elastophene Sanded, Elastophene Sanded 3.0, Elastophene HS Sanded, Elastophene PS*, Elastophene PS 3.0*, Elastophene 180 Sanded, Sopralene 180 Sanded 2.2, Elastophene 180 PS*, Sopralene 180 PS 2.2*, Sopralene 180 Sanded, Sopralene 180 PS*, Sopralene 250 Sanded, adhered in hot asphalt at 25 lbs./sq. to sand surfaced base membrane.

*Requires heat welded cap membrane.



Membrane: One layer of Elastophene Flam GR, Elastophene Flam FR GR, Elastophene Flam LS FR GR, Elastophene Flam FR+ GR, Elastophene Flam HS FR GR, Soprastar Flam, Sopralene Flam 180 GR, Sopralene Flam 180 FR GR, Sopralene Flam 180 FR+ GR, Sopralene Flam 250 FR GR, Sopralene Flam 250 FR+ GR, Sopralast 50 TV Alu, heat welded.

Or

One layer of Elastophene GR, Elastophene FR GR, Elastophene LS FR GR, Elastophene FR+ GR, Elastophene HS FR GR, Soprastar Sanded, Sopralene 180 FR GR, Sopralene 250 FR GR, adhered in hot asphalt at 25 lbs./sq. to sand surfaced base or ply membrane.

Surfacing: Surfacing is Optional on granular surfaced field cap membranes.
Surfacing is Required for smooth or sanded surfaced field cap membranes.
Refer to Underwriters Laboratories or Intertek Testing Services listings for applicable fire classifications
Apply any coating listed in Table 4 above, or any Miami-Dade approved coating system

Maximum Design

Pressure: -217.5 psf; (for insulation adhered with Pliodeck Insulation Adhesive)
(See General Limitation #9)
-225 psf; (for insulation adhered with all other adhesives)
(See General Limitation #9)

Membrane Type: SBS
Deck Type 3I: Concrete Decks, Insulated
Deck Description: 2500 psi structural concrete or concrete plank
System Type A(18): One or more layers of insulation adhered with approved adhesive or 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, ACFoam-III, Sopra-ISO s, Sopra-ISO+ s, ENRGY 3, H-Shield, M-Shield, Sopra-ISO r		
Minimum 1.5" thick	N/A	N/A
Top Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft²
DensDeck		
Minimum ¼" thick	N/A	N/A
Approved High Density Wood Fiberboard (requires two coat application of OlyBond)		
Minimum ½" thick	N/A	N/A

Note: Concrete deck shall be primed with ASTM D 41 asphalt primer and allowed to dry prior to application of insulation. All insulation shall be adhered to the vapor barrier or primed deck in full moppings of approved hot asphalt within the EVT range and at a rate of 20-40 lbs./100 ft² or OlyBond Insulation Adhesive applied at a rate of 1 gal./100 ft². Please refer to Roofing Application Standard RAS 117 for insulation attachment. Insulations listed as base layer only shall be used only as base layers with a second layer of approved top layer insulation installed as the final membrane substrate. Composite insulation panels may be used as a top layer placed with the polyisocyanurate side facing down.

Base Sheet: (Optional) One or more plies of Sopra G, Modified Sopra G, Sopra-IV, Sopra-VI, Soprabase, Soprabase S adhered in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs./sq.

Ply Sheet: One or more plies of Elastophene Flam*, Elastophene Flam 2.2*, Sopralene Flam 180*, Sopralene Flam 250*, Sopralene 180 SP, Sopralene 250 SP, heat welded (not permitted as first layer on wood fiberboard)

or

One or more plies of Elastophene Sanded, Elastophene 180 Sanded, Sopralene 180 Sanded 2.2, Elastophene PS*, Elastophene PS 3.0*, Elastophene 180 PS*, Sopralene 180 PS 2.2*, Sopralene 180 PS*, Sopralene 180 Sanded, Sopralene 250 Sanded or one or more plies of Type IV or Type VI ply sheets adhered in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs./sq.

*Requires heat welded cap membrane.



- Membrane:** Elastophene Flam GR, Elastophene Flam FR GR, Elastophene Flam FR+ GR, Elastophene Flam LS FR GR, Soprastar Flam, Sopralene Flam 180 GR, Sopralene Flam 180 FR GR, Sopralene Flam 250 FR GR, Sopralene Flam 180 FR+ GR, Sopralene Flam 250 FR+ GR, Sopralast 50 TV Alu, heat welded
or
Elastophene FR GR, Elastophene FR+ GR, Elastophene LS FR GR, Elastophene GR, Soprastar Sanded, Sopralene 180 FR GR, Sopralene 250 FR GR, adhered in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs./sq. to sand surfaced ply membrane.
- Surfacing:** Surfacing is Optional on granular surfaced field cap membranes.
Surfacing is Required for smooth or sanded surfaced field cap membranes.
Refer to Underwriters Laboratories or Intertek Testing Services listings for applicable fire classifications
Apply any coating listed in Table 4 above, or any Miami-Dade approved coating system.
- Maximum Design Pressure:** -105 psf; (for ½” thick High Density Wood Fiber) (See General Limitation #9.)
-232.5 psf; (for ¼” thick DensDeck) (See General Limitation #9.)



Membrane Type: SBS
Deck Type 3I: Concrete Decks, Insulated
Deck Description: Min. 2500 psi structural concrete or concrete plank
System Type A(19): One or more layers of insulation 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, Sopra-ISO s, H-Shield, ENRGY 3, M-Shield, Sopra-ISO r Minimum 2” thick	N/A	N/A
Top Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft²
SECUROCK Gypsum-Fiber Roof Board Minimum 0.25” thick	N/A	N/A

Note: All insulation shall be adhered to the deck with full mopping of approved hot asphalt within the EVT range and at a rate of 20-40 lbs./100 ft² or 0.75” wide beads of Insta-Stik, OlyBond 500, TITASET Roofing Adhesive or 3M Polyurethane Foam Insulation Adhesive CR-20, Millennium One Step Foamable Adhesive, Millennium One Step Green Foamable Adhesive, Millennium PG-1 Pump Grade Adhesive, High Velocity Insulation Adhesive III (HVIA-III), High Velocity[®] Insulation Adhesive III – Green or High Velocity Insulation Adhesive PG, spaced maximum 12” o.c. Please refer to Roofing Application Standard RAS 117 for insulation attachment. Insulations listed as base layer only shall be used only as base layers with a second layer of approved top layer insulation installed as the final membrane substrate.

Base Sheet: One or more plies of Elastophene Sanded, Elastophene Sanded 3.0, Elastophene HS Sanded, Elastophene PS*, Elastophene PS 3.0*, Elastophene 180 Sanded, Sopralene 180 Sanded 2.2, Elastophene 180 PS*, Sopralene 180 PS 2.2*, Sopralene 180 Sanded, Sopralene 180 PS*, Sopralene 250 Sanded, adhered in hot asphalt at 25 lbs./sq.

*Requires heat welded ply or cap membrane.

Ply Sheet: (Optional) One or more layers of Elastophene Flam*, Elastophene Flam 2.2*, Elastophene Flam HS*, Elastophene SP, Elastophene SP 3.0, Sopralene Flam 180*, Sopralene 180 SP 3.5, Soprafix, Soprafix Base 622, Sopralene Flam 250*, Sopralene 250 SP, heat welded.

Or

Elastophene Sanded, Elastophene Sanded 3.0, Elastophene HS Sanded, Elastophene PS*, Elastophene PS 3.0*, Elastophene 180 Sanded, Sopralene 180 Sanded 2.2, Elastophene 180 PS*, Sopralene 180 PS 2.2*, Sopralene 180 Sanded, Sopralene 180 PS*, Sopralene 250 Sanded, adhered in hot asphalt at 25 lbs./sq. to sand surfaced base membrane.

*Requires heat welded cap membrane.



Membrane: One layer of Elastophene Flam GR, Elastophene Flam FR GR, Elastophene Flam LS FR GR, Elastophene Flam FR+ GR, Elastophene Flam HS FR GR, Soprastar Flam, Sopralene Flam 180 GR, Sopralene Flam 180 FR GR, Sopralene Flam 180 FR+ GR, Sopralene Flam 250 FR GR, Sopralene Flam 250 FR+ GR, Sopralast 50 TV Alu, heat welded.

Or

One layer of Elastophene GR, Elastophene FR GR, Elastophene LS FR GR, Elastophene FR+ GR, Elastophene HS FR GR, Soprastar Sanded, Sopralene 180 FR GR, Sopralene 250 FR GR, adhered in hot asphalt at 25 lbs./sq. to sand surfaced base or ply membrane.

Surfacing: Surfacing is Optional on granular surfaced field cap membranes.
Surfacing is Required for smooth or sanded surfaced field cap membranes.
Refer to Underwriters Laboratories or Intertek Testing Services listings for applicable fire classifications
Apply any coating listed in Table 4 above, or any Miami-Dade approved coating system

Maximum Design Pressure: -225 psf (See General Limitation #9)

Membrane Type: SBS
Deck Type 3I: Concrete Decks, Insulated
Deck Description: 2500 psi structural concrete or concrete plank
System Type A(20): One or more layers of insulation 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, ACFoam-III, Sopra-ISO s, Sopra-ISO+ s, ENRGY 3, Sopra-ISO r, M-Shield or H-Shield		
Minimum 1.4” thick	N/A	N/A
Top Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft²
Sopraboard		
Minimum 1/8” thick	N/A	N/A

Note: All insulation shall be adhered to the deck with OlyBond Adhesive Fastener at 1 gallon/square. Please refer to Roofing Application Standard RAS 117 for insulation attachment.

Primer: Elastocol 500, Elastocol Stick or AquaTac applied at a rate of 1 gal./sq., to top surface of any insulation, base or ply sheet prior to application of next layer.
(Optional)

Base Sheet: One ply of Sopra G, Modified Sopra G, Sopra IV, Sopra VI, Soprabase, Soprabase S, Elastophene Sanded, Elastophene Sanded 3.0, Elastophene HS Sanded, Elastophene PS*, Elastophene PS 3.0*, Elastophene 180 Sanded, Sopralene 180 Sanded 2.2, Elastophene 180 PS*, Sopralene 180 PS 2.2*, Sopralene 180 Sanded, Sopralene 180 PS*, Sopralene 250 Sanded, adhered in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs./sq. or in FM Adhesive, FM Adhesive (VOC), COLPLY Modified Adhesive or Soprastar Adhesive at 1.5 – 2.0 gallons / square.
(Optional)

*Requires heat welded ply membrane.

Ply Sheet: One or two plies of Elastophene Flam*, Elastophene Flam 2.2*, Elastophene Flam HS*, Elastophene SP, Elastophene SP 3.0, Sopralene Flam 180*, Sopralene 180 SP 3.5, Soprafix, Soprafix Base 622, Sopralene Flam 250*, Sopralene 250 SP, heat welded.

Or

One ply of Elastophene Sanded, Elastophene Sanded 3.0, Elastophene HS Sanded, Elastophene PS*, Elastophene PS 3.0*, Elastophene 180 Sanded, Sopralene 180 Sanded 2.2, Elastophene 180 PS*, Sopralene 180 PS 2.2*, Sopralene 180 Sanded, Sopralene 180 PS*, Sopralene 250 Sanded, or one to three plies of ASTM D2178 Type IV or VI ply sheet adhered in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs./sq. or in FM Adhesive, FM Adhesive (VOC), COLPLY Modified Adhesive or Soprastar Adhesive at 1.5 – 2.0 gallons / square.

*Requires heat welded cap membrane.



Membrane: One layer of Elastophene Flam GR, Elastophene Flam FR GR, Elastophene Flam LS FR GR, Elastophene Flam FR+ GR, Elastophene Flam HS FR GR, Soprastar Flam, Sopralene Flam 180 GR, Sopralene Flam 180 FR GR, Sopralene Flam 180 FR+ GR, Sopralene Flam 250 FR GR, Sopralene Flam 250 FR+ GR, Sopralast 50 TV Alu, heat welded.

or

One layer of Elastophene GR, Elastophene FR GR, Elastophene LS FR GR, Elastophene FR+ GR, Elastophene HS FR GR, Soprastar Sanded, Sopralene 180 FR GR, Sopralene 250 FR GR, adhered in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs./sq. or in FM Adhesive, FM Adhesive (VOC), COLPLY Modified Adhesive or Soprastar Adhesive at 1.5 – 2.0 gallons / square. to sand surfaced ply membrane.

Surfacing: Surfacing is Optional on granular surfaced field cap membranes.
Surfacing is Required for smooth or sanded surfaced field cap membranes.
Refer to Underwriters Laboratories or Intertek Testing Services listings for applicable fire classifications
Apply any coating listed in Table 4 above, or any Miami-Dade approved coating system.

Maximum Design Pressure: -255 psf; (using ENRGY 3, H-Shield, Sopra-ISO r , M-Shield)
(See General Limitation #9.)
-270 psf; (using ACFoam-II, ACFoam-III, Sopra-ISO s, Sopra-ISO+ s)
(See General Limitation #9.)

Membrane Type: SBS

Deck Type 3I: Concrete Decks, Insulated

Deck Description: 2500 psi structural concrete or concrete plank

System Type A(21): One or more layers of insulation adhered with approved adhesive

Substrate Preparation: All surfaces must be dry, smooth, free of depressions, voids and protrusions, and clean and free of any non-compatible curing compounds, foam release agents and other surface contaminants.

Primer: Substrate primed with approved ASTM D41 primer

Vapor Retarder: (Optional)
 One layer of Elastophene SP, Elastophene SP 3.0, Sopralene 180 SP 3.5, Sopralene 250 SP, heat welded
 Or
 Elastophene Sanded, Elastophene Sanded 3.0, Elastophene HS Sanded, Elastophene 180 Sanded, Sopralene 180 Sanded 2.2, Sopralene 180 Sanded, Sopralene 250 Sanded, adhered in hot asphalt at 25 lbs./sq.

Leveling Agent: (Optional) Poly Patch

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, ACFoam-III, Sopra-ISO s, Sopra-ISO+ s, H-Shield, M-Shield, Sopra-ISO r or any approved polyisocyanurate listed in Table 2 Minimum 2” thick	N/A	N/A
Top Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft²
Sopraboard Minimum 1/8” thick	N/A	N/A

Note: Concrete deck shall be primed with ASTM D 41 asphalt primer and allowed to dry prior to application of vapor barrier or insulation. All insulation shall be adhered to the vapor barrier or primed deck in full mopping of approved hot asphalt within the EVT range and at a rate of 20-40 lbs./100 ft². Please refer to Roofing Application Standard RAS 117 for insulation attachment. Insulations listed as base layer only shall be used only as base layers with a second layer of approved top layer insulation installed as the final membrane substrate. Composite insulation panels may be used as a top layer placed with the polyisocyanurate side facing down.

Primer: Elastocol 500, Elastocol Stick or AquaTac applied at a rate of 1 gal./sq., to top surface of any insulation, base or ply sheet prior to application of next layer
(Optional)

Base Sheet: One layer of Elastophene Flam*, Elastophene Flam 2.2*, Elastophene Flam HS*, Elastophene SP, Elastophene SP 3.0, Sopralene Flam 180*, Sopralene 180 SP 3.5, Soprafix, Soprafix Base 622, Sopralene Flam 250*, Sopralene 250 SP, heat welded
 Or



- Base Sheet:
(Cont.)** Elastophene Sanded, Elastophene Sanded 3.0, Elastophene HS Sanded, Elastophene PS* Elastophene PS 3.0*, Elastophene 180 Sanded, Sopralene 180 Sanded 2.2, Elastophene 180 PS*, Sopralene 180 PS 2.2*, Sopralene 180 Sanded, Sopralene 180 PS*, Sopralene 250 Sanded, or one to five plies of Sopra G, Modified Sopra G, Type IV or Type VI ply sheet adhered in hot asphalt at 25 lbs./sq.
*Requires heat welded ply or cap membrane.
- Ply Sheet:
(Optional)** One or more layers of Elastophene Flam*, Elastophene Flam 2.2*, Elastophene Flam HS*, Elastophene SP, Elastophene SP 3.0, Sopralene Flam 180*, Sopralene 180 SP 3.5, Soprafix, Soprafix Base 622, Sopralene Flam 250*, Sopralene 250 SP, heat welded
Or
Elastophene Sanded, Elastophene Sanded 3.0, Elastophene HS Sanded, Elastophene PS*, Elastophene PS 3.0*, Elastophene 180 Sanded, Sopralene 180 Sanded 2.2, Elastophene 180 PS*, Sopralene 180 PS 2.2*, Sopralene 180 Sanded, Sopralene 180 PS*, Sopralene 250 Sanded, adhered in hot asphalt at 25 lbs./sq. to sand surfaced base membrane.
*Requires heat welded cap membrane.
- Membrane:** One layer of Elastophene Flam GR, Elastophene Flam FR GR, Elastophene Flam LS FR GR, Elastophene Flam FR+ GR, Elastophene Flam HS FR GR, SopraStar Flam, Sopralene Flam 180 GR, Sopralene Flam 180 FR GR, Sopralene Flam 180 FR+ GR, Sopralene Flam 250 FR GR, Sopralene Flam 250 FR+ GR, Sopralast 50 TV Alu, heat welded.
Or
One layer of Elastophene GR, Elastophene FR GR, Elastophene LS FR GR, Elastophene FR+ GR, Elastophene HS FR GR, SopraStar Sanded, Sopralene 180 FR GR, Sopralene 250 FR GR, adhered in hot asphalt at 25 lbs./sq. to sand surfaced base or ply membrane
- Surfacing:** Surfacing is Optional on granular surfaced field cap membranes.
Surfacing is Required for smooth or sanded surfaced field cap membranes.
Refer to Underwriters Laboratories or Intertek Testing Services listings for applicable fire classifications
Apply any coating listed in Table 4 above, or any Miami-Dade approved coating system.
- Maximum Design Pressure:** -502.5 psf (See General Limitation #9.)

Membrane Type: SBS

Deck Type 3I: Concrete Decks, Insulated

Deck Description: 2500 psi structural concrete or concrete plank

System Type A(22): One or more layers of insulation adhered with approved adhesive

Substrate Preparation: All surfaces must be dry, smooth, free of depressions, voids and protrusions, and clean and free of any non-compatible curing compounds, foam release agents and other surface contaminants.

Primer: Substrate primed with approved ASTM D41 primer.

Vapor Retarder: (Optional)
One layer of Elastophene SP, Elastophene SP 3.0, Sopralene 180 SP 3.5, Sopralene 250 SP, heat welded.
Or
Elastophene Sanded, Elastophene Sanded 3.0, Elastophene HS Sanded, Elastophene 180 Sanded, Sopralene 180 Sanded 2.2, Sopralene 180 Sanded, Sopralene 250 Sanded, adhered in hot asphalt at 25 lbs./sq.

Leveling Agent: (Optional) Vinyl Patch

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, ACFoam-III, Sopra-ISO s, Sopra-ISO+ s, H-Shield, M-Shield, Sopra-ISO r or any approved polyisocyanurate listed in Table 2		
Minimum 2” thick	N/A	N/A
Top Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft²
Sopraboard		
Minimum 1/8” thick	N/A	N/A

Note: Concrete deck shall be primed with ASTM D 41 asphalt primer and allowed to dry prior to application of vapor barrier or insulation. All insulation shall be adhered to the vapor barrier or primed deck in full mopping of approved hot asphalt within the EVT range and at a rate of 20-40 lbs./100 ft². Please refer to Roofing Application Standard RAS 117 for insulation attachment. Insulations listed as base layer only shall be used only as base layers with a second layer of approved top layer insulation installed as the final membrane substrate. Composite insulation panels may be used as a top layer placed with the polyisocyanurate side facing down.

Primer: Elastocol 500, Elastocol Stick or AquaTac applied at a rate of 1 gal./sq., to top surface of any insulation, base or ply sheet prior to application of next layer.
(Optional)

Base Sheet: One layer of Elastophene Flam*, Elastophene Flam 2.2*, Elastophene Flam HS*, Elastophene SP, Elastophene SP 3.0, Sopralene Flam 180*, Sopralene 180 SP 3.5, Soprafix, Soprafix Base 622, Sopralene Flam 250*, Sopralene 250 SP, heat welded.
Or



**Base Sheet:
(Cont.)**

Elastophene Sanded, Elastophene Sanded 3.0, Elastophene HS Sanded, Elastophene PS*, Elastophene PS 3.0*, Elastophene 180 Sanded, Sopralene 180 Sanded 2.2, Elastophene 180 PS*, Sopralene 180 PS 2.2*, Sopralene 180 Sanded, Sopralene 180 PS*, Sopralene 250 Sanded, or one to five plies of Sopra G, Modified Sopra G, Type IV or Type VI ply sheet adhered in hot asphalt at 25 lbs./sq.

*Requires heat welded ply or cap membrane.

**Ply Sheet:
(Optional)**

One or more layers of Elastophene Flam*, Elastophene Flam 2.2*, Elastophene Flam HS*, Elastophene SP, Elastophene SP 3.0, Sopralene Flam 180*, Sopralene 180 SP 3.5, Soprafix, Soprafix Base 622, Sopralene Flam 250*, Sopralene 250 SP, heat welded.

Or

Elastophene Sanded, Elastophene Sanded 3.0, Elastophene HS Sanded, Elastophene PS*, Elastophene PS 3.0*, Elastophene 180 Sanded, Sopralene 180 Sanded 2.2, Elastophene 180 PS*, Sopralene 180 PS 2.2*, Sopralene 180 Sanded, Sopralene 180 PS*, Sopralene 250 Sanded, adhered in hot asphalt at 25 lbs./sq. to sand surfaced base membrane.

*Requires heat welded cap membrane

Membrane:

One layer of Elastophene Flam GR, Elastophene Flam FR GR, Elastophene Flam LS FR GR, Elastophene Flam FR+ GR, Elastophene Flam HS FR GR, SopraStar Flam, Sopralene Flam 180 GR, Sopralene Flam 180 FR GR, Sopralene Flam 180 FR+ GR, Sopralene Flam 250 FR GR, Sopralene Flam 250 FR+ GR, Sopralast 50 TV Alu, heat welded.

Or

One layer of Elastophene GR, Elastophene FR GR, Elastophene LS FR GR, Elastophene FR+ GR, Elastophene HS FR GR, SopraStar Sanded, Sopralene 180 FR GR, Sopralene 250 FR GR, adhered in hot asphalt at 25 lbs./sq. to sand surface base or ply membrane.

Surfacing:

Surfacing is Optional on granular surfaced field cap membranes.

Surfacing is Required for smooth or sanded surfaced field cap membranes.

Refer to Underwriters Laboratories or Intertek Testing Services listings for applicable fire classifications

Apply any coating listed in Table 4 above, or any Miami-Dade approved coating system.

**Maximum Design
Pressure:**

-525 psf (See General Limitation #9.)



Membrane Type: SBS
Deck Type 3I: Concrete Decks, Insulated
Deck Description: 2500 psi structural concrete or concrete plank
System Type B: Base layer of insulation mechanically fastened, optional 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, ACFoam-III, Sopra-ISO s, Sopra-ISO+ s, ENRGY 3, ENRGY 3 25 PSI, H-Shield, M-Shield, Sopra-ISO r (flat or tapered) Minimum 1.5" thick	1, 2, 5, 8, 10, 13 or 14	1:1.33 ft²

Note: Base layer shall be mechanically attached with fasteners and density described above. 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
Approved High Density Fiberboard, Structodek High Density Fiberboard Roof Insulation Minimum 1/2" thick	N/A	N/A
Fesco Board Minimum 3/4" thick	N/A	N/A

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

Base Sheet: (Optional) One or more plies of Sopra G, Modified Sopra G, Sopra-IV, Sopra-VI, Soprabase, Soprabase S adhered in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs./sq.

Ply Sheet: One or more plies of Elastophene Sanded, Elastophene 180 Sanded, Sopralene 180 Sanded 2.2, Elastophene PS*, Elastophene PS 3.0*, Elastophene 180 PS*, Sopralene 180 PS 2.2*, Sopralene 180 PS*, Sopralene 180 Sanded, Sopralene 250 Sanded or one or more plies of Type IV or Type VI ply sheets adhered in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs./sq.

*Requires heat welded cap membrane.



- Membrane:** Elastophene Flam GR, Elastophene Flam FR GR, Elastophene Flam FR+ GR, Elastophene Flam LS FR GR, Soprastar Flam, Sopralene Flam 180 GR, Sopralene Flam 180 FR GR, Sopralene Flam 250 FR GR, Sopralene Flam 180 FR+ GR, Sopralene Flam 250 FR+ GR, Sopralast 50 TV Alu, heat welded
or
Elastophene FR GR, Elastophene FR+ GR, Elastophene LS FR GR, Elastophene GR, Soprastar Sanded, Sopralene 180 FR GR, Sopralene 250 FR GR, adhered in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs./sq. to sand surfaced ply membrane
- Surfacing:** Surfacing is Optional on granular surfaced field cap membranes.
Surfacing is Required for smooth or sanded surfaced field cap membranes. Refer to Underwriters Laboratories or Intertek Testing Services listings for applicable fire classifications
Apply any coating listed in Table 4 above, or any Miami-Dade approved coating system.
- Maximum Design Pressure:** -67.5 psf; (Min. ¾” thick Perlite in asphalt) (See General Limitation #7.)
-75 psf; (Min. ½” thick High Density Fiberboard in asphalt)
(See General Limitation #7.)

Membrane Type: SBS
Deck Type 3I: Concrete Decks, Insulated
Deck Description: Min. 2500 psi structural concrete or concrete plank
System Type C: 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, Sopra-ISO s, H-Shield, M-Shield, Sopra-ISO r, ISO 95+ GL, ENRGY 3 Minimum 2” 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	8	1:1.78

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. Refer to Roofing Application Standard RAS 117 for insulation attachment.

Primer: Elastocol 500, Elastocol Stick or AquaTac applied at a rate of 1 gal./sq., to top surface of any insulation, base or ply sheet prior to application of next layer
(Optional)

Base Sheet: One or more plies of Sopra G, Modified Sopra G, Sopra-IV, Sopra-VI, Soprabase, Soprabase S, Elastophene Sanded, Elastophene Sanded 3.0, Elastophene HS Sanded, Elastophene PS*, Elastophene PS 3.0*, Elastophene 180 Sanded, Sopralene 180 Sanded 2.2, Elastophene 180 PS*, Sopralene 180 PS 2.2, Sopralene 180 Sanded, Sopralene 180 PS*, Sopralene 250 Sanded, adhered in a full mopping of approved asphalt, applied within the EVT range and at a rate of 20-40 lbs./sq.

Or

Elastophene Flam*, Elastophene Flam 2.2*, Elastophene Flam HS*, Elastophene SP, Elastophene SP 3.0, Sopralene Flam 180*, Sopralene 180 SP 3.5, Soprafix, Soprafix Base 622, Sopralene Flam 250*, Sopralene 250 SP, Colvent TG, Colvent 180 TG, heat welded.

*Requires heat welded ply or cap membrane.



**Ply Sheet:
(Optional)** One or more layers of Elastophene Flam*, Elastophene Flam 2.2*, Elastophene Flam HS*, Elastophene SP, Elastophene SP 3.0, Sopralene Flam 180*, Sopralene 180 SP 3.5, Soprafix, Soprafix Base 622, Sopralene Flam 250*, Sopralene 250 SP, heat welded.

Or

Elastophene Sanded, Elastophene Sanded 3.0, Elastophene HS Sanded, Elastophene PS*, Elastophene PS 3.0*, Elastophene 180 Sanded, Sopralene 180 Sanded 2.2, Elastophene 180 PS*, Sopralene 180 PS 2.2*, Sopralene 180 Sanded, Sopralene 180 PS*, Sopralene 250 Sanded, adhered in a full mopping of approved asphalt, applied within the EVT range and at a rate of 20-40 lbs./sq. to sand surfaced base membrane.

*Requires heat welded cap membrane.

Membrane: One layer of Elastophene Flam GR, Elastophene Flam FR GR, Elastophene Flam LS FR GR, Elastophene Flam FR+ GR, Elastophene Flam HS FR GR, Soprastar Flam, Sopralene Flam 180 GR, Sopralene Flam 180 FR GR, Sopralene Flam 180 FR+ GR, Sopralene Flam 250 FR GR, Sopralene Flam 250 FR+ GR, Sopralast 50 TV Alu, heat welded.

or

One layer of Elastophene GR, Elastophene FR GR, Elastophene LS FR GR, Elastophene FR+ GR, Elastophene HS FR GR, Soprastar Sanded, Sopralene 180 FR GR, Sopralene 250 FR GR, adhered in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs./sq. or in FM Adhesive, FM Adhesive (VOC), COLPLY Modified Adhesive or Soprastar Adhesive at 1.5 – 2.0 gallons/square to sand surfaced base or ply membrane.

Surfacing: Surfacing is Optional on granular surfaced field cap membranes.
Surfacing is Required for smooth or sanded surfaced field cap membranes.
Refer to Underwriters Laboratories or Intertek Testing Services listings for applicable fire classifications
Apply any coating listed in Table 4 above, or any Miami-Dade approved coating system.

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

Membrane Type: SBS
Deck Type 3I: Concrete Decks, Insulated
Deck Description: 2500 psi structural concrete or concrete plank
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, ACFoam-III, Sopra-ISO s, Sopra-ISO+ s, ENRGY 3, Multi-Max FA-3, H-Shield, M-Shield, Sopra-ISO r (flat or tapered) Minimum 1.5" thick	N/A	N/A
(Optional) Top Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft²
Approved High Density Fiberboard, Structodek High Density Fiberboard Roof Insulation Minimum ½" thick	N/A	N/A
Fesco Board Minimum ¾" thick	N/A	N/A
DensDeck, SECUROCK Gypsum-Fiber Roof Board Minimum ¼" thick	N/A	N/A
Sopraboard Minimum 1/8" thick	N/A	N/A
DensDeck DuraGuard Fireguard Type X Gypsum Board Minimum 5/8" thick	N/A	N/A

Note: Top layer shall have preliminary attachment, prior to the installation of the base/anchor sheet, at a minimum application rate of two fasteners per board for insulation boards having no dimension greater than 4 ft., and four fasteners for any insulation board having no dimension greater than 8 ft. All layers of insulation and base sheet shall be simultaneously fastened. See base/anchor sheet below for fasteners and density. Refer to Roofing Application Standard RAS 117 for insulation attachment.

Base Sheet: One ply of Soprafix, Soprafix Base 622, Soprafix [S]*, Soprafix Base 612*, Soprafix [X]*, Soprafix Base 614*, Soprafix-e, Soprafix Base 641*, Soprafix [F]*, Soprafix Base 613*, Sopralene Flam 180*, Sopralene Flam 250*, fastened to the deck as described below:

*Requires heat welded ply or cap membrane.

Fastening #1: Attach base sheet using Dekfast #14 fasteners or Soprema #14 fasteners with Soprafix 2" SB Stress Plates spaced 18" o.c. in a 4" wide heat welded or bituminous taped seam.

(Maximum Design Pressures –45 psf; See General Limitation #9.)



Fastening #2: Attach base sheet using Dekfast #14 fasteners with Dekfast Galvalume Steel 3 in. Round Insulation Plates spaced 24" o.c. in the center of the sheet. Laps are heat welded. Fastener rows are stripped in with a 7" wide section of heat welded base sheet membrane.

(Maximum Design Pressures –45 psf; See General Limitation #9.)

Fastening #3: Attach base sheet using Soprema #14 fasteners with Soprafix 2" SB Stress Plates 12" o.c. in a 5" heat welded lap.

(Maximum Design Pressures –60 psf; See General Limitation #7.)

**Ply Sheet:
(Optional)** One or more plies of Elastophene Flam*, Elastophene Flam 2.2*, Sopralene Flam 180*, Sopralene Flam 250*, Sopralene 180 SP, Sopralene 250 SP, heat welded

*Requires heat welded cap membrane.

Membrane: Elastophene Flam GR, Elastophene Flam FR GR, Elastophene Flam FR+ GR, Elastophene Flam LS FR GR, Sopraplast Flam, Sopralene Flam 180 GR, Sopralene Flam 180 FR GR, Sopralene Flam 250 FR GR, Sopralene Flam 180 FR+ GR, Sopralene Flam 250 FR+ GR, Sopralast 50 TV Alu, heat welded.

Surfacing: Surfacing is Optional on granular surfaced field cap membranes. Surfacing is Required for smooth or sanded surfaced field cap membranes. Refer to Underwriters Laboratories or Intertek Testing Services listings for applicable fire classifications. Apply any coating listed in Table 4 above, or any Miami-Dade approved coating system.

Maximum Design Pressure: See Fastening Requirements above.

Membrane Type: SBS
Deck Type 3I: Concrete Decks, Insulated
Deck Description: Min. 2500 psi concrete or concrete plank
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.

Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft ²
ACFoam-II, Sopra-ISO s, H-Shield, M-Shield, Sopra-ISO r (flat or tapered) Minimum 1.5” thick	N/A	N/A
DensDeck, SECUROCK Gypsum-Fiber Roof Board Minimum 0.25” thick	N/A	N/A
Sopraboard Minimum 1/8” thick	N/A	N/A
EnergyGuard Isocyanurate Composite, Fesco Board, or Approved Perlite Minimum 0.75” thick	N/A	N/A

Note: Insulation layer shall have preliminary attachment, prior to the installation of the base/anchor sheet, at a minimum application rate of two fasteners per board for insulation boards having no dimension greater than 4 ft., and four fasteners for any insulation board having no dimension greater than 8 ft. All layers of insulation and base sheet shall be simultaneously fastened. See base/anchor sheet below for fasteners and density. Refer to Roofing Application Standard RAS 117 for insulation attachment.

Base Sheet: One ply of Soprafix, Soprafix Base 622, Soprafix-e or Soprafix Base 641, fastened to the deck as described below:

Fastening #1: Attach base sheet using Trufast Recessed Batten Bar with Trufast #14 HD Fastener or Soprafix MBB-R with Soprema #14 MP Fasteners spaced 12” o.c. in the minimum 5” wide lap.

**Ply Sheet:
(Optional)** One or more plies of Elastophene Flam*, Elastophene Flam 2.2*, Sopralene Flam 180*, Sopralene Flam 250*, Sopralene 180 SP, Sopralene 250 SP, heat welded
*Requires heat welded cap membrane.

Membrane: Elastophene Flam GR, Elastophene Flam FR GR, Elastophene Flam FR+ GR, Elastophene Flam LS FR GR, SopraStar Flam, Sopralene Flam 180 GR, Sopralene Flam 180 FR GR, Sopralene Flam 250 FR GR, Sopralene Flam 180 FR+ GR, Sopralene Flam 250 FR+ GR, Sopralast 50 TV Alu, heat welded

Surfacing: Surfacing is Optional on granular surfaced field cap membranes.
Surfacing is Required for smooth or sanded surfaced field cap membranes.
Refer to Underwriters Laboratories or Intertek Testing Services listings for applicable fire classifications
Apply any coating listed in Table 4 above, or any Miami-Dade approved coating system.

Maximum Design Pressure: -75 psf (General Limitation #7)



Membrane Type: SBS
Deck Type 3I: Concrete Decks, Insulated
Deck Description: Min. 2500 psi concrete or concrete plank
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, Sopra-ISO s, H-Shield, M-Shield, Sopra-ISO r (flat or tapered) Minimum 1.5” thick	N/A	N/A
DensDeck, SECUROCK Gypsum-Fiber Roof Board Minimum 0.25” thick	N/A	N/A
Sopraboard Minimum 1/8” thick	N/A	N/A
EnergyGuard Isocyanurate Composite, Fesco Board, Approved Perlite Minimum 0.75” thick	N/A	N/A

Note: Insulation layer shall have preliminary attachment, prior to the installation of the base/anchor sheet, at a minimum application rate of two fasteners per board for insulation boards having no dimension greater than 4 ft., and four fasteners for any insulation board having no dimension greater than 8 ft. All layers of insulation and base sheet shall be simultaneously fastened. See base/anchor sheet below for fasteners and density. Refer to Roofing Application Standard RAS 117 for insulation attachment.

Base Sheet: One ply of Soprafix, Soprafix Base 622, Soprafix-e or Soprafix Base 641, fastened to the deck as described below:

Fastening #1: Attach base sheet using OMG Polymer Batten Strip-TL with OMG #15 Roofgrip Large Head fasteners or Trufast Recessed Batten Brand Trufast #14 HD Fastener or Soprafix MBB-R with Soprema #14 MP Fasteners, spaced 12” o.c. in the minimum 5” wide lap.

**Ply Sheet:
(Optional)** One or more plies of Elastophene Sanded, Elastophene 180 Sanded, Sopralene 180 Sanded 2.2, Sopralene 180 Sanded, Sopralene 250 Sanded or one or more plies of Type IV or Type VI ply sheets adhered in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs./sq. to sand surfaced base membrane.

Membrane: Elastophene FR GR, Elastophene FR+ GR, Elastophene LS FR GR, Elastophene GR, Soprastar Sanded, Sopralene 180 FR GR, Sopralene 250 FR GR, adhered in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs./sq. to sand surfaced base or ply membrane.

Surfacing: Surfacing is Optional on granular surfaced field cap membranes. Surfacing is Required for smooth or sanded surfaced field cap membranes. Refer to Underwriters Laboratories or Intertek Testing Services listings for applicable fire classifications. Apply any coating listed in Table 4 above, or any Miami-Dade approved coating system.

Maximum Design Pressure: -75 psf (General Limitation #7)



Membrane Type: SBS
Deck Type 3I: Concrete Decks, Insulated
Deck Description: 2500 psi structural concrete or concrete plank
System Type D(4): Base Sheet mechanically attached over preliminarily secured insulation

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
Any approved insulation board listed in Table 2 Minimum 1.5" thick	N/A	N/A
Top Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft²
Any approved coverboard board listed in Table 2 Minimum 1/4" thick	N/A	N/A

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

Primer: Elastocol 500, Elastocol Stick or AquaTac applied at a rate of 1 gal./sq., to top surface of any insulation, base or ply sheet prior to application of next layer
(Optional)

Base Sheet: Soprafix-e or Soprafix Base 641, mechanically attached with OMG Polymer Batten Strip-TL and OMG #15 Roofgrip Large Head fasteners, Trufast Flat Batten Bar and Trufast #15 EHD Fastener, Soprema Soprafix MBB-R and Soprema # 15 fasteners or SFS Dekfast Coiled Batten Strip and Dekfast #15 HS fasteners, spaced 12" o.c. in the min. 5" self-adhered lap

Ply Sheet: One or more layers of Sopralene Flam 180*, Sopralene 180 SP 3.5, Soprafix, Soprafix Base 622, Sopralene Flam 250*, Sopralene 250 SP, heat welded
(Optional)
 *Requires heat welded cap membrane.

Membrane: One layer of Soprastar Flam, Sopralene Flam 180 GR, Sopralene Flam 180 FR GR, Sopralene Flam 180 FR+ GR, Sopralene Flam 250 FR GR, Sopralene Flam 250 FR+ GR, heat welded.

Surfacing: Surfacing is Optional on granular surfaced field cap membranes. Surfacing is Required for smooth or sanded surfaced field cap membranes. Refer to Underwriters Laboratories or Intertek Testing Services listings for applicable fire classifications
 Apply any coating listed in Table 4 above, or any Miami-Dade approved coating system.

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



Membrane Type: SBS
Deck Type 3I: Concrete Decks, Insulated
Deck Description: 2500 psi structural concrete or concrete plank
System Type D(5): Base Sheet mechanically attached over preliminarily secured insulation

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
Any approved insulation board listed in Table 2 Minimum 1.5" thick	N/A	N/A
Top Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft²
Any approved coverboard board listed in Table 2 Minimum 1/4" thick	N/A	N/A

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

Primer: Elastocol 500, Elastocol Stick or AquaTac applied at a rate of 1 gal./sq., to top surface of any insulation, base or ply sheet prior to application of next layer
(Optional)

Base Sheet: Soprafix or Soprafix Base 622, mechanically attached with OMG Polymer Batten Strip-TL and OMG #15 Roofgrip Large Head fasteners, Trufast Flat Batten Bar and Trufast #15 EHD Fastener, Soprema Soprafix MBB-R and Soprema # 15 fasteners or SFS Dekfast Batten Bar and Dekfast #15 HS fasteners, spaced 12" o.c. in the min. 4" heat welded lap

Ply Sheet: One or more layers of Sopralene Flam 180*, Sopralene 180 SP 3.5, Soprafix, Soprafix Base 622, Sopralene Flam 250*, Sopralene 250 SP, heat welded
(Optional)

*Requires heat welded cap membrane.

Membrane: One layer of SopraStar Flam, Sopralene Flam 180 GR, Sopralene Flam 180 FR GR, Sopralene Flam 180 FR+ GR, Sopralene Flam 250 FR GR, Sopralene Flam 250 FR+ GR, heat welded.

Surfacing: Surfacing is Optional on granular surfaced field cap membranes. Surfacing is Required for smooth or sanded surfaced field cap membranes. Refer to Underwriters Laboratories or Intertek Testing Services listings for applicable fire classifications. Apply any coating listed in Table 4 above, or any Miami-Dade approved coating system.

Maximum Design Pressure: -105 psf; (See General Limitation #7.)



Membrane Type: SBS
Deck Type 3I: Concrete Decks, Insulated
Deck Description: 2500 psi structural concrete or concrete plank
System Type D(6): Base Sheet mechanically attached over preliminarily secured insulation

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
Any approved insulation board listed in Table 2 Minimum 1.5" thick	N/A	N/A
Top Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft²
Any approved coverboard board listed in Table 2 Minimum 1/4" thick	N/A	N/A

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

Primer: Elastocol 500, Elastocol Stick or AquaTac applied at a rate of 1 gal./sq., to top surface of any insulation, base or ply sheet prior to application of next layer
(Optional)

Base Sheet: Soprafix or Soprafix Base 622, mechanically attached with OMG Polymer Batten Strip-TL and OMG #15 Roofgrip Large Head fasteners, Trufast Flat Batten Bar and Trufast #15 EHD Fastener Soprema Soprafix MBB-R and Soprema # 15 fasteners or SFS Dekfast Coiled Batten Strip and Dekfast #15 HS, spaced 6" o.c. in every other minimum 4" heat welded lap. Intermediate, non-fastened laps are 3" wide and heat welded.

Ply Sheet: One or more layers of Sopralene Flam 180*, Sopralene 250 Flam*, heat welded.
(Optional) *Requires heat welded cap membrane

Membrane: One layer of Soprastar Flam, Sopralene Flam 180 GR, Sopralene Flam 180 FR GR, Sopralene Flam 180 FR+ GR, Sopralene 250 SP*, Sopralene Flam 250 FR GR, Sopralene Flam 250 FR+ GR, heat welded.

Surfacing: Surfacing is Optional on granular surfaced field cap membranes. Surfacing is Required for smooth or sanded surfaced field cap membranes. Refer to Underwriters Laboratories or Intertek Testing Services listings for applicable fire classifications. Apply any coating listed in Table 4 above, or any Miami-Dade approved coating system.

Maximum Design Pressure: -120 psf; (See General Limitation #7.)



Membrane Type: SBS
Deck Type 3I: Concrete Decks, Insulated
Deck Description: Min. 2500 psi concrete or concrete plank
System Type D(7): 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, Sopra-ISO s, ISO 95+ GL, H-Shield, ENRGY 3, Multi-Max-3, M-Shield, Sopra-ISO r 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, DensDeck, DensDeck Prime, DensDeck DuraGuard Minimum 0.5” thick	1, 24, 2, 13, 14	1:4 ft ²

Note: Insulation layer shall have preliminary attachment, prior to the installation of the base/anchor sheet, at a minimum application rate of two fasteners per board for insulation boards having no dimension greater than 4 ft., and four fasteners for any insulation board having no dimension greater than 8 ft. All layers of insulation and base sheet shall be simultaneously fastened. See base/anchor sheet below for fasteners and density. Refer to Roofing Application Standard RAS 117 for insulation attachment.

Primer: Coverboard is primed with an approved ASTM D41 asphalt primer at a rate of 100-150 ft²/gal.
(Optional)

Base Sheet: Sopralene Flam 180, Sopralene Flam 250, Soprafix, Soprafix Base 622, Soprafix [F], Soprafix Base 613, Soprafix [S], Soprafix Base 612, Soprafix [X], Soprafix Base 614, Soprafix-e or Soprafix Base 641 fastened as specified below:

Fastening #1: Heat weld base membrane to the coverboard with minimum 3” laps. Mechanically attach heat welded base sheet with Soprema #14 or Soprema #15 fasteners and Soprema Soprafix 2” SB Stress plates, Dekfast #14 or Dekfast #15 HS fasteners with Dekfast IF-2-SB, Dekfast Galvalume Steel Round 2-3/8” 20 ga. Barbed plates, Trufast #15 EHD Fasteners with Trufast 2” Barbed Metal Stress Plates or Trufast 2.4” Barbed Seam Plates, Soprema #15 HD Fasteners with Soprema 2” Seam Plates or Soprafix 2-3/8” –SB Stress Plates, spaced maximum 12” o.c. through the side laps and two equally spaced staggered rows in the field of the membrane.

(Maximum Design Pressures –165 psf; See General Limitation #7.)



- Fastening #2:** Mechanically attach base sheet with Soprema #14 or Soprema #15 fasteners and Soprema Soprafix 2” SB Stress plates, Dekfast #14 or Dekfast #15 HS fasteners with Dekfast IF-2-SB, Dekfast Galvalume Steel Round 2-3/8” 20 ga. Barbed plates, Trufast #15 EHD Fasteners with Trufast 2” Barbed Metal Stress Plates or Trufast 2.4” Barbed Seam Plates, Soprema #15 HD Fasteners with Soprema 2” Seam Plates or Soprafix 2-3/8” –SB Stress Plates, spaced maximum 12” o.c. through the minimum 3” wide side lap and two equally spaced staggered rows in the field of the membrane.
(Maximum Design Pressures –150 psf; See General Limitation #7.)
- Ply Sheet:** Elastophene Flam, Elastophene Flam 2.2, Elastophene Flam HS, Sopralene Flam 180, Sopralene Flam 250, heat welded with minimum 3” laps.
- Membrane:** Elastophene Flam FR GR, Elastophene Flam GR, Elastophene Flam HS FR GR, Elastophene Flam LS FR GR, Sopralast 50 TV Alu, Soprastar Flam, Sopralene Flam 180 FR GR, Sopralene Flam 180 GR, Sopralene Flam 250 FR GR, heat welded with minimum 3” laps.
- Surfacing:** Surfacing is Optional on granular surfaced field cap membranes.
Surfacing is Required for smooth or sanded surfaced field cap membranes.
Refer to Underwriters Laboratories or Intertek Testing Services listings for applicable fire classifications
Apply any coating listed in Table 4 above, or any Miami-Dade approved coating system.
- Maximum Design Pressure:** See Fastening Options Above

Membrane Type: SBS
Deck Type 3I: Concrete Decks, Insulated
Deck Description: Min. 2500 psi concrete or concrete plank
System Type D(8): 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, Sopra-ISO s, ISO 95+ GL, H-Shield, ENRGY 3, Multi-Max 3, M-Shield, Sopra-ISO r 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, DensDeck, DensDeck Prime, DensDeck DuraGuard Minimum 0.5" thick	1, 2, 13, 14 or 24	1:4 ft ²

Note: Insulation layer shall have preliminary attachment, prior to the installation of the base/anchor sheet, at a minimum application rate of two fasteners per board for insulation boards having no dimension greater than 4 ft., and four fasteners for any insulation board having no dimension greater than 8 ft. All layers of insulation and base sheet shall be simultaneously fastened. See base/anchor sheet below for fasteners and density. Refer to Roofing Application Standard RAS 117 for insulation attachment.

Primer: Coverboard is primed with an approved ASTM D41 asphalt primer at a rate of 100-150 ft²/gal.
(Optional)

Base Sheet: Sopralene 180 SP, Sopralene 180 SP 3.5, Sopralene 250 SP, fastened as specified below:

Fastening #1: Heat weld base sheet to coverboard with minimum 3" wide side lap. Mechanically attach heat welded base sheet with Soprema #14 or Soprema #15 fasteners and Soprema Soprafix 2" SB Stress plates, Dekfast #14 or Dekfast #15 HS fasteners with Dekfast IF-2-SB, Dekfast Galvalume Steel Round 2-3/8" 20 ga. Barbed plates, Trufast #15 EHD Fasteners with Trufast 2" Barbed Metal Stress Plates or Trufast 2.4" Barbed Seam Plates, Soprema #15 HD Fasteners with Soprema 2" Seam Plates or Soprafix 2-3/8" –SB Stress Plates, spaced maximum 12" o.c. through the side laps and two equally spaced staggered rows in the field of the membrane.
(Maximum Design Pressures –165 psf; See General Limitation #7.)



- Fastening #2:** Mechanically attach base sheet with Soprema #14 or Soprema #15 fasteners and Soprema Soprafix 2” SB Stress plates, Dekfast #14 or Dekfast #15 HS fasteners with Dekfast IF-2-SB, Dekfast Galvalume Steel Round 2-3/8” 20 ga. Barbed plates, Tru-Fast #15 EHD Fasteners with Trufast 2” Barbed Metal Stress Plates or Trufast 2.4” Barbed Seam Plates, Soprema #15 HD Fasteners with Soprema 2” Seam Plates or Soprafix 2-3/8” –SB Stress Plates, spaced maximum 12” o.c. through the minimum 3” wide side lap and two equally spaced staggered rows in the field of the membrane.
(Maximum Design Pressures –150 psf; See General Limitation #7.)
- Ply Sheet:** Elastophene 180 PS, Sopralene 180 PS 2.2, Elastophene PS, adhered in full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs./sq. with minimum 3” wide side lap.
- Membrane:** Elastophene Flam FR GR, Elastophene Flam GR, Elastophene Flam HS FR GR, Elastophene Flam LS FR GR, Sopralast 50 TV Alu, SopraStar Flam, Sopralene Flam 180 FR GR, Sopralene Flam 180 GR, Sopralene Flam 250 FR GR, heat welded with minimum 3” wide side lap.
- Surfacing:** Surfacing is Optional on granular surfaced field cap membranes. Surfacing is Required for smooth or sanded surfaced field cap membranes. Refer to Underwriters Laboratories or Intertek Testing Services listings for applicable fire classifications. Apply any coating listed in Table 4 above, or any Miami-Dade approved coating system.
- Maximum Design Pressure:** See Fastening Options Above

Membrane Type: SBS
Deck Type 3I: Concrete Decks, Insulated
Deck Description: Min. 2500 psi concrete or concrete plank
System Type D(9): 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, Sopra-ISO s, ISO 95+ GL, H-Shield, ENRGY 3, Multi-Max 3, M-Shield, Sopra-ISO r 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, DensDeck, DensDeck Prime, DensDeck DuraGuard Minimum 0.5" thick	1, 2, 13, 14 or 24	1:4 ft ²

Note: Insulation layer shall have preliminary attachment, prior to the installation of the base/anchor sheet, at a minimum application rate of two fasteners per board for insulation boards having no dimension greater than 4 ft., and four fasteners for any insulation board having no dimension greater than 8 ft. All layers of insulation and base sheet shall be simultaneously fastened. See base/anchor sheet below for fasteners and density. Refer to Roofing Application Standard RAS 117 for insulation attachment.

Primer: Coverboard is primed with an approved ASTM D41 asphalt primer at a rate of 100-150 ft²/gal.
(Optional)

Base Sheet: Sopralene 180 SP, Sopralene 180 SP 3.5, Sopralene 250 SP, Soprafix [F]*, Soprafix Base 613*, Soprafix [S]*, Soprafix Base 612*, Soprafix [X]*, Soprafix Base 614*, Soprafix* or Soprafix Base 622* fastened as specified below:

*Requires heat welded cap membrane.

Fastening #1: Adhere base sheet to coverboard with minimum 3" wide side lap. Mechanically attach adhered base sheet with Soprema #14 or Soprema #15 fasteners and Soprema Soprafix 2" SB Stress plates, Dekfast #14 or Dekfast #15 HS fasteners with Dekfast IF-2-SB, Dekfast Galvalume Steel Round 2-3/8" 20 ga. Barbed plates, Trufast #15 EHD Fasteners with Trufast 2" Barbed Metal Stress Plates or Trufast 2.4" Barbed Seam Plates, Soprema #15 HD Fasteners with Soprema 2" Seam Plates or Soprafix 2-3/8" –SB Stress Plates, spaced maximum 12" o.c. through the side laps and two equally spaced staggered rows in the field of the membrane.

(Maximum Design Pressures –165 psf; See General Limitation #7.)



Fastening #2: Mechanically attach base sheet with Soprema #14 or Soprema #15 fasteners and Soprema Soprafix 2” SB Stress plates, Dekfast #14 or Dekfast #15 HS fasteners with Dekfast IF-2-SB, Dekfast Galvalume Steel Round 2-3/8” 20 ga. Barbed plates, Trufast #15 EHD Fasteners with Trufast 2” Barbed Metal Stress Plates or Trufast 2.4” Barbed Seam Plates, Soprema #15 HD Fasteners with Soprema 2” Seam Plates or Soprafix 2-3/8” –SB Stress Plates, spaced maximum 12” o.c. through the minimum 3” wide side lap and two equally spaced staggered rows in the field of the membrane.
(Maximum Design Pressures –150 psf; See General Limitation #7.)

Ply Sheet: Elastophene SP, Elastophene SP 3.0, Sopralene 180 SP, Sopralene 180 SP 3.5, Sopralene 250 SP, heat welded with minimum 3” wide side lap.
Or
Elastophene 180 Sanded, Sopralene 180 Sanded 2.2, Elastophene HS Sanded, Elastophene Sanded, Sopralene 180 Sanded, Sopralene 250 Sanded, or 1-2 plies of Sopra IV or Sopra VI, adhered in full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs./sq. with minimum 3” wide side lap.

Membrane: Elastophene FR GR, Elastophene GR, Elastophene HS FR GR, Elastophene HS GR, Elastophene LS FR GR, Sopralene 180 FR GR, Sopralene 250 FR GR, Soprastar Sanded, adhered in full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs./sq. with minimum 3” wide side lap.

Surfacing: Surfacing is Optional on granular surfaced field cap membranes.
Surfacing is Required for smooth or sanded surfaced field cap membranes.
Refer to Underwriters Laboratories or Intertek Testing Services listings for applicable fire classifications
Apply any coating listed in Table 4 above, or any Miami-Dade approved coating system.

Maximum Design Pressure: See Fastening Options Above

Membrane Type: SBS
Deck Type 3: Concrete Decks, Non-Insulated
Deck Description: 2500 psi structural concrete or concrete plank
System Type E: Base sheet mechanically fastened.

All General and System Limitations apply.

Base Sheet: One ply of Sopra G, Modified Sopra G, fastened to the deck as described below:

Fastening: Attach base sheet using SFS Dekfast #14 fasteners with Dekfast Galvalume Steel Hex Plates spaced 9" o.c. in a 4" lap and 12" o.c. in two staggered rows in the center of the sheet.

Ply Sheet: One or more plies of Elastophene Flam*, Elastophene Flam 2.2*, Sopralene Flam 180*, Sopralene Flam 250*, Sopralene 180 SP, Sopralene 250 SP, heat welded

or

One or more plies of Elastophene Sanded, Elastophene 180 Sanded, Sopralene 180 Sanded 2.2, Elastophene PS*, Elastophene PS 3.0*, Elastophene 180 PS*, Sopralene 180 PS 2.2*, Sopralene 180 PS*, Sopralene 180 Sanded, Sopralene 250 Sanded or one or more plies of Type IV or Type VI ply sheets adhered in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs./sq.

*Requires heat welded cap membrane.

Membrane: Elastophene Flam GR, Elastophene Flam FR GR, Elastophene Flam FR+ GR, Elastophene Flam LS FR GR, Soprastar Flam, Sopralene Flam 180 GR, Sopralene Flam 180 FR GR, Sopralene Flam 250 FR GR, Sopralene Flam 180 FR+ GR, Sopralene Flam 250 FR+ GR, heat welded

or

Elastophene FR GR, Elastophene FR+ GR, Elastophene LS FR GR, Elastophene GR, Soprastar Sanded, Sopralene 180 FR GR, Sopralene 250 FR GR, adhered in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs./sq. to sand surfaced base or ply membrane.

Surfacing: Surfacing is Optional on granular surfaced field cap membranes.
Surfacing is Required for smooth or sanded surfaced field cap membranes.
Refer to Underwriters Laboratories or Intertek Testing Services listings for applicable fire classifications
Apply any coating listed in Table 4 above, or any Miami-Dade approved coating system.

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



Membrane Type: SBS
Deck Type 3: Concrete Decks, Non-Insulated
Deck Description: 2500 psi structural concrete or concrete plank
System Type F(1): Base sheet adhered to primed substrate.

All General and System Limitations apply.

Primer: Elastocol 500, Elastocol Stick or AquaTac applied at a rate of 1 gal./sq., to top surface of any base or ply sheet prior to application of next layer
(Optional)

Base Sheet: One ply of Sopra G, Modified Sopra G, Soprabase, Soprabase S, Elastophene Sanded, Elastophene Sanded 3.0, Elastophene HS Sanded, Elastophene PS*, Elastophene PS 3.0*, Elastophene 180 Sanded, Sopralene 180 Sanded 2.2, Elastophene 180 PS*, Sopralene 180 PS 2.2*, Sopralene 180 Sanded, Sopralene 180 PS*, Sopralene 250 Sanded, adhered in FM Adhesive at 1.5 – 2.0 gallons/square or in hot asphalt at 25 lbs./sq.
(Optional)

*Requires heat welded ply or cap membrane.

Ply Sheet: One ply of Elastophene Sanded, Elastophene Sanded 3.0, Elastophene HS Sanded, Elastophene PS*, Elastophene PS 3.0*, Elastophene 180 Sanded, Sopralene 180 Sanded 2.2, Elastophene 180 PS*, Sopralene 180 PS 2.2*, Sopralene 180 Sanded, Sopralene 180 PS*, Sopralene 250 Sanded, adhered in FM Adhesive at 1.5 – 2.0 gallons/square or in hot asphalt at 25 lbs./sq.

Or

Elastophene Flam*, Elastophene Flam 2.2*, Elastophene Flam HS*, Elastophene SP, Elastophene SP 3.0, Sopralene Flam 180*, Sopralene 180 SP 3.5, Soprafix, Soprafix Base 622, Sopralene Flam 250*, Sopralene 250 SP, heat welded.

*Requires heat welded cap membrane.

Membrane: Elastophene GR, Elastophene FR GR, Elastophene LS FR GR, Elastophene FR+ GR, Elastophene HS FR GR, SopraStar Sanded, Sopralene 180 FR GR, Sopralene 250 FR GR, adhered in FM Adhesive at 1.5 – 2.0 gallons/square or in hot asphalt at 25 lbs./sq. to sand surfaced ply membrane.

Or

One layer of Elastophene Flam GR, Elastophene Flam FR GR, Elastophene Flam LS FR GR, Elastophene Flam FR+ GR, Elastophene Flam HS FR GR, SopraStar Flam, Sopralene Flam 180 GR, Sopralene Flam 180 FR GR, Sopralene Flam 180 FR+ GR, Sopralene Flam 250 FR GR, Sopralene Flam 250 FR+ GR, Sopralast 50 TV Alu, heat welded.

Surfacing: Surfacing is Optional on granular surfaced field cap membranes.
Surfacing is Required for smooth or sanded surfaced field cap membranes.
Refer to Underwriters Laboratories or Intertek Testing Services listings for applicable fire classifications
Apply any coating listed in Table 4 above, or any Miami-Dade approved coating system.

Maximum Design Pressure: -82.5 psf (See General Limitation #9.)



Membrane Type: SBS
Deck Type 3: Concrete Decks, Non-insulated
Deck Description: 2500 psi structural concrete or concrete plank
System Type F(2): Base sheet heat welded to primed deck.

All General and System Limitations apply.

Note: Concrete deck shall be primed with ASTM D 41 asphalt primer and allowed to dry prior to application of base sheet.

Base Sheet: One ply of Colvent TG, Colvent 180 TG, heat welded.

*Requires heat welded ply or cap membrane.

**Ply Sheet:
(Optional)** One or more plies of Elastophene Flam*, Elastophene Flam 2.2*, Elastophene Flam HS*, Elastophene SP, Elastophene SP 3.0, Sopralene Flam 180*, Sopralene 180 SP 3.5, Soprafix, Soprafix Base 622, Sopralene Flam 250*, Sopralene 250 SP, heat welded.

Or

One or more plies of Elastophene Sanded, Elastophene Sanded 3.0, Elastophene HS Sanded, Elastophene PS*, Elastophene PS 3.0*, Elastophene 180 Sanded, Sopralene 180 Sanded 2.2, Elastophene 180 PS*, Sopralene 180 PS 2.2*, Sopralene 180 Sanded, Sopralene 180 PS*, Sopralene 250 Sanded, adhered in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs./sq. to sand surfaced base membrane.

*Requires heat welded cap membrane.

Membrane: Elastophene Flam GR, Elastophene Flam FR GR, Elastophene Flam LS FR GR, Elastophene Flam FR+ GR, Elastophene Flam HS FR GR, SopraStar Flam, Sopralene Flam 180 GR, Sopralene Flam 180 FR GR, Sopralene Flam 180 FR+ GR, Sopralene Flam 250 FR GR, Sopralene Flam 250 FR+ GR, Sopralast 50 TV Alu, heat welded.

Or

Elastophene GR, Elastophene FR GR, Elastophene LS FR GR, Elastophene FR+ GR, Elastophene HS FR GR, SopraStar Sanded, Sopralene 180 FR GR, Sopralene 250 FR GR, adhered in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs./sq. to sand surfaced base or ply membrane.

Surfacing: Surfacing is Optional on granular surfaced field cap membranes.
Surfacing is Required for smooth or sanded surfaced field cap membranes.
Refer to Underwriters Laboratories or Intertek Testing Services listings for applicable fire classifications
Apply any coating listed in Table 4 above, or any Miami-Dade approved coating system.

Maximum Design Pressure: -187.5 psf; (See General Limitation #9.)



Membrane Type: SBS
Deck Type 3: Concrete Decks, Non-Insulated
Deck Description: 2500 psi structural concrete or concrete plank
System Type F(3): Base sheet adhered to primed substrate.

All General and System Limitations apply.

Primer: Elastocol 500, Elastocol Stick or AquaTac applied at a rate of 1 gal./sq., to top surface of any base or ply sheet prior to application of next layer
(Optional)

Base Sheet: One ply of Sopra G, Modified Sopra G, Soprabase, Soprabase S, Elastophene Sanded, Elastophene Sanded 3.0, Elastophene HS Sanded, Elastophene PS*, Elastophene PS 3.0*, Elastophene 180 Sanded, Sopralene 180 Sanded 2.2, Elastophene 180 PS*, Sopralene 180 PS 2.2*, Sopralene 180 Sanded, Sopralene 180 PS*, Sopralene 250 Sanded, adhered in FM Adhesive (VOC), COLPLY Modified Adhesive or Soprastar Adhesive at 1.5 – 2.0 gallons/square or in hot asphalt at 25 lbs./sq.
(Optional)

Requires heat welded ply or cap membrane.

Ply Sheet: One ply of Elastophene Sanded, Elastophene Sanded 3.0, Elastophene HS Sanded, Elastophene PS*, Elastophene PS 3.0*, Elastophene 180 Sanded, Sopralene 180 Sanded 2.2, Elastophene 180 PS*, Sopralene 180 PS 2.2*, Sopralene 180 Sanded, Sopralene 180 PS*, Sopralene 250 Sanded, adhered in FM Adhesive (VOC), COLPLY Modified Adhesive or Soprastar Adhesive at 1.5 – 2.0 gallons/square or in hot asphalt at 25 lbs./sq.

Or

Elastophene Flam*, Elastophene Flam 2.2*, Elastophene Flam HS*, Elastophene SP, Elastophene SP 3.0, Sopralene Flam 180*, Sopralene 180 SP 3.5, Soprafix, Soprafix Base 622, Sopralene Flam 250*, Sopralene 250 SP, heat welded

*Requires heat welded cap membrane.

Membrane: One layer of Elastophene GR, Elastophene FR GR, Elastophene LS FR GR, Elastophene FR+ GR, Elastophene HS FR GR, Soprastar Sanded, Sopralene 180 FR GR, Sopralene 250 FR GR, adhered in FM Adhesive (VOC), COLPLY Modified Adhesive or Soprastar Adhesive at 1.5 – 2.0 gallons/square or in hot asphalt at 25 lbs./sq. to sand surfaced ply membrane

Or

One layer of Elastophene Flam GR, Elastophene Flam FR GR, Elastophene Flam FR+ GR, Elastophene Flam LS FR GR, Elastophene Flam HS FR GR, Soprastar Flam, Sopralene Flam 180 GR, Sopralene Flam 180 FR GR, Sopralene Flam 180 FR+ GR, Sopralene Flam 250 FR GR, Sopralene Flam 250 FR+ GR, Sopralast 50 TV Alu, heat welded.



Surfacing: Surfacing is Optional on granular surfaced field cap membranes.
Surfacing is Required for smooth or sanded surfaced field cap membranes.
Refer to Underwriters Laboratories or Intertek Testing Services listings for applicable fire classifications
Apply any coating listed in Table 4 above, or any Miami-Dade approved coating system.

Maximum Design Pressure: -187.5 psf (See General Limitation #9.)



Membrane Type: SBS
Deck Type 3: Concrete Decks, Non-Insulated
Deck Description: 2500 psi structural concrete or concrete plank
System Type F(4): Membranes adhered to primed substrate.

All General and System Limitations apply.

Substrate Preparation: All surfaces must be dry, smooth, free of depressions, voids and protrusions, and clean and free of any non-compatible curing compounds, foam release agents and other surface contaminants.

Primer: Elastocol 500, Elastocol Stick or AquaTac at an application rate of 100 ft²/gallon.

Base Sheet: One layer of Colvent TG or Colvent 180 TG, heat welded.

Ply Sheet: (Optional) One or more layers of Elastophene Sanded, Elastophene Sanded 3.0, Elastophene HS Sanded, Elastophene 180 Sanded, Sopralene 180 Sanded 2.2, Sopralene 180 Sanded, Sopralene 250 Sanded, adhered in hot asphalt at 25 lbs./sq. to sand surfaced base membrane.

Primer: (Optional) Elastocol 500, Elastocol Stick or AquaTac applied at a rate of 1 gal/sq. to top surface of any base or ply sheet prior to application of next layer

Membrane: One layer of Elastophene GR, Elastophene FR GR, Elastophene LS FR GR, Elastophene FR+ GR, Elastophene HS FR GR, Soprastar Sanded, Sopralene 180 FR GR, Sopralene 250 FR GR, adhered in hot asphalt at 25 lbs./sq. to sand surfaced base or ply membrane.

Surfacing: Surfacing is Optional on granular surfaced field cap membranes. Surfacing is Required for smooth or sanded surfaced field cap membranes. Refer to Underwriters Laboratories or Intertek Testing Services listings for applicable fire classifications. Apply any coating listed in Table 4 above, or any Miami-Dade approved coating system.

Maximum Design Pressure: -267.5 psf. (See General Limitation #9.)



Membrane Type: SBS
Deck Type 3: Concrete Decks, Non-Insulated
Deck Description: 2500 psi structural concrete or concrete plank
System Type F(5): Membranes adhered to primed substrate.

All General and System Limitations apply.

Substrate Preparation: All surfaces must be dry, smooth, free of depressions, voids and protrusions, and clean and free of any non-compatible curing compounds, foam release agents and other surface contaminants.

Primer: Elastocol 500, Elastocol Stick or AquaTac at an application rate of 100 ft²/gallon.

Base Sheet: One layer of Colvent TG or Colvent 180 TG, heat welded.
*Requires heat welded ply or cap membrane.

Ply Sheet (Optional): One or more layers of Elastophene Flam*, Elastophene Flam 2.2*, Elastophene Flam HS*, Elastophene SP, Elastophene SP 3.0, Sopralene Flam 180*, Sopralene 180 SP 3.5, Soprafix, Soprafix Base 622, Sopralene Flam 250*, Sopralene 250 SP, heat welded.
*Requires heat welded cap membrane.

Primer (Optional): Elastocol 500, Elastocol Stick or AquaTac applied at a rate of 1 gal/sq. to top surface of any base or ply sheet prior to application of next layer

Membrane: One layer of Elastophene Flam GR, Elastophene Flam FR GR, Elastophene Flam LS FR GR, Elastophene Flam FR+ GR, Elastophene Flam HS FR GR, Soprastar Flam, Sopralene Flam 180 GR, Sopralene Flam 180 FR GR, Sopralene Flam 180 FR+ GR, Sopralene Flam 250 FR GR, Sopralene Flam 250 FR+ GR, Sopralast 50 TV Alu, heat welded.

Surfacing: Surfacing is Optional on granular surfaced field cap membranes.
Surfacing is Required for smooth or sanded surfaced field cap membranes.
Refer to Underwriters Laboratories or Intertek Testing Services listings for applicable fire classifications
Apply any coating listed in Table 4 above, or any Miami-Dade approved coating system.

Maximum Design Pressure: -295 psf. (See General Limitation #9.)

CONCRETE DECK SYSTEM LIMITATIONS:

1. If mechanical attachment to the structural deck through the lightweight insulating concrete is proposed, a field withdrawal resistance testing shall be performed to determine equivalent or enhanced fastener patterns and density. All testing and fastening design shall be in compliance with Testing Application Standard TAS 105 and Roofing Application Standard RAS 117, calculations shall be signed and sealed by a Florida registered Professional Engineer, Registered Architect, or Registered Roof Consultant.

GENERAL LIMITATIONS:

1. Fire classification is not part of this acceptance; refer to a current Approved Roofing Materials Directory for fire ratings of this product.
2. Insulation may be installed in multiple layers. The first layer shall be attached in compliance with Product Control Approval guidelines. All other layers shall be adhered in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs./sq., or mechanically attached using the fastening pattern of the top layer
3. All standard panel sizes are acceptable for mechanical attachment. When applied in approved asphalt, panel size shall be 4' x 4' maximum.
4. An overlay and/or recovery board insulation panel is required on all applications over closed cell foam insulations when the base sheet is fully mopped. If no recovery board is used the base sheet shall be applied using spot mopping with approved asphalt, 12" diameter circles, 24" o.c.; or strip mopped 8" ribbons in three rows, one at each side lap and one down the center of the sheet allowing a continuous area of ventilation. Encircling of the strips is not acceptable. A 6" break shall be placed every 12' in each ribbon to allow cross ventilation. Asphalt application of either system shall be at a minimum rate of 12 lbs./sq.
Note: Spot attached systems shall be limited to a maximum design pressure of -45 psf.
5. Fastener spacing for insulation attachment is based on a Minimum Characteristic Force (F') value of 275 lbf., as tested in compliance with Testing Application Standard TAS 105. If the fastener value, as field-tested, are below 275 lbf. insulation attachment shall not be acceptable.
6. Fastener spacing for mechanical attachment of anchor/base sheet or membrane attachment is based on a minimum fastener resistance value in conjunction with the maximum design value listed within a specific system. Should the fastener resistance be less than that required, as determined by the Building Official, a revised fastener spacing, prepared, signed and sealed by a Florida registered Professional Engineer, Registered Architect, or Registered Roof Consultant may be submitted. Said revised fastener spacing shall utilize the withdrawal resistance value taken from Testing Application Standards TAS 105 and calculations in compliance with Roofing Application Standard RAS 117.
7. Perimeter and corner areas shall comply with the enhanced uplift pressure requirements of these areas. Fastener densities shall be increased for both insulation and base sheet as calculated in compliance with Roofing Application Standard RAS 117. Calculations prepared, signed and sealed by a Florida registered Professional Engineer, Registered Architect, or Registered Roof Consultant **(When this limitation is specifically referred within this NOA, General Limitation #9 will not be applicable.)**
8. All attachment and sizing of perimeter nailers, metal profile, and/or flashing termination designs shall conform to Roofing Application Standard RAS 111 and applicable wind load requirements.
9. The maximum designed pressure limitation listed shall be applicable to all roof pressure zones (i.e. field, perimeters, and corners). Neither rational analysis, nor extrapolation shall be permitted for enhanced fastening at enhanced pressure zones (i.e. perimeters, extended corners and corners). **(When this limitation is specifically referred within this NOA, General Limitation #7 will not be applicable.)**
10. All products listed herein shall have a quality assurance audit in accordance with the Florida Building Code and Rule 9N-3 of the Florida Administrative Code.

END OF THIS ACCEPTANCE

