MIAMI-DADE COUNTY
PRODUCT CONTROL SECTION
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DEPARTMENT OF REGULATORY AND ECONOMIC RESOURCES (RER)
BOARD AND CODE ADMINISTRATION DIVISION

NOTICE OF ACCEPTANCE (NOA)

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 Steel Decks.

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

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

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

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

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

This NOA renews and revises NOA No. 15-0709.15 and consists of pages 1 through 114.
The submitted documentation was reviewed by Jorge L. Acebo.

ROOFING SYSTEM APPROVAL

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

TRADE NAMES OF PRODUCTS MANUFACTURED OR LABELED BY APPLICANT:

TABLE 1

Product	Dimensions	Test Specification	Product Description
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-surface 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.**
Soprabase TG	39” x 65’ (2 sq.)	ASTM D4601	SBS modified bitumen, polyester reinforced, film-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 ply sheet 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 IV	Type IV, fiberglass reinforced, smooth surfaced ply sheet used in multi-ply systems and complies with ASTM and UL Standards. Applied in hot asphalt or cold adhesive.
Elastophene Stick	39” x 49’ (1.5 sq.)	ASTM D6163	Self-adhered, sanded surfaced, fiberglass reinforced membranes.
Elastophene Flam Stick	39” x 49’ (1.5 sq.)	ASTM D6163	Self-adhered, sanded surfaced, fiberglass reinforced membranes.
Sopralene Flam Stick	39” x 49’ (1.5 sq.)	ASTM D6164	Self-adhered, polyester reinforced membrane with a release film on the bottom and a sanded top.
Sopralene Stick	39" x 33' (1 sq.)	ASTM D6164	Self-adhered, polyester reinforced membrane with a release film on the bottom and a sanded top.
Colphene Stick	39" x 33' (1 sq.)	ASTM D6164	Self-adhered, polyester reinforced membrane with a release film on the bottom and a sanded top.

Product	Dimensions	Test Specification	Product Description
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.
Colvent Flam 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 and a plastic burn-off film surface.
Colphene 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 2.2	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	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.
Elastophene PS	39" x 49' (1.5 sq.)	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' (1.5 sq.)	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 by heat welding or ribbon stripping (after removal of plastic burn-off film).
Colphene SP 2.2	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 by heat welding or ribbon stripping (after removal of plastic burn-off film).

Product	Dimensions	Test Specification	Product Description
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 by heat welding or ribbon stripping (after removal of plastic burn-off film).
Colphene 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 by 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.
Colphene 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.
Colphene 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 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.
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 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.

Product	Dimensions	Test Specification	Product Description
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.
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).
Colphene 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 3.0	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.

Product	Dimensions	Test Specification	Product Description
Soprafix Base 611	39" x 33' (1.5 sq.)	ASTM D6164	Non-woven polyester reinforced modified bitumen membrane with a film surface. 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 Base 613	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 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 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).
Colphene 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).

Product	Dimensions	Test Specification	Product Description
Colphene 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 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).
Colphene 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 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).
Colphene 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).
Colphene 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).

Product	Dimensions	Test Specification	Product Description
Sopralene Flam 180 FR GR 3.5	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).
Colphene 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).
Sopralene Flam Antirock	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.
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).
Sopralast 50 TV Alu Sanded	various	ASTM D6298	Fiberglass reinforced modified bitumen sheeting sanded on the bottom and faced with aluminum foil. Applied in hot asphalt, cold adhesive or ribbon stripping.
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 primers.

Product	Dimensions	Test Specification	Product Description
Elastocol Stick	various	ASTM D41	Asphalt primers.
Elastocol Stick Zero	Various	ASTM D41	Asphalt primers.
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.
COLPLY Flashing Cement	5 gallon pail	Proprietary	Elastomeric bitumen based mastic compound.
Sopravap'r	45" x 133'	Various	A self-adhering air/vapor barrier membrane applied dierct to deck for use in steel deck assemblies, composed of a SBS modified bitumen adhesive bottom layer and a tri-laminated woven polyethylene top layer.
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.
COLPLY Adhesive	5 gallon pail or 55 gallon drum	Proprietary	Polymer modified cold process membrane adhesive.
COLPLY EF Adhesive	5 gallon pail	Proprietary	Solvent free, polymeric adhesive.

APPROVED INSULATIONS:

TABLE 2

Product Name	Product Description	Manufacturer (With Current NOA)
ACFoam-II, ACFoam-III	Polyisocyanurate foam insulation	Atlas Roofing Corporation
ISO 95+ GL	Polyisocyanurate foam insulation	Firestone Building Products Company, LLC
DensDeck, DensDeck Prime	Water resistant gypsum board	Georgia Pacific Gypsum LLC
M-Shield	Polyisocyanurate foam insulation	SOPREMA, Inc.
Sopra-ISO r, Sopra-ISO+ r	Polyisocyanurate foam insulation	SOPREMA, Inc.
Sopra-ISO s, Sopra-ISO+ s	Polyisocyanurate foam insulation	SOPREMA, Inc.
Sopra-ISO x	Polyisocyanurate foam insulation	SOPREMA, Inc.
Sopra-ISO r	Polyisocyanurate foam insulation	SOPREMA, Inc.
Sopraboard	Mineral fortified asphaltic cored coverboard	SOPREMA, Inc.
H-Shield, H-Shield CG	Polyisocyanurate foam insulation	Hunter Panels LLC
ENRGY 3, ENRGY 3 25 PSI	Polyisocyanurate foam insulation	Johns Manville Corp.
ENRGY 3 CGF, ENRGY 3 FR, ENRGY 3 AGF	Polyisocyanurate foam insulation	Johns Manville Corp.
Fesco Board	Expanded mineral fiber insulation	Johns Manville Corp.
Fesco Board HD, Retro-Fit Board, DuraBoard	Expanded mineral fiberboard	Johns Manville Corp.
Invinsa Roof Board, Invinsa FR Roof Board	High density Polyisocyanurate	Johns Manville Corp.
Ultra-Max, 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.
EnergyGuard Polyiso Insulation, EnergyGuard Ultra POLYISO Insulation	Polyisocyanurate foam insulation	GAF
Kingspan GreenGuard-PB6, Kingspan GreenGuard-PB6W, Kingspan GreenGuard-PB6 PLUS, Kingspan GreenGuard-PB3890	Extruded polystyrene	Kingspan Insulation LLC
SopraRock DD, SopraRock DD Plus	Mineral wool insulation	SOPREMA, Inc.
TopRock DD, TopRock DD Plus	Mineral wool insulation	ROXUL, Inc. dba ROCKWOOL

APPROVED FASTENERS:

TABLE 3

Fastener Number	Product Name	Product Description	Dimensions	Manufacturer (With Current NOA)
1.	Tri-Fix Fastening System	Fastening system for base sheet attachment to lightweight concrete, gypsum or cementitious wood fiber decks.	3” diameter plate with various length fasteners	SOPREMA, Inc.
2.	Soprema #12, #14 & #15 Fastener	Fasteners for membrane or insulation attachment to wood, steel or concrete decks.	Various	SOPREMA, Inc.
3.	Dekfast DF-#12-PH3, DF-#14-PH3 & DF-#15-PH3	Insulation fastener		SFS Group USA, Inc.
4.	Dekfast PLT-H-2-7/8	Galvalume AZ50 steel plate	2 7/8” x 3 ¼”	SFS Group USA, Inc.
5.	AccuTrac Hextra	Insulation fastener for wood and steel.		OMG, Inc.
6.	AccuTrac Plate	Galvalume square stress plate	3” square	OMG, Inc.
7.	OMG 3” Galvalume Steel Plate	Galvalume stress plate.	3” round	OMG, Inc.
8.	#12 Standard Roofgrip, #14 Roofgrip & #15 Roofgrip	Insulation fastener.		OMG, Inc.
9.	3 in. Round Metal Plate	Galvalume AZ50 steel plate	3" round	OMG, Inc.
10.	Trufast TL Fastener	Insulation fastener for lightweight concrete, CWF and gypsum decks		Altenloh, Brinck & Co. U.S., Inc.
11.	Trufast #14 HD Fastener	Insulation fastener for wood, steel and concrete.		Altenloh, Brinck & Co. U.S., Inc.
12.	Trufast #15 EHD Fastener	Insulation fastener for wood, steel and concrete.		Altenloh, Brinck & Co. U.S., Inc.
13.	Trufast 3” Metal Insulation Plate	Galvalume AZ50 steel plate	3" round	Altenloh, Brinck & Co. U.S., Inc.
14.	Polymer Batten Strip	Modified polymer batten bar		OMG, Inc.
15.	Dekfast PLT-R-3	Galvalume AZ50 steel plate	3” round	SFS Group USA, Inc.
16.	Soprema 3” Round Insulation Plate	Stress plate	3” diameter	SOPREMA, Inc.
17.	Soprafix 2” SB Stress Plate	Stress plate	2” diameter	SOPREMA, Inc.
18.	Soprafix 2-3/8” SB Stress Plate	Stress plate	2-3/8” diameter	SOPREMA, Inc.
19.	Soprafix MBB-R	Metal Batten Bar		SOPREMA, Inc.
20.	Soprema #12 DP Fastener, Soprema #14 MP Fastener, Soprema #15 HD Fastener	Insulation and membrane fasteners	Various	SOPREMA, Inc.

APPROVED FASTENERS:

TABLE 3

Fastener Number	Product Name	Product Description	Dimensions	Manufacturer (With Current NOA)
21.	Trufast Flat Batten Bar	Galvalume AZ55 steel batten bar		Altenloh, Brinck & Co. U.S., Inc.
22.	Trufast Recessed Batten Bar	Galvalume AZ55 steel batten bar with recessed holes		Altenloh, Brinck & Co. U.S., Inc.
23.	#15 Roofgrip Large Head	Carbon steel fasteners used in steel, wood and concrete decks.	Various	OMG, Inc.
24.	Dekfast PLT-R-2-4B	Galvalume AZ55 steel plate	2” round	SFS Group USA, Inc.
25.	Dekfast PLT-R-2-3/8-6B	Galvalume AZ55 steel barbed plate	2.37” Round	SFS Group USA, Inc.
26.	Trufast 2” Barbed Metal Seam Plate	Galvalume steel stress plate	2” Round	Altenloh, Brinck & Co. U.S., Inc.
27.	Trufast 2.4” Barbed Metal Seam Plate	Galvalume steel stress plate	2.4” Round	Altenloh, Brinck & Co. U.S., Inc.
28.	Soprema 2" Seam Plate	Stress plate	2” diameter	SOPREMA, Inc.
29.	Soprema 3" Metal Insulation Plate	Stress plate	3” diameter	SOPREMA, Inc.
30.	Flat Bottom Metal Plate	Galvalume stress plate.	3” square	OMG, Inc.
31.	OMG 2” Barbed Plate	Galvalume stress plate	2” Round	OMG, Inc.
32.	Trufast 2.4” Scoop Seam Plate	Galvalume steel stress plate	2.4” Round	Altenloh, Brinck & Co. U.S., Inc.
33.	Soprema 2.4” Seam Plates	Galvalume steel stress plate	2.4” Round	SOPREMA, Inc.
34.	OMG Heavy-Duty	Insulation fastener for wood, steel and concrete.		OMG, Inc.
35.	OMG 2-3/8” Barbed XHD Plate	Galvalume stress plate	2-3/8” Round	OMG, Inc.
36.	AccuTrac Flat Bottom	Aluminized square stress plate	3” square	OMG, Inc.
37.	Trufast #12 DP Fastener	Insulation fastener for wood and steel.	Various	Altenloh, Brinck & Co. U.S., Inc.
38.	Millennium One Step Foamable Adhesive	Polyurethane two component high rise insulation adhesive		H.B. Fuller Company
39.	Millennium One Step Green Foamable Adhesive	Polyurethane two component high rise insulation adhesive		H.B. Fuller Company
40.	Millennium PG-1 Low Viscosity Insulation Adhesive	Polyurethane two component high rise insulation adhesive		H.B. Fuller Company
41.	Duotack	Two part elastomeric urethane foam adhesive.	5, 50 gallon pail	SOPREMA, Inc.
42.	Duotack Neo	Two part polyurethane foam adhesive.	5, 50 gallon pail	SOPREMA, 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	Flood coat and gravel/slag with an application rate of 60 lbs./sq. & 400 lbs./sq., respectively.
2.	SOPREMA, Inc.	Gravel applied at 400 lbs./sq., adhered with COLPLY EF Adhesive, COLPLY Adhesive, at 4 gal./sq.
3.	Karnak Corporation	Karnak (#97 AF) Fibrated Aluminum Roof Coating applied at an application rate of 1.5 gal./sq.
4.	SOPREMA, Inc.	Cural Aluminizer applied at an application rate of 2 gal./sq.
5.	Thermo Manufacturing Systems, LLC	Super Prep Elastomeric Roof Maintenance Coating applied in two coats at an application rate of 1.5 gal./sq./coat.
6.	Quest Construction Products LLC dba United Coatings	United Coatings 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.
7.	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.
8.	Henry Company	HE280DC White Elastomeric Roof Coating applied in two coats at an application rate of 1 gal./sq./coat.
9.	National Coating Corp.	Acryshield® A500 applied in two coats at an application rate of 1 gal./sq./coat.
10.	SOPREMA, Inc.	R Nova Plus applied in two coats. Base coat is applied at 3 gal/sq. (1.2 L/m^2) and allowed to dry. A top coat is applied at 1 gal/sq. (0.4 L/m^2).
11.	Generic	Semi-ceramic coated colored granules.

EVIDENCE SUBMITTED:

Test Agency/Identifier	Report	Name	Date
Dynatech Engineering Corp.	2491-04.95	TAS 114	01/04/95
FM Approvals	1Z3A6.AM	FM 4470	04/27/95
	1D4A3.AM	FM 4470	04/24/98
	3002351	FM 4470	02/28/03
	3017614	FM 4470	02/27/06
	3026028	FM 4470	05/25/06
	3023458	FM 4450	07/18/06
	3029098	FM 4470	10/25/07
	3032109	FM 4470	07/21/08
	3036182	FM 4470	07/31/09
	3001445	FM 4470	02/05/99
	3X3A7.AM	FM 4470	09/08/94
	3045101	FM 4470	11/05/12
	3049322	FM 4470	01/17/14
	3008441	FM 4470	10/17/00
	3044801	FM 4470	02/27/12
	3047439	FM 4470	07/22/13
	3028410	FM 4470	02/19/07
	3045734	FM 4470	04/04/12
	3046765	FM 4470	02/15/13
	3047351	FM 4470	10/09/14
	RR203650	FM 4470	12/18/15
	3053841	FM 4470	03/27/15
	3051109	FM 4470	05/11/15
	3042559	FM 4470	10/18/11
	3054633	FM 4470	12/18/15
	3011490	FM 4470	04/22/02
	3026964	FM 4470	07/25/07
	3011494	FM 4470	08/22/01
	3034124	FM 4470	02/23/09
	3037437	FM 4470	11/09/09
	3053475	FM 4470	
	RR201595	FM 4470	06/17/15
	RR201064	FM 4470	05/01/15
	RR203157	FM 4470	11/06/15
	RR203472	FM 4470	02/05/16
UL LLC	R11436	UL 790	01/15/21
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
	2716.05.98-1	TAS 114	05/27/98
	2752.02LAB.05.02-1	TAS 114	05/24/02
	2109.09.02	TAS 114	09/19/02
	2764.09.03	TAS 114	09/16/03

EVIDENCE SUBMITTED: (CONTINUED)

Test Agency/Identifier	Report	Name	Date
Exterior Research & Design, LLC	02843.02.05-2	TAS 117 & FM 4470	02/10/05
	2774.04 .05-R1	TAS 114	04/18/07
	2779.11.05-R1	TAS 114	04/18/07
Trinity | ERD	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
	S11440.06.10	ASTM D4798 & TAS 110	06/01/10
	S32840.06.10-R1	TAS 117 (B)	12/11/14
	02848.04.05-R1	TAS 114	10/19/10
	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
	S30440.03.10-2-R2	FM 4470 & TAS 114	06/01/10
	S35860.12.11-1-R1	ASTM D2178	12/12/14
	S35860.12.11-2	ASTM D4601	12/12/11
	S35860.05.12-1-R2	ASTM D6163	02/14/13
	S35860.05.12-2-R3	ASTM D6164	08/28/14
	S35860.05.12-3	ASTM D6164	05/08/12
	S35860.09.12-R2	ASTM D6163	12/12/14
	S39320.01.12-R1	FM 4474 & TAS 114	05/24/12
	S39970.07.12-2	ASTM D6164	07/12/12
	S43400.08.14-6	ASTM D6164	08/26/14
	S45520.11.13-R2	Physical Properties	03/26/14
	S32700.12.10-R2	ASTM D6162	07/07/14
	S43210.11.14	ASTM D1876	11/10/14
	S43400.08.14-5	ASTM D6163	08/26/14
	S45340.10.13	FM 4474 & TAS 114	10/02/13
	S39970.07.12-R1	ASTM D6162	12/12/14
	S47160.01.14-R1	FM 4470 & TAS 114 (H)	12/11/14
	S45010.02.14	ASTM D6506	02/07/14
	S43400.08.14-7-R1	ASTM D6164	11/20/14
	S43400.09.14-9	ASTM D6164	09/02/14
	S43400.09.14-10	ASTM D6298	09/08/14
	S43400.08.14-4-R1	ASTM D6163	10/24/14
	S44110.09.14-3	ASTM D6163	09/08/14
	S44110.09.14-7C	ASTM D6164	09/02/14
	S44220.09.14-1	ASTM D6162	09/08/14
	S44220.09.14-7A	ASTM D4601	09/08/14
	S11440.11.10-3-R2	ASTM D4601 & TAS 117(B)	08/26/14
	S39500.02.12	Physical Properties	02/23/12
PRI Construction Materials Technologies, LLC	SOP-049-02-01	ASTM D1644 /D2196	05/31/12
	SOP-043-02-01	ASTM D4601	02/27/12
	SOP-042-02-01	ASTM D4601	02/27/12

EVIDENCE SUBMITTED: (CONTINUED)

Test Agency/Identifier	Report	Name	Date
PRI Construction Materials Technologies, LLC	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
	SOP-033-02-01	FM 4474 & TAS 114	05/10/12
	SOP-056-02-01	Various	09/12/12

DECK STRESS ANALYSIS CALCULATIONS/REPORTS

Engineer/Agency	Identifier	Assemblies	Date
Robert Nieminen, P.E.	Signed/Sealed Calculations	B(2), B(3), B(4), B(6), C(5), C(6), C(8), C(9), D(2), D(3), D(4), D(11), D(14), D(15), D(18), D(21), D(24)	02/10/16
FM Approval Deck Limitations	N/A	B(1), B(5), B(7), B(8), C(1), C(2), C(3), C(4), C(7), C(10), C(11), D(1), D(5), D(6), D(7), D(8), D(9), D(10), D(12), D(13), D(16), D(17), D(19), D(20), D(22), D(23), D(25), D(26), D(27), D(28), D(29), D(30), D(31), D(32)	01/01/13

APPROVED ASSEMBLIES:

Membrane: SBS

Deck Type 2I: Steel, Insulated

Deck Description: 18-22 ga., Type B, Grade 33 steel deck fastened 6" o.c. with Traxx/5 fasteners into ¼" steel supports spaced maximum 6 ft. o.c. Deck side laps are attached with #12 HWH Tek 1 fasteners spaced max. 24" o.c.
This Tested Assembly has been analyzed for allowable deck stress. See Evidence Submitted Table.

System Type B(1): Optional vapor barrier followed by base layer of insulation mechanically attached, top layer adhered with approved adhesive, roof cover fully adhered.

All General and System Limitations apply.

Vapor Barrier: Sopravap'r, self-adhered to the top flanges of the steel deck.

(Optional)

One or more layers of any of the following insulations.

Base Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft^2
H-Shield, H-Shield CG, M-Shield, Sopra-ISO r, Sopra-ISO+ r, ACFoam-II, ACFoam-III, Sopra-ISO s, Sopra-ISO+ s, Multi-Max FA-3, UltraMax, Sopra-ISO x, ENRGY 3, ENRGY 3 AGF, ENRGY 3 CGF, EnergyGuard POLYISO Insulation		
Minimum 1.5" thick	**12 or 20 (#15)**	**1:1.78 ft^2**

Note: Base layer shall use minimum two layers of insulation panels listed. Insulation panel joints shall be staggered, mechanically attached with fasteners and density described above. Alternately the first layer of insulation may be mechanically fastened as above and the second layer adhered with Duotack or Duotack Neo applied in ½" to ¾" wide ribbons spaced maximum 12" o.c. Refer to Roofing Application Standard RAS 117 for insulation attachment.

Top Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft^2
Sopraboard		
Minimum 1/8" thick	**N/A**	**N/A**

Note: All insulations shall be adhered with Duotack or Duotack Neo applied in ½" to ¾" wide ribbons spaced maximum 12" o.c. 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 two plies of Modified Sopra G, Soprabase, Colphene Sanded, Elastophene Sanded 2.2, Elastophene Sanded 3.0, Elastophene HS, Elastophene PS*, Elastophene PS 3.0*, Colphene 180 Sanded, Sopralene 180 Sanded 2.2, Soprabase, Colphene 180 PS*, Sopralene 180 PS 2.2*, Sopralene 180 Sanded, Sopralene 180 PS* or Sopralene 250 Sanded, adhered in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-25 lbs./sq. or in COLPLY Adhesive, COLPLY EF Adhesive at 1.5-2.5 gal./sq. Or One layer of Elastophene Flam*, Elastophene Flam 2.2*, Elastophene Flam HS*, Elastophene SP 2.2, Colphene SP 2.2, Elastophene SP 3.0, Colphene SP 3.0, Sopralene 180 SP 3.0, Sopralene 180 SP 3.5, Colphene 180 SP 3.5, Sopralene Flam 180*, Colphene Flam 180*, Sopralene Flam 250*, Colvent TG, Colvent 180 TG, Colvent Flam 180 TG*, torch-applied. Or One layer of Elastophene Stick, Sopralene Stick, Colphene Stick, Elastophene Flam Stick*, Sopralene Flam Stick* self-adhered. *Requires torch-applied ply or cap membrane.
Ply Sheet: (Optional)	One layer of Modified Sopra G, Soprabase, Colphene Sanded, Elastophene Sanded 2.2, Elastophene Sanded 3.0, Elastophene HS, Elastophene PS*, Elastophene PS 3.0*, Colphene 180 Sanded, Sopralene 180 Sanded 2.2, Soprabase, Colphene 180 PS*, Sopralene 180 PS 2.2*, Sopralene 180 Sanded, Sopralene 180 PS* or Sopralene 250 Sanded adhered in hot asphalt at 25 lbs./sq. or in COLPLY Adhesive, COLPLY EF Adhesive at 1.5-2.5 gal./sq. Or One layer of Elastophene Flam*, Elastophene Flam 2.2*, Elastophene Flam HS*, Elastophene SP 2.2, Colphene SP 2.2, Elastophene SP 3.0, Colphene SP 3.0, Sopralene 180 SP 3.0, Sopralene 180 SP 3.5, Colphene 180 SP 3.5, Sopralene Flam 180*, Colphene Flam 180*, Sopralene Flam 250*, Colvent TG, Colvent 180 TG, Colvent Flam 180 TG*, torch-applied. Or One layer of Elastophene Stick, Sopralene Stick, Colphene Stick, Elastophene Flam Stick*, Sopralene Flam Stick* self-adhered. *Requires torch-applied cap membrane.
Membrane:	Elastophene Flam FR GR, Elastophene Flam LS FR GR, Elastophene Flam FR+ GR, Sopralene Flam 180 GR, Colphene Flam 180 GR, Sopralene Flam 180 FR GR, Colphene Flam 180 FR GR, Sopralene Flam 180 FR GR 3.5, Sopralene Flam 180 FR+ GR, Sopralene Flam 250 FR GR, Colphene Flam 250 FR GR, Sopralene Flam 250 FR+ GR, Sopralast 50 TV Alu, Sopralene Flam Antirock, torch-applied.
Membrane: (Continued)	Or Elastophene FR GR, Elastophene LS FR GR, Elastophene FR+ GR, Sopralene 180 FR GR, Colphene 180 FR GR, Sopralene 180 FR+ GR, Sopralene 250 FR GR, Colphene 250 FR GR, Sopralene 250 FR+ GR, Sopralast 50 TV Alu 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 COLPLY Adhesive, COLPLY EF Adhesive at 1.5-2.5 gal./sq. to sand surfaced 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 #7.)

Membrane: SBS

Deck Type 2I: Steel, Insulated

Deck Description: Min. 22 ga., Type B, Grade 33 steel deck fastened with ¾" puddle welds spaced 6" o.c. to supports spaced maximum 6' o.c. Deck side laps are fastened max. 24" o.c. with Tek/1 fasteners.

This Tested Assembly has been analyzed for allowable deck stress. See Evidence Submitted Table.

System Type B(2): Optional vapor barrier followed by base layer of insulation mechanically attached, top layer adhered with approved adhesive, roof cover fully adhered.

All General and System Limitations apply.

Vapor Barrier: Sopravap'r, self-adhered to the top flanges of the steel deck.

(Optional)

One or more layers of any of the following insulations.

Base Insulation Layer	**Insulation Fasteners (Table 3)**	**Fastener Density/ft²**
ACFoam-II, Sopra-ISOs or ENRGY 3		
Minimum 2" thick	**8 (#12 or #14) with 36, 8 (#12) or 34 with 7, 3 (#12 or #14) with 15, 37, 20 (#12) or 11 or 20 (#14) with 13 or 16 or 2 (#12 or #14) with 29**	**1:2 ft²**

Top Insulation Layer	**Insulation Fasteners (Table 3)**	**Fastener Density/ft²**
SECUROCK Gypsum-Fiber Roof Board		
Minimum 3/8" thick	**N/A**	**N/A**

Note: All insulations shall be adhered with hot asphalt full mop applied at a rate of 25 lbs./sq. or with Duotack, Duotack Neo, Millennium One Step Foamable Adhesive, Millennium One Step Green Foamable Adhesive, Millennium PG-1 Low Viscosity Insulation Adhesive applied in continuous ribbons maximum spacing of 12" o.c. 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: Sopralene Stick, Colphene Stick, Elastophene Flam Stick* or Sopralene Flam Stick* self-adhered.

Or

Elastophene Flam HS*, Elastophene Flam 2.2*, Elastophene Flam*, Sopralene Flam 180*, Colphene Flam 180*, Sopralene Flam 250* Elastophene SP 2.2, Colphene SP 2.2, Elastophene SP 3.0, Colphene SP 3.0, Sopralene 180 SP 3.0, Sopralene 180 SP 3.5, Colphene 180 SP 3.5 or Sopralene 250 SP, torch-applied.
*Requires torch-applied Ply or Cap.

Ply Sheet: (Optional)	Colphene Sanded, Elastophene Sanded 2.2, Elastophene Sanded 3.0, Elastophene HS, Sopralene 180 Sanded 2.2, Colphene 180 Sanded, Sopralene 180 Sanded, Sopralene 250 Sanded, Elastophene PS*, Elastophene PS 3.0*, Sopralene 180 PS 2.2*, Colphene 180 PS* or Sopralene 180 PS* applied in hot asphalt at 25 lbs./sq. Or Elastophene Flam HS*, Elastophene Flam 2.2*, Elastophene Flam*, Sopralene Flam 180*, Colphene Flam 180*, Sopralene Flam 250*, Elastophene SP 2.2, Colphene SP 2.2, Elastophene SP 3.0, Colphene SP 3.0, Sopralene 180 SP 3.0, Sopralene 180 SP 3.5, Colphene 180 SP 3.5 or Sopralene 250 SP, torch-applied. *Requires torch-applied Cap.
Membrane:	Elastophene LS FR GR, Elastophene FR GR, Elastophene FR+ GR, Sopralene 180 FR GR, Colphene 180 FR GR, Sopralene 180 FR+ GR, Sopralene 250 FR GR, Colphene 250 FR GR, Sopralene 250 FR+ GR, or Sopralast 50 TV Alu Sanded, applied in hot asphalt at 25 lbs./sq. Or Elastophene Flam LS FR GR, Elastophene Flam FR GR, Elastophene Flam FR+ GR, Sopralene Flam 180 GR, Colphene Flam 180 GR, Sopralene Flam 180 FR GR, Colphene Flam 180 FR GR, Sopralene Flam 180 FR GR 3.5, Sopralene Flam 250 FR GR, Colphene Flam 250 FR GR, Sopralene Flam 180 FR+ GR, Sopralene Flam 250 FR+ GR, Sopralast 50 TV Alu, Sopralene Flam Antirock, torch-applied.
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: SBS

Deck Type 2I: Steel, Insulated

Deck Description: 18-22 ga., Type B, Grade 33 steel fastened to structural supports spaced 6' o.c. with #12-24 x 1-1/4" HWH self-drilling metal screws with ¼" washers in every flute. Deck side laps fastened with #1/4-14 x 7/8" HWH self-drilling metal screws with ¼" washers spaced at 12" o.c.
This Tested Assembly has been analyzed for allowable deck stress. See Evidence Submitted Table.

System Type B(3): Optional vapor barrier followed by base layer of insulation mechanically fastened, top layer adhered with approved asphalt, roof cover fully adhered.

All General and System Limitations apply.

Vapor Barrier: (Optional) Sopravap'r, self-adhered.

One or more layers of any of the following insulations.

Base Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft²
H-Shield, M-Shield, Sopra-ISO r Minimum 2" thick	**11, 20 (#14 MP) with 13, 29**	**1:1.78 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
Fesco Board Minimum ¾" thick	**N/A**	**N/A**

Note: Top layer of insulation shall be adhered with ASTM D312 Type IV mopping asphalt within the EVT range and at a rate of 25 lbs./100 ft². Please refer to Roofing Application Standard RAS 117 for insulation attachment. Insulations listed as the base layer shall only be used as the base layer with a second layer of approved top layer insulation installed as the final membrane substrate. Composite insulation boards used as a top layer shall be installed with the polyisocyanurate face down.

Base Sheet: (Optional) One layer of Modified Sopra G, Sopra IV, Sopra VI, Soprabase, Soprabase S, Colphene Sanded, Elastophene Sanded 2.2, Elastophene Sanded 3.0, Elastophene HS, Elastophene PS*, Elastophene PS 3.0*, Colphene 180 Sanded, Sopralene 180 Sanded 2.2, Colphene 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.
*Requires torch-applied cap membrane.

Ply Sheet:	**(Base sheet required for use of torch-applied ply sheets)** One or more layers of Elastophene Flam*, Elastophene Flam 2.2*, Elastophene SP 2.2, Colphene SP 2.2, Elastophene SP 3.0, Colphene SP 3.0, Sopralene Flam 180*, Colphene Flam 180*, Sopralene Flam 250*, Sopralene 180 SP 3.0, Sopralene 180 SP 3.5, Colphene 180 SP 3.5, Sopralene 250 SP, torch-applied. Or One or more layers of Colphene Sanded, Elastophene Sanded 2.2, Elastophene Sanded 3.0, Elastophene HS, Colphene 180 Sanded, Sopralene 180 Sanded 2.2, Soprabase, Elastophene PS*, Elastophene PS 3.0*, Colphene 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 torch-applied cap membrane.
Membrane:	Elastophene Flam FR GR, Elastophene Flam FR+ GR, Elastophene Flam LS FR GR, Sopralene Flam 180 GR, Colphene Flam 180 GR, Sopralene Flam 180 FR GR, Colphene Flam 180 FR GR, Sopralene Flam 180 FR GR 3.5, Sopralene Flam 250 FR GR, Colphene Flam 250 FR GR, Sopralene Flam 180 FR+ GR, Sopralene Flam 250 FR+ GR, Sopralast 50 TV Alu, Sopralene Flam Antirock, torch-applied. Or Elastophene FR GR, Elastophene FR+ GR, Elastophene LS FR GR, Sopralene 180 FR GR, Colphene 180 FR GR, Sopralene 180 FR+ GR, Sopralene 250 FR GR, Colphene 250 FR GR, Sopralene 250 FR+ GR, , Sopralast 50 TV Alu 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 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:	-67.5 psf. (See General Limitation #7)

Membrane: SBS

Deck Type 2I: Steel, Insulated

Deck Description: 18-22 ga. Type B, Grade 80 steel deck fastened 6" o.c. with Traxx/5 fasteners to steel supports spaced maximum 5 ft. o.c. Deck side laps fastened with Traxx/1 fasteners spaced at 20" o.c.
This Tested Assembly has been analyzed for allowable deck stress. See Evidence Submitted Table.

System Type B(4): Optional vapor barrier followed by base layer of insulation mechanically fastened, top layer adhered with approved asphalt.

All General and System Limitations apply.

Vapor Barrier: (Optional) Sopravap'r, self-adhered.

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	**2, 3, 5, 8, 10 with approved plates**	**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**
Structodek High Density Fiberboard Roof Insulation		
Minimum ½" thick	**N/A**	**N/A**
Fesco Board		
Minimum ¾" thick	**N/A**	**N/A**

Note: Top layer of insulation shall be adhered with approved hot asphalt within the EVT range and at a rate of 20-40 lbs./100 ft². Please refer to Roofing Application Standard RAS 117 for insulation attachment. 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 layers of Modified Sopra G, Sopra IV, Sopra VI, or Soprabase 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 layers of Elastophene Flam*, Elastophene Flam 2.2*, Elastophene SP 2.2, Colphene SP 2.2, Elastophene SP 3.0, Colphene SP 3.0, Sopralene Flam 180*, Colphene Flam 180*, Sopralene Flam 250*, Sopralene 180 SP 3.0, Sopralene 180 SP 3.5, Colphene 180 SP 3.5, Sopralene 250 SP, torch-applied. Or One or more layers of Colphene Sanded, Elastophene Sanded 2.2, Elastophene Sanded 3.0, Elastophene HS, Colphene 180 Sanded, Sopralene 180 Sanded 2.2, Soprabase, Elastophene PS*, Elastophene PS 3.0*, Colphene 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 torch-applied cap membrane.
Membrane:	Elastophene Flam FR GR, Elastophene Flam FR+ GR, Elastophene Flam LS FR GR, Sopralene Flam 180 GR, Colphene Flam 180 GR, Sopralene Flam 180 FR GR, Colphene Flam 180 FR GR, Sopralene Flam 180 FR GR 3.5, Sopralene Flam 250 FR GR, Colphene Flam 250 FR GR, Sopralene Flam 180 FR+ GR, Sopralene Flam 250 FR+ GR or Sopralast 50 TV Alu, Sopralene Flam Antirock, torch-applied. Or Elastophene FR GR, Elastophene FR+ GR, Elastophene LS FR GR, Sopralene 180 FR GR, Colphene 180 FR GR, Sopralene 180 FR+ GR, Sopralene 250 FR GR, Colphene 250 FR GR, Sopralene 250 FR+ GR, Sopralast 50 TV Alu 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 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:	-67.5 psf. (For Fesco Board) (See General Limitation #7) -75 psf. (For High Density Wood Fiberboard) (See General Limitation #7)

Membrane: SBS

Deck Type 2I: Steel, Insulated

Deck Description: Min. 18-22 ga., Type B, Grade 80 steel deck fastened 6" o.c. with Traxx/5 fasteners into steel supports spaced maximum 6 ft. o.c. Deck side laps are attached with Traxx/1 fasteners spaced max. 30" o.c.
This Tested Assembly has been analyzed for allowable deck stress. See Evidence Submitted Table.

System Type B(5): Optional vapor barrier followed by base layer of insulation mechanically attached, top layer adhered with approved asphalt
All General and System Limitations apply.

Vapor Barrier: (Optional) Sopravap'r, self-adhered.

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 (flat or tapered)		
Minimum 2" thick	**11 or 20 (min #14)**	**1:1.6 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**
Structodek High Density Fiberboard Roof Insulation		
Minimum ½" thick	**N/A**	**N/A**

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

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

Base Sheet: One or more layers of Modified Sopra G, Sopra IV, Sopra VI, Soprabase, Colphene Sanded, Elastophene Sanded 2.2, Elastophene Sanded 3.0, Elastophene HS, Elastophene PS*, Elastophene PS 3.0*, Colphene 180 Sanded, Sopralene 180 Sanded 2.2, Colphene 180 PS*, 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.
*Requires torch-applied ply or cap membrane.

Ply Sheet: (Optional)	One or more layers of Elastophene Flam*, Elastophene Flam 2.2*, Elastophene Flam HS*, Elastophene SP 2.2, Colphene SP 2.2, Elastophene SP 3.0, Colphene SP 3.0, Sopralene Flam 180*, Colphene Flam 180*, Sopralene 180 SP 3.0, Sopralene 180 SP 3.5, Colphene 180 SP 3.5, Soprafix Base 622. Sopralene Flam 250*, Sopralene 250 SP, torch-applied. Or Colphene Sanded, Elastophene Sanded 2.2, Elastophene Sanded 3.0, Elastophene HS, Elastophene PS*, Elastophene PS 3.0*, Colphene 180 Sanded, Sopralene 180 Sanded 2.2, Soprabase, Colphene 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 torch-applied cap membrane.
Membrane:	Elastophene Flam FR GR, Elastophene Flam LS FR GR, Elastophene Flam FR+ GR, Sopralene Flam 180 GR, Colphene Flam 180 GR, Sopralene Flam 180 FR GR, Colphene Flam 180 FR GR, Sopralene Flam 180 FR GR 3.5, Sopralene Flam 180 FR+ GR, Sopralene Flam 250 FR GR, Colphene Flam 250 FR GR, Sopralene Flam 250 FR+ GR, Sopralast 50 TV Alu, Sopralene Flam Antirock, torch-applied. Or Elastophene FR GR, Elastophene LS FR GR, Elastophene FR+ GR, Sopralene 180 FR GR, Colphene 180 FR GR, Sopralene 180 FR+ GR, Sopralene 250 FR GR, Colphene 250 FR GR, Sopralene 250 FR+ GR, Sopralast 50 TV Alu 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 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. (See General Limitation #7.)

Membrane Type: SBS

Deck Type 2I: Steel, Insulated

Deck Description: Min. 22 ga., Type B, Grade 33 steel fastened to structural supports spaced 6' o.c. with Tek/5 screws in every flute spaced 6" o.c. Deck side laps are fastened max. 24" o.c. with Tek/1 fasteners.
This Tested Assembly has been analyzed for allowable deck stress. See Evidence Submitted Table.

System Type B(6): Insulation layer mechanically attached followed by vapor barrier, fully adhered and insulation layers adhered with approved adhesive, roof cover fully adhered.

All General and System Limitations apply.

One or more layers of any of the following insulations.

Separation Sheet: (Optional) Sopravap'r, self-adhered.

Base Insulation Layer	**Insulation Fasteners (Table 3)**	**Fastener Density/ft^2**
DensDeck Prime or SECUROCK Gypsum-Fiber Roof Board		
Min. 0.625-inch thick	**11 with 13 or 20 (#14) with 29**	**1:2 ft^2**

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.

Vapor Barrier: Elastophene SP 3.0, Colphene SP 3.0, Sopralene 180 SP 3.0, Sopralene 180 SP 3.5, Colphene 180 SP 3.5, Sopralene 250 SP, torch-applied.

Middle Insulation Layer	**Insulation Fasteners (Table 3)**	**Fastener Density/ft^2**
EnergyGuard POLYISO Insulation or ENRGY 3 CGF		
Minimum 2" thick	**N/A**	**N/A**

Top Insulation Layer	**Insulation Fasteners (Table 3)**	**Fastener Density/ft^2**
DensDeck Prime or SECUROCK Gypsum-Fiber Roof Board		
Minimum 0.25" thick	**N/A**	**N/A**

Note: Middle and Top insulation shall be adhered with Millennium PG-1 Low Viscosity Insulation Adhesive, Duotack or Duotack Neo applied in continuous ¾" to 1" wide ribbons at a maximum spacing of 12" o.c. 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 layer of Elastophene Flam*, Elastophene Flam 2.2*, Elastophene SP, Colphene SP 2.2, Elastophene SP 3.0, Colphene SP 3.0, Elastophene Flam HS*, Sopralene 180 SP 3.0, Sopralene 180 SP 3.5, Colphene 180 SP 3.5, Sopralene Flam 180*, Colphene Flam 180*, Sopralene Flam 250* or Sopralene 250 SP, torch-applied.

Base Sheet: (Continued)	Or Colphene Sanded, Elastophene Sanded 2.2, Elastophene Sanded 3.0, Elastophene PS*, Elastophene PS 3.0, Elastophene HS, Colphene 180 Sanded, Sopralene 180 Sanded 2.2, Colphene 180 PS*, Sopralene 180 PS 2.2*, Sopralene 180 Sanded, Sopralene 180 PS*, Sopralene 250 Sanded adhered in COLPLY Adhesive, COLPLY EF Adhesive at a rate of 1.5 gal./sq. or adhered in hot asphalt at 25 lbs./sq. or Modified Sopra-G, Sopra IV, Sopra VI or Soprabase applied in hot asphalt at 25 lbs./sq. *Requires torch-applied cap membrane
Ply Sheet: (Optional)	One layer of Elastophene Flam*, Elastophene Flam 2.2*, Elastophene SP, Colphene SP 2.2, Elastophene SP 3.0, Colphene SP 3.0, Elastophene Flam HS*, Sopralene 180 SP 3.0, Sopralene 180 SP 3.5, Colphene 180 SP 3.5, Sopralene Flam 180*, Colphene Flam 180*, Sopralene Flam 250* or Sopralene 250 SP, torch-applied. Or Colphene Sanded, Elastophene Sanded 2.2, Elastophene Sanded 3.0, Elastophene PS*, Elastophene PS 3.0, Elastophene HS, Colphene 180 Sanded, Sopralene 180 Sanded 2.2, Colphene 180 PS*, Sopralene 180 PS 2.2*, Sopralene 180 Sanded, Sopralene 180 PS*, Sopralene 250 Sanded adhered in COLPLY Adhesive, COLPLY EF Adhesive at a rate of 1.5 gal./sq. or adhered in hot asphalt at 25 lbs./sq. or Modified Sopra-G, Sopra IV, Sopra VI or Soprabase applied in hot asphalt at 25 lbs./sq. *Requires torch-applied cap membrane
Membrane:	Elastophene Flam LS FR GR, Elastophene Flam FR GR, Sopralene Flam 180 GR, Colphene Flam 180 GR, Sopralene Flam 180 FR GR, Colphene Flam 180 FR GR, Sopralene Flam 180 FR GR 3.5, Sopralene Flam 250 FR GR, Colphene Flam 250 FR GR, Sopralene Flam 180 FR+ GR, Sopralene Flam 250 FR+ GR, Sopralast 50 TV Alu, Sopralene Flam Antirock, torch-applied with minimum 3” wide lap. Or Elastophene FR GR, Elastophene LS FR GR, Sopralene 180 FR GR, Colphene 180 FR GR, Sopralene 180 FR+ GR, Sopralene 250 FR GR, Colphene 250 FR GR, Sopralene 250 FR+ GR, adhered in COLPLY Adhesive, COLPLY EF Adhesive at a rate of 1.5 gal./sq. or adhered in hot asphalt at 25 lbs./sq.
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. (See General Limitation #7)

Membrane: SBS

Deck Type 2I: Steel, Insulated

Deck Description: 18-22 ga., Type B, Grade 33 steel fastened to ¼" thick structural supports spaced 6' o.c. with Traxx/5 fasteners spaced 6" o.c. Deck side laps fastened with Traxx/1 fasteners spaced at 24" o.c.
This Tested Assembly has been analyzed for allowable deck stress. See Evidence Submitted Table.

System Type B(7): Insulation layer mechanically attached followed by vapor barrier and insulation layers adhered with approved adhesive, roof cover fully adhered.

All General and System Limitations apply.

One or more layers of any of the following insulations.

Base Insulation Layer	**Insulation Fasteners (Table 3)**	**Fastener Density/ft²**
DensDeck, DensDeck Prime, SECUROCK Gypsum-Fiber Roof Board		
Minimum ½" thick	**20 (#14 MP or #15 HD)**	**1:2 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.

Primer: (Optional) Elastocol 500, Elastocol Stick Zero or Elastocol Stick at a rate of 0.5 gal/sq.

Vapor Barrier: Sopravap'r, Elastophene Stick, Sopralene Stick or Colphene Stick, self-adhered over primed gypsum board.
Or
Elastophene SP 2.2, Colphene SP 2.2, Elastophene SP 3.0, Colphene SP 3.0, Sopralene 180 SP 3.0, Sopralene 180 SP 3.5, Colphene 180 SP 3.5, Sopralene 250 SP, torch-applied over primed gypsum board.
Or
Colphene Sanded, Elastophene Sanded 2.2, Elastophene Sanded 3.0, Elastophene HS, Colphene 180 Sanded, Sopralene 180 Sanded 2.2, Sopralene 180 Sanded, Sopralene 250 Sanded, Elastophene PS, Elastophene PS 3.0, Colphene 180 PS, Sopralene 180 PS 2.2, adhered in hot asphalt at 25 lbs./sq. or applied in COLPLY Adhesive at a rate of 1.5 gal./sq

Middle Insulation Layer	**Insulation Fasteners (Table 3)**	**Fastener Density/ft²**
H-Shield, H-Shield CG, M-Shield, Sopra-ISO r, Sopra-ISO+ r, ACFoam-II, ACFoam-III, Sopra-ISO s, Sopra-ISO+ s, Multi-Max FA-3, UltraMax, Sopra-ISO x, ENRGY 3, ENRGY 3 AGF, ENRGY 3 CGF, EnergyGuard POLYISO Insulation (flat or tapered)		
Minimum 1.5" thick	**N/A**	**N/A**

Top Insulation Layer	**Insulation Fasteners (Table 3)**	**Fastener Density/ft²**
SECUROCK Gypsum-Fiber Roof Board		
Minimum ¼" thick	**N/A**	**N/A**

Note: Top layer of insulation shall be adhered with Duotack or Duotack Neo applied in ½" to ¾" wide ribbons spaced 12" o.c. 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:

One layer of Modified Sopra G, Soprabase, Colphene Sanded, Elastophene Sanded 2.2, Elastophene Sanded 3.0, Elastophene HS, Elastophene PS*, Elastophene PS 3.0*, Colphene 180 Sanded, Sopralene 180 Sanded 2.2, Soprabase, Colphene 180 PS*, Sopralene 180 PS 2.2*, Sopralene 180 Sanded, Sopralene 180 PS* or Sopralene 250 Sanded adhered in hot asphalt at 25 lbs./sq. or applied in COLPLY EF Adhesive, COLPLY Adhesive, applied at a rate of 1.5 – 2 gal./sq.

Or

One layer of Elastophene Flam*, Elastophene Flam 2.2*, Elastophene SP 2.2, Colphene SP 2.2, Elastophene SP 3.0, Colphene SP 3.0, Sopralene 180 SP 3.0, Sopralene 180 SP 3.5, Colphene 180 SP 3.5, Sopralene Flam 180*, Colphene Flam 180*, Sopralene Flam 250*, Colvent TG, Colvent 180 TG, Colvent Flam 180 TG*, torch-applied to substrate primed with Elastocol 500.

Or

One layer of Elastophene Stick, Sopralene Stick, Colphene Stick, Elastophene Flam Stick* or Sopralene Flam Stick*, self-adhered to substrate primed with Elastocol Stick or Elastocol Stick Zero.
*Requires torch-applied ply or cap membrane

Ply Sheet: (Optional)

One layer of Modified Sopra G, Soprabase, Colphene Sanded, Elastophene Sanded 2.2, Elastophene Sanded 3.0, Elastophene HS, Elastophene PS*, Elastophene PS 3.0*, Colphene 180 Sanded, Sopralene 180 Sanded 2.2, Soprabase, Colphene 180 PS*, Sopralene 180 PS 2.2*, Sopralene 180 Sanded, Sopralene 180 PS* or Sopralene 250 Sanded adhered in hot asphalt at 25 lbs./sq. or applied in COLPLY EF Adhesive, COLPLY Adhesive, applied at a rate of 1.5 – 2 gal./sq.

Or

One layer of Elastophene Flam*, Elastophene Flam 2.2*, Elastophene SP 2.2, Colphene SP 2.2, Elastophene SP 3.0, Colphene SP 3.0, Sopralene 180 SP 3.0, Sopralene 180 SP 3.5, Colphene 180 SP 3.5, Sopralene Flam 180*, Colphene Flam 180*, Sopralene Flam 250*, Colvent TG, Colvent 180 TG, Colvent Flam 180 TG*, torch-applied.

Or

One layer of Elastophene Stick, Sopralene Stick, Colphene Stick, Elastophene Flam Stick* or Sopralene Flam Stick*, self-adhered.
*Requires torch-applied ply or cap membrane

Membrane:	Elastophene Flam FR GR, Elastophene Flam LS FR GR, Elastophene Flam FR+ GR, Sopralene Flam 180 GR, Colphene Flam 180 GR, Sopralene Flam 180 FR GR, Colphene Flam 180 FR GR, Sopralene Flam 180 FR GR 3.5, Sopralene Flam 180 FR+ GR, Sopralene Flam 250 FR GR, Colphene Flam 250 FR GR, Sopralene Flam 250 FR+ GR, Sopralast 50 TV Alu, Sopralene Flam Antirock, torch-applied. Or Elastophene FR GR, Elastophene LS FR GR, Elastophene FR+ GR, Sopralene 180 FR GR, Colphene 180 FR GR, Sopralene 180 FR+ GR, Sopralene 250 FR GR, Colphene 250 FR GR, Sopralene 250 FR+ GR, Sopralast 50 TV Alu 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 COLPLY Adhesive, COLPLY EF Adhesive at 1.5-2.5 gal./sq. to sand surfaced 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:	-82.5 psf. (See General Limitation #7)

Membrane: SBS

Deck Type 2I: Steel, Insulated

Deck Description: 18-22 ga., Type B, Grade 33 steel fastened to ¼" thick structural supports spaced 6' o.c. with Traxx/5 fasteners spaced 6" o.c. Deck side laps fastened with Traxx/1 fasteners spaced at 24" o.c.
This Tested Assembly has been analyzed for allowable deck stress. See Evidence Submitted Table.

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

All General and System Limitations apply.

Thermal Barrier: (Optional) Min. ¼" thick DensDeck, DensDeck Prime, SECUROCK Gypsum-Fiber Roof Board, DEXcell Glass Mat Roof Board, DEXcell Cement Roof Board or min. 7/16" thick DEXcell Cement Roof Board, loose-laid.

One or more layers of any of the following insulations.

Base Insulation Layer	**Insulation Fasteners (Table 3)**	**Fastener Density/ft²**
H-Shield, M-Shield, Sopra-ISO r, ACFoam-II, Sopra-ISO s, Multi-Max FA-3, UltraMax, Sopra-ISO x (flat or tapered)		
Minimum 2.0" thick	**20 (#14 MP or #15 HD), 11 or 12**	**1:1.6 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**
SECUROCK Gypsum-Fiber Roof Board		
Minimum ¼" thick	**N/A**	**N/A**

Note: Top layer of insulation shall be adhered with Duotack or Duotack Neo applied in ½" to ¾" wide ribbons spaced 12" o.c. 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:

One layer of Modified Sopra G, Soprabase, Colphene Sanded, Elastophene Sanded 2.2, Elastophene Sanded 3.0, Elastophene HS, Elastophene PS*, Elastophene PS 3.0*, Colphene 180 Sanded, Sopralene 180 Sanded 2.2, Soprabase, Colphene 180 PS*, Sopralene 180 PS 2.2*, Sopralene 180 Sanded, Sopralene 180 PS* or Sopralene 250 Sanded adhered in hot asphalt at 25 lbs./sq. or applied in COLPLY EF Adhesive, COLPLY Adhesive, applied at a rate of 1.5 – 2 gal./sq.

Or

One layer of Elastophene Flam*, Elastophene Flam 2.2*, Elastophene SP 2.2, Colphene SP 2.2, Elastophene SP 3.0, Colphene SP 3.0, Sopralene 180 SP 3.0, Sopralene 180 SP 3.5, Colphene 180 SP 3.5, Sopralene Flam 180*, Colphene Flam 180*, Sopralene Flam 250*, Colvent TG, Colvent 180 TG, Colvent Flam 180 TG*, torch-applied to substrate primed with Elastocol 500.

Or

One layer of Elastophene Stick, Sopralene Stick, Colphene Stick, Elastophene Flam Stick* or Sopralene Flam Stick*, self-adhered to substrate primed with Elastocol Stick or Elastocol Stick Zero.
*Requires torch-applied ply or cap membrane

Ply Sheet: (Optional)

One layer of Modified Sopra G, Soprabase, Colphene Sanded, Elastophene Sanded 2.2, Elastophene Sanded 3.0, Elastophene HS, Elastophene PS*, Elastophene PS 3.0*, Colphene 180 Sanded, Sopralene 180 Sanded 2.2, Soprabase, Colphene 180 PS*, Sopralene 180 PS 2.2*, Sopralene 180 Sanded, Sopralene 180 PS* or Sopralene 250 Sanded adhered in hot asphalt at 25 lbs./sq. or applied in COLPLY EF Adhesive, COLPLY Adhesive, applied at a rate of 1.5 – 2 gal./sq.

Or

One layer of Elastophene Flam*, Elastophene Flam 2.2*, Elastophene SP 2.2, Colphene SP 2.2, Elastophene SP 3.0, Colphene SP 3.0, Sopralene 180 SP 3.0, Sopralene 180 SP 3.5, Colphene 180 SP 3.5, Sopralene Flam 180*, Colphene Flam 180*, Sopralene Flam 250*, Colvent TG, Colvent 180 TG, Colvent Flam 180 TG*, torch-applied.

Or

One layer of Elastophene Stick, Sopralene Stick, Colphene Stick, Elastophene Flam Stick* or Sopralene Flam Stick*, self-adhered.
*Requires torch-applied ply or cap membrane

Membrane:	Elastophene Flam FR GR, Elastophene Flam LS FR GR, Elastophene Flam FR+ GR, Sopralene Flam 180 GR, Colphene Flam 180 GR, Sopralene Flam 180 FR GR, Colphene Flam 180 FR GR, Sopralene Flam 180 FR GR 3.5, Sopralene Flam 180 FR+ GR, Sopralene Flam 250 FR GR, Colphene Flam 250 FR GR, Sopralene Flam 250 FR+ GR, Sopralast 50 TV Alu, Sopralene Flam Antirock, torch-applied. Or Elastophene FR GR, Elastophene LS FR GR, Elastophene FR+ GR, Sopralene 180 FR GR, Colphene 180 FR GR, Sopralene 180 FR+ GR, Sopralene 250 FR GR, Colphene 250 FR GR, Sopralene 250 FR+ GR, Sopralast 50 TV Alu 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 COLPLY Adhesive, COLPLY EF Adhesive at 1.5-2.5 gal./sq. to sand surfaced 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:	-82.5 psf. (See General Limitation #7)

Membrane: SBS

Deck Type 2I: Steel, Insulated

Deck Description: 18-22 ga., Type B, Grade 33 steel deck fastened 6" o.c. with Traxx/5 fasteners to supports spaced maximum deck spans of 6 ft. o.c. Deck side laps are attached with Traxx/1 screws spaced 24" o.c.

This Tested Assembly has been analyzed for allowable deck stress. See Evidence Submitted Table.

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

All General and System Limitations apply.

Vapor Barrier: (Optional) Sopravap'r, self-adhered to the top flanges of the steel deck.

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, ACFoam-III, Sopra-ISO+ s, EnergyGuard POLYISO Insulation, EnergyGuard Ultra POLYISO Insulation, ENRGY 3, ENRGY 3 FR, ENRGY 3 AGF, ENRGY 3 CGF, H-Shield, Sopra-ISO r, M-Shield, H-Shield CG, Sopra-ISO+ r, Multi-Max FA-3, Sopra-ISO x (flat or tapered)		
Minimum 1.5" thick	**N/A**	**N/A**

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

Top Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft²
SECUROCK Gypsum-Fiber Roof Board		
Minimum 0.5" thick	**8 (#12 or #14) with 36, 8 (#12) or 34 with 7, 3 (#12 or #14) with 15, 37 or 20 (#12) or 11 or 20 (#14) with 13 or 16 or 2 (#12 or #14) with 29**	**1:1.78 ft²**

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

Primer: (Optional) Coverboard is primed with an approved ASTM D41 asphalt primer at a rate of 100-150 ft^2/gal.

Base Sheet: Elastophene Flam HS*, Elastophene Flam 2.2*, Elastophene Flam*, Sopralene Flam 180*, Colphene Flam 180*, Sopralene Flam 250*, Elastophene SP 2.2, Colphene SP 2.2, Elastophene SP 3.0, Colphene SP 3.0, Sopralene 180 SP 3.0, Sopralene 180 SP 3.5, Colphene 180 SP 3.5 or Sopralene 250 SP, torch-applied. *Requires torch-applied Ply or Cap.

Ply Sheet: (Optional) Colphene Sanded, Elastophene Sanded 2.2, Elastophene Sanded 3.0, Elastophene HS, Sopralene 180 Sanded 2.2, Colphene 180 Sanded, Sopralene 180 Sanded, Sopralene 250 Sanded, Elastophene PS*, Elastophene PS 3.0*, Sopralene 180 PS 2.2*, Colphene 180 PS* or Sopralene 180 PS* applied in hot asphalt at 25 lbs./sq. Or

Ply Sheet: (Optional) Continued	Elastophene Flam HS*, Elastophene Flam 2.2*, Elastophene Flam*, Sopralene Flam 180*, Colphene Flam 180*, Sopralene Flam 250*, Elastophene SP 2.2, Colphene SP 2.2, Elastophene SP 3.0, Colphene SP 3.0, Sopralene 180 SP 3.0, Sopralene 180 SP 3.5, Colphene 180 SP 3.5 or Sopralene 250 SP, torch-applied. *Requires torch-applied Cap.
Membrane:	Elastophene LS FR GR, Elastophene FR GR, Elastophene FR+ GR, Sopralene 180 FR GR, Colphene 180 FR GR, Sopralene 180 FR+ GR, Sopralene 250 FR GR, Colphene 250 FR GR, Sopralene 250 FR+ GR, or Sopralast 50 TV Alu Sanded, applied in hot asphalt at 25 lbs./sq. Or Elastophene Flam LS FR GR, Elastophene Flam FR GR, Sopralene Flam 180 GR, Colphene Flam 180 GR, Sopralene Flam 180 FR GR, Colphene Flam 180 FR GR, Sopralene Flam 180 FR GR 3.5, Sopralene Flam 250 FR GR, Colphene Flam 250 FR GR, Sopralene Flam 180 FR+ GR, Sopralene Flam 250 FR+ GR, Sopralast 50 TV Alu, Sopralene Flam Antirock, torch-applied.
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 #7.)

Membrane: SBS

Deck Type 2I: Steel, Insulated

Deck Description: Min. 18-22 ga. Type B, Grade 80 steel decking over ¼" thick steel supports spaced at maximum 6 ft. o.c. attached with Traxx/5 fasteners at a spacing of 6" o.c. Deck side laps are attached 30" o.c. using Traxx/1 fasteners.
This Tested Assembly has been analyzed for allowable deck stress. See Evidence Submitted Table.

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

All General and System Limitations apply.

Vapor Barrier: (Optional) Sopravap'r, self-adhered.

One or more layers of any of the following insulations.

Base Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft^2
ACFoam-II, ACFoam-III, Sopra-ISO s, Sopra-ISO+ s, ENRGY 3, ENRGY 3 25 PSI, Multi-Max FA-3, Sopra-ISO x, H-Shield, M-Shield, Sopra-ISO r (flat or tapered)		
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/ft^2
DensDeck		
Minimum ¼" thick	**8(#14)**	**1:1.78 ft²**

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

Base Sheet: (Optional) One layer of Sopralene Stick, Colphene Stick or Sopralene Flam Stick*, self-adhered over top insulation primed with ASTM D41 asphaltic primer or Elastocol Stick or Elastocol Stick Zero applied at 1 gal/sq.

Or

One or more layers of Modified Sopra G, Sopra IV, Sopra VI, Soprabase, adhered in full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs./sq.

*Requires torch-applied ply or cap membrane.

Ply Sheet: (Optional)	**(Required if no base sheet used)** One layer of Sopralene Stick, Colphene Stick or Sopralene Flam Stick*, self-adhered over top insulation primed with ASTM D41 asphaltic primer or Elastocol Stick or Elastocol Stick Zero applied at 1 gal/sq. Or **(Required if no base sheet used)** One or more layers of Elastophene Flam*, Elastophene Flam 2.2*, Elastophene SP 2.2, Colphene SP 2.2, Elastophene SP 3.0, Colphene SP 3.0, Sopralene Flam 180*, Colphene Flam 180*, Sopralene Flam 250*, Sopralene 180 SP 3.0, Sopralene 180 SP 3.5, Colphene 180 SP 3.5, Sopralene 250 SP, torch-applied. Or One or more layers of Colphene Sanded, Elastophene Sanded 2.2, Elastophene Sanded 3.0, Elastophene HS, Colphene 180 Sanded, Sopralene 180 Sanded 2.2, Soprabase, Elastophene PS*, Elastophene PS 3.0*, Colphene 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 torch-applied cap membrane.
Membrane:	Elastophene Flam FR GR, Elastophene Flam FR+ GR, Elastophene Flam LS FR GR, Sopralene Flam 180 GR, Colphene Flam 180 GR, Sopralene Flam 180 FR GR, Colphene Flam 180 FR GR, Sopralene Flam 250 FR GR, Colphene Flam 250 FR GR, Sopralene Flam 180 FR GR 3.5, Sopralene Flam 180 FR+ GR, Sopralene Flam 250 FR+ GR, Sopralast 50 TV Alu, Sopralene Flam Antirock, torch-applied. Or Elastophene FR GR, Elastophene LS FR GR, Elastophene FR+ GR, Sopralene 180 FR GR, Colphene 180 FR GR, Sopralene 180 FR+ GR, Sopralene 250 FR GR, Colphene 250 FR GR, Sopralene 250 FR+ GR, Sopralast 50 TV Alu 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 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: SBS

Deck Type 2I: Steel, Insulated

Deck Description: Min. 18-22 ga., Type B, Grade 80 steel deck fastened 6" o.c. with Traxx/5 fasteners into steel supports spaced maximum 6 ft. o.c. Deck side laps are attached with Traxx/1 fasteners spaced max. 30" o.c.
This Tested Assembly has been analyzed for allowable deck stress. See Evidence Submitted Table.

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

All General and System Limitations apply.

Vapor Barrier: (Optional) Sopravap'r, self-adhered.

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, Multi-Max FA-3, Sopra-ISO x (flat or tapered)		
Minimum 1.4" thick	**N/A**	**N/A**

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

Top Insulation Layer	**Insulation Fasteners (Table 3)**	**Fastener Density/ft²**
DensDeck		
Minimum ¼" thick	**2(#14), 3(#14)**	**1:1.78 ft²**

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

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

Base Sheet: (Optional) One layer of Sopralene Stick, Colphene Stick or Sopralene Flam Stick*, self-adhered over primed top insulation.

Or

One or two layers of Modified Sopra G, Sopra IV, Sopra VI, Soprabase, adhered in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs./sq. or in COLPLY Adhesive at 1.5 – 2.0 gallons/square.

Ply Sheet: (Optional) **(Required if no base sheet used)** One layer of Sopralene Stick, Colphene Stick or Sopralene Flam Stick*, self-adhered over primed top insulation.

Or

(Required if no base sheet used) One or more layers of Elastophene Flam*, Elastophene Flam 2.2*, Elastophene Flam HS*, Elastophene SP 2.2, Colphene SP 2.2, Elastophene SP 3.0, Colphene SP 3.0, Sopralene Flam 180*, Colphene Flam 180*, Sopralene 180 SP 3.0, Sopralene 180 SP 3.5, Colphene 180 SP 3.5, Soprafix Base 622, Sopralene Flam 250*, Sopralene 250 SP, torch-applied.

Or

One or more layers of Colphene Sanded, Elastophene Sanded 2.2, Elastophene Sanded 3.0, Elastophene HS, Elastophene PS*, Elastophene PS 3.0*, Colphene 180 Sanded, Sopralene 180 Sanded 2.2, Soprabase, Colphene 180 PS*, Sopralene 180 PS 2.2*, Sopralene 180 Sanded, Sopralene 180 PS*, Sopralene 250 Sanded, or one to three plies of Sopra IV or Sopra 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 COLPLY Adhesive at 1.5 – 2.0 gallons/square.
*Requires torch-applied cap membrane.

Membrane: Elastophene Flam FR GR, Elastophene Flam LS FR GR, Elastophene Flam FR+ GR, Sopralene Flam 180 GR, Colphene Flam 180 GR, Sopralene Flam 180 FR GR, Colphene Flam 180 FR GR, Sopralene Flam 180 FR GR 3.5, Sopralene Flam 180 FR+ GR, Sopralene Flam 250 FR GR, Colphene Flam 250 FR GR, Sopralene Flam 250 FR+ GR, Sopralast 50 TV Alu, Sopralene Flam Antirock, torch-applied.

Or

Elastophene FR GR, Elastophene LS FR GR, Elastophene FR+ GR, Sopralene 180 FR GR, Colphene 180 FR GR, Sopralene 180 FR+ GR, Sopralene 250 FR GR, Colphene 250 FR GR, Sopralene 250 FR+ GR, Sopralast 50 TV Alu Sanded adhered in hot asphalt at 25 lbs./sq. or in COLPLY 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: SBS

Deck Type 2I: Steel, Insulated

Deck Description: 18-22 ga., Type B, Grade 33 steel deck fastened 6" o.c. with Traxx/5 fasteners to supports spaced maximum deck spans of 6 ft. o.c. Deck side laps are attached with Traxx/1 screws spaced 24" o.c.
This Tested Assembly has been analyzed for allowable deck stress. See Evidence Submitted Table.

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

All General and System Limitations apply.

Vapor Barrier: (Optional) Sopravap'r, self-adhered.

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 (4'x8')	**3, 7, 11, 12**	**1:1.78 ft²**

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

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

Base Sheet: One or more layers of Colphene Sanded, Elastophene Sanded 2.2, Elastophene Sanded 3.0, Elastophene HS, Elastophene PS*, Elastophene PS 3.0*, Colphene 180 Sanded, Sopralene 180 Sanded 2.2, Soprabase, Colphene 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 torch-applied ply or cap membrane.

Ply Sheet: (Optional)	One or more layers of Elastophene Flam*, Elastophene Flam 2.2*, Elastophene Flam HS*, Elastophene SP 2.2, Colphene SP 2.2, Elastophene SP 3.0, Colphene SP 3.0, Sopralene Flam 180*, Colphene Flam 180*, Sopralene 180 SP 3.0, Sopralene 180 SP 3.5, Colphene 180 SP 3.5, Soprafix Base 622, Sopralene Flam 250*, Sopralene 250 SP, torch-applied. Or Colphene Sanded, Elastophene Sanded 2.2, Elastophene Sanded 3.0, Elastophene HS, Elastophene PS*, Elastophene PS 3.0*, Colphene 180 Sanded, Sopralene 180 Sanded 2.2, Soprabase, Colphene 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 torch-applied cap membrane.
Membrane:	Elastophene Flam FR GR, Elastophene Flam LS FR GR, Elastophene Flam FR+ GR, Sopralene Flam 180 GR, Colphene Flam 180 GR, Sopralene Flam 180 FR GR, Colphene Flam 180 FR GR, Sopralene Flam 180 FR GR 3.5, Sopralene Flam 180 FR+ GR, Sopralene Flam 250 FR GR, Colphene Flam 250 FR GR, Sopralene Flam 250 FR+ GR, Sopralast 50 TV Alu, Sopralene Flam Antirock, torch-applied. Or Elastophene FR GR, Elastophene LS FR GR, Elastophene FR+ GR, Sopralene 180 FR GR, Colphene 180 FR GR, Sopralene 180 FR+ GR, Sopralene 250 FR GR, Colphene 250 FR GR, Sopralene 250 FR+ GR, Sopralast 50 TV Alu Sanded 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:	-60 psf. (See General Limitation #7.)

Membrane: SBS

Deck Type 2I: Steel, Insulated

Deck Description: 18-22 ga., Type B, Grade 33 steel deck fastened 6" o.c. with Traxx/5 fasteners to supports spaced maximum deck spans of 6 ft. o.c. Deck side laps are attached with Traxx/1 screws spaced 24" o.c.
This Tested Assembly has been analyzed for allowable deck stress. See Evidence Submitted Table.

System Type C(5): All layers of insulation simultaneously attached.

All General and System Limitations apply.

Vapor Barrier: (Optional) Sopravap'r, self-adhered.

One or more layers of any of the following insulations.

Base Insulation Layer	**Insulation Fasteners (Table 3)**	**Fastener Density/ft²**
Any approved polyisocyanurate or EPS or XPS listed in Table 2 Minimum 1" thick	**N/A**	**N/A**

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

Top Insulation Layer	**Insulation Fasteners (Table 3)**	**Fastener Density/ft²**
Sopraboard Minimum 1/8" thick	**2, 3, 8, 11, 12**	**1:2 ft²**

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

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

Base Sheet: One or more layers of Modified Sopra G, Soprabase, Colphene Sanded, Elastophene Sanded 2.2, Elastophene Sanded 3.0, Elastophene HS, Elastophene PS*, Elastophene PS 3.0*, Colphene 180 Sanded, Colphene 180 PS*, Sopralene 180 PS 2.2*, Sopralene 180 Sanded, Sopralene 180 Sanded 2.2, Sopralene 180 PS*, Sopralene 250 Sanded, adhered in hot asphalt at 25 lbs./sq.
Or
One or more layers of Elastophene Flam*, Elastophene Flam 2.2*, Elastophene Flam HS*, Elastophene SP 2.2, Colphene SP 2.2, Elastophene SP 3.0, Colphene SP 3.0, Sopralene Flam 180*, Colphene Flam 180*, Sopralene 180 SP 3.0, Sopralene 180 SP 3.5, Colphene 180 SP 3.5, Sopralene Flam 250*, Sopralene 250 SP, Colvent TG, Colvent 180 TG, Colvent Flam 180 TG*, torch-applied.
*Requires torch-applied ply or cap membrane.

Ply Sheet: (Optional)	One or more layers of Sopra IV, Sopra VI, Soprabase, Colphene Sanded, Elastophene Sanded 2.2, Elastophene Sanded 3.0, Elastophene HS, Elastophene PS*, Elastophene PS 3.0*, Colphene 180 Sanded, Colphene 180 PS*, Sopralene 180 PS 2.2*, Sopralene 180 Sanded, Sopralene 180 Sanded 2.2, Sopralene 250 Sanded, adhered in hot asphalt at 25 lbs./sq. to sand surfaced base membrane. Or Elastophene Flam*, Elastophene Flam 2.2*, Elastophene Flam HS*, Elastophene SP 2.2, Colphene SP 2.2, Elastophene SP 3.0, Colphene SP 3.0, Sopralene Flam 180*, Colphene Flam 180*, Sopralene 180 SP 3.0, Sopralene 180 SP 3.5, Colphene 180 SP 3.5, Sopralene Flam 250*, Sopralene 250 SP, torch-applied. *Requires torch-applied cap membrane.
Membrane:	Elastophene Flam FR GR, Elastophene Flam LS FR GR, Elastophene Flam FR+ GR, Sopralene Flam 180 GR, Colphene Flam 180 GR, Sopralene Flam 180 FR GR, Colphene Flam 180 FR GR, Sopralene Flam 180 FR GR 3.5, Sopralene Flam 180 FR+ GR, Sopralene Flam 250 FR GR, Colphene Flam 250 FR GR, Sopralene Flam 250 FR+ GR, Sopralast 50 TV Alu, Sopralene Flam Antirock, torch-applied. Or Elastophene FR GR, Elastophene LS FR GR, Elastophene FR+ GR, Sopralene 180 FR GR, Colphene 180 FR GR, Sopralene 180 FR+ GR, Sopralene 250 FR GR, Colphene 250 FR GR, Sopralene 250 FR+ GR, Sopralast 50 TV Alu Sanded 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:	-60 psf. (See General Limitation #7.)

Membrane: SBS

Deck Type 2I: Steel, Insulated

Deck Description: 18-22 ga., Type B, Grade 33 steel deck fastened 6" o.c. with Traxx/5 fasteners to supports spaced maximum deck spans of 6 ft. o.c. Deck side laps are attached with Traxx/1 screws spaced 24" o.c.
This Tested Assembly has been analyzed for allowable deck stress. See Evidence Submitted Table.

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

All General and System Limitations apply.

Vapor Barrier: (Optional) Sopravap'r, self-adhered.

One or more layers of any of the following insulations.

Base Insulation Layer	**Insulation Fasteners (Table 3)**	**Fastener Density/ft²**
Any approved polyisocyanurate or EPS or XPS listed in Table 2 Minimum 1" thick	**N/A**	**N/A**

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

Top Insulation Layer	**Insulation Fasteners (Table 3)**	**Fastener Density/ft²**
Sopraboard Minimum 1/8" thick	**2, 3, 8, 11, 12**	**1:2 ft²**

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

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

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

Or

Sopralene Flam 180*, Colphene Flam 180*, Sopralene 180 SP 3.0, Sopralene 180 SP 3.5, Colphene 180 SP 3.5, Sopralene Flam 250*, Sopralene 250 SP, Colvent 180 TG, Colvent Flam 180 TG*, torch-applied.

*Requires torch-applied ply or cap membrane.

Ply Sheet: (Optional)	Sopralene 180 Sanded, Colphene 180 Sanded, Sopralene 180 Sanded 2.2, Sopralene 180 PS 2.2*, Sopralene 180 PS*, Sopralene 250 Sanded, adhered in hot asphalt at 25 lbs./sq. to sand surfaced base membrane. Or Sopralene Flam 180*, Colphene Flam 180*, Sopralene 180 SP 3.0, Sopralene 180 SP 3.5, Colphene 180 SP 3.5, Sopralene Flam 250*, Sopralene 250 SP, torch-applied. *Requires torch-applied cap membrane.
Membrane:	Sopralene Flam 180 GR, Colphene Flam 180 GR, Sopralene Flam 180 FR GR, Colphene Flam 180 FR GR, Sopralene Flam 180 FR GR 3.5, Sopralene Flam 180 FR+ GR, Sopralene Flam 250 FR GR, Colphene Flam 250 FR GR, Sopralene Flam 250 FR+ GR, Sopralene Flam Antirock, torch-applied. Or Sopralene 180 FR GR, Colphene 180 FR GR, Sopralene 180 FR+ GR, Sopralene 250 FR GR, Colphene 250 FR GR, Sopralene 250 FR+ GR, Sopralast 50 TV Alu Sanded 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:	-67.5 psf. (See General Limitation #7.)

Membrane: SBS

Deck Type 2I: Steel, Insulated

Deck Description: 18-22 ga., Type B, Grade 80 steel deck fastened 6" o.c. with Traxx/5 fasteners to supports spaced maximum deck spans of 6 ft. o.c. Deck side laps are attached with Traxx/1 screws spaced 30" o.c.
This Tested Assembly has been analyzed for allowable deck stress. See Evidence Submitted Table.

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

All General and System Limitations apply.

Vapor Barrier: (Optional) Sopravap'r, self-adhered to the top flanges of the steel deck.

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, ACFoam-III, Sopra-ISO+ s, EnergyGuard POLYISO Insulation, EnergyGuard Ultra POLYISO Insulation, ENRGY 3, ENRGY 3 FR, ENRGY 3 AGF, ENRGY 3 CGF, H-Shield, Sopra-ISO r, M-Shield, H-Shield CG, Sopra-ISO+ r, Multi-Max FA-3, Sopra-ISO x (flat or tapered)		
Minimum 1.5" thick	**N/A**	**N/A**

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

Top Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft2
DensDeck Prime		
Minimum 0.5" thick	**34 with 7, 11 or 20 (#14) with 13 or 29**	**1:1.6 ft²**

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

Base Sheet: Two or three plies of Sopra IV, Sopra VI or two plies of Colphene Sanded, Elastophene Sanded 2.2, Elastophene Sanded 3.0, Elastophene HS, Colphene 180 Sanded, Sopralene 180 Sanded 2.2, Sopralene 180 Sanded adhered in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs./sq.

Membrane: Elastophene LS FR GR, Elastophene FR GR, Elastophene FR+ GR, Sopralene 180 FR GR, Colphene 180 FR GR, Sopralene 180 FR+ GR, Sopralene 250 FR GR, Colphene 250 FR GR, Sopralene 250 FR+ GR, or Sopralast 50 TV Alu Sanded applied in hot asphalt at 25 lbs./sq.

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 #7.)

Membrane: SBS

Deck Type 2I: Steel, Insulated

Deck Description: 18-22 ga., Type B, Grade 80 steel deck fastened 6" o.c. with Traxx/5 fasteners to supports spaced maximum deck spans of 6 ft. o.c. Deck side laps are attached with Traxx/1 screws spaced 24" o.c.
This Tested Assembly has been analyzed for allowable deck stress. See Evidence Submitted Table.

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

All General and System Limitations apply.

Vapor Barrier: Sopravap'r, self-adhered to the top flanges of the steel deck.

(Optional)

One or more layers of any of the following insulations.

Base Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft^2
ACFoam-II, Sopra-ISO s, ACFoam-III, Sopra-ISO+ s, EnergyGuard POLYISO Insulation, EnergyGuard Ultra POLYISO Insulation, ENRGY 3, ENRGY 3 FR, ENRGY 3 AGF, ENRGY 3 CGF, H-Shield, Sopra-ISO r, M-Shield, H-Shield CG, Sopra-ISO+ r, Multi-Max FA-3, Sopra-ISO x (flat or tapered)		
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/ft^2
SECUROCK Gypsum-Fiber Roof Board		
Minimum 0.375" thick	**12 or 20(#15) with 13 or 29**	**1:1.33 ft²**

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

Base Sheet: Elastophene Flam HS*, Elastophene Flam 2.2*, Elastophene Flam*, Sopralene Flam 180*, Colphene Flam 180*, Sopralene Flam 250*, Elastophene SP 2.2, Colphene SP 2.2, Elastophene SP 3.0, Colphene SP 3.0, Sopralene 180 SP 3.0, Sopralene 180 SP 3.5, Colphene 180 SP 3.5 or Sopralene 250 SP, torch-applied.

*Requires torch-applied Ply or Cap.

Ply Sheet: (Optional)	Elastophene Flam HS*, Elastophene Flam 2.2*, Elastophene Flam*, Sopralene Flam 180*, Colphene Flam 180*, Sopralene Flam 250*, Elastophene SP 2.2, Colphene SP 2.2, Elastophene SP 3.0, Colphene SP 3.0, Sopralene 180 SP 3.0, Sopralene 180 SP 3.5, Colphene 180 SP 3.5 or Sopralene 250 SP, torch-applied. or Colphene Sanded, Elastophene Sanded 2.2, Elastophene Sanded 3.0, Elastophene HS, Sopralene 180 Sanded 2.2, Colphene 180 Sanded, Sopralene 180 Sanded, Sopralene 250 Sanded, Elastophene PS*, Elastophene PS 3.0*, Sopralene 180 PS 2.2*, Colphene 180 PS* or Sopralene 180 PS* applied in hot asphalt at 25 lbs./square. *Requires torch-applied Cap.
Membrane:	Elastophene Flam LS FR GR, Elastophene Flam FR GR, Elastophene Flam FR+ GR, Sopralene Flam 180 GR, Colphene Flam 180 GR, Sopralene Flam 180 FR GR, Colphene Flam 180 FR GR, Sopralene Flam 180 FR GR 3.5, Sopralene Flam 250 FR GR, Colphene Flam 250 FR GR, Sopralene Flam 180 FR+ GR, Sopralene Flam 250 FR+ GR, Sopralast 50 TV Alu, Sopralene Flam Antirock, torch-applied. or Elastophene LS FR GR, Elastophene FR GR, Elastophene FR+ GR, Sopralene 180 FR GR, Colphene 180 FR GR, Sopralene 180 FR+ GR, Sopralene 250 FR GR, Colphene 250 FR GR, Sopralene 250 FR+ GR, or Sopralast 50 TV Alu Sanded, applied in COLPLY Adhesive at 1.5-2.0 gal/square or applied in hot asphalt at 25 lbs./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:	-75 psf. (See General Limitation #7.)

Membrane: SBS

Deck Type 2I: Steel, Insulated

Deck Description: 18-22 ga. Type B, Grade 80 steel fastened 6" o.c. with Traxx/5 fasteners to steel supports spaced maximum 5 ft. o.c. Deck side laps fastened with Traxx/1 fasteners spaced at 20" o.c.
This Tested Assembly has been analyzed for allowable deck stress. See Evidence Submitted Table.

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

All General and System Limitations apply.

Vapor Barrier: (Optional) Sopravap'r, self-adhered.

One or more layers of any of the following insulations.

Base Insulation Layer	**Insulation Fasteners (Table 3)**	**Fastener Density/ft²**
Any Approved Polyiso insulation listed in Table 2 (flat or tapered) loose laid.		
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**
Sopraboard		
Minimum 1/8" thick	**3, 8, 12 (#15) or 20 (#15)**	**1:1.25 ft²**

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

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

Base Sheet: One or more layers of Modified Sopra G, Sopra IV, Sopra VI, Soprabase, Colphene Sanded, Elastophene Sanded 2.2, Elastophene Sanded 3.0, Elastophene HS, Elastophene PS*, Elastophene PS 3.0*, Colphene 180 Sanded, Sopralene 180 Sanded 2.2, Soprabase, Colphene 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 2.2, Colphene SP 2.2, Elastophene SP 3.0, Colphene SP 3.0, Sopralene Flam 180*, Colphene Flam 180*, Sopralene 180 SP 3.0, Sopralene 180 SP 3.5, Colphene 180 SP 3.5, Soprafix Base 622, Sopralene Flam 250*, Sopralene 250 SP, Colvent TG, Colvent 180 TG, Colvent Flam 180 TG*, torch-applied.
*Requires torch-applied ply or cap membrane.

Ply Sheet: (Optional)	One or more layers of Elastophene Flam*, Elastophene Flam 2.2*, Elastophene Flam HS*, Elastophene SP 2.2, Colphene SP 2.2, Elastophene SP 3.0, Colphene SP 3.0, Sopralene Flam 180*, Colphene Flam 180*, Sopralene 180 SP 3.0, Sopralene 180 SP 3.5, Colphene 180 SP 3.5, Soprafix Base 622, Sopralene Flam 250*, Sopralene 250 SP, torch-applied. Or Colphene Sanded, Elastophene Sanded 2.2, Elastophene Sanded 3.0, Elastophene HS, Elastophene PS*, Elastophene PS 3.0*, Colphene 180 Sanded, Sopralene 180 Sanded 2.2, Soprabase, Colphene 180 PS*, Sopralene 180 PS 2.2*, Sopralene 180 Sanded, Sopralene 180 PS*, Sopralene 250 Sanded, or one to three plies of Sopra IV or Sopra VI, 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 torch-applied cap membrane.
Membrane:	Elastophene Flam FR GR, Elastophene Flam LS FR GR, Elastophene Flam FR+ GR, Sopralene Flam 180 GR, Colphene Flam 180 GR, Sopralene Flam 180 FR GR, Colphene Flam 180 FR GR, Sopralene Flam 180 FR GR 3.5, Sopralene Flam 180 FR+ GR, Sopralene Flam 250 FR GR, Colphene Flam 250 FR GR, Sopralene Flam 250 FR+ GR, Sopralast 50 TV Alu, Sopralene Flam Antirock, torch-applied.. Or Elastophene FR GR, Elastophene LS FR GR, Elastophene FR+ GR, Sopralene 180 FR GR, Colphene 180 FR GR, Sopralene 180 FR+ GR, Sopralene 250 FR GR, Colphene 250 FR GR, Sopralene 250 FR+ GR, , Sopralast 50 TV Alu Sanded adhered in hot asphalt at 25 lbs./sq. or in COLPLY 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:	-90 psf. (See General Limitation #7.)

Membrane: SBS

Deck Type 2I: Steel, Insulated

Deck Description: Min. 18-22 ga., Type B, Grade 80 steel deck secured to min. ¼" thick supports spaced a max. 6' o.c. with Traxx/5 fasteners spaced a max. 6" o.c. Deck side laps are attached with Traxx/1 screws spaced 24" o.c.
This Tested Assembly has been analyzed for allowable deck stress. See Evidence Submitted Table.

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

All General and System Limitations apply.

Vapor Barrier: (Optional) Sopravap'r, self-adhered.

One or more layers of any of the following insulations.

Base Insulation Layer (Optional)	**Insulation Fasteners (Table 3)**	**Fastener Density/ft²**
DensDeck or DensDeck Prime Minimum .25" thick	**N/A**	**N/A**

Middle Insulation Layer	**Insulation Fasteners (Table 3)**	**Fastener Density/ft²**
H-Shield, M-Shield, Sopra-ISO r, ACFoam-II, Sopra-ISO s, ISO 95+ GL, Multi-Max FA-3, Sopra-ISO x, ENRGY 3 Minimum 1.5" thick	**N/A**	**N/A**

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

Top Insulation Layer	**Insulation Fasteners (Table 3)**	**Fastener Density/ft²**
DensDeck Prime, SECUROCK Gypsum-Fiber Roof Board Minimum .5" thick	**11, 12 with 13; 20 (#14 or #15) with 29**	**1:1.33 ft²**

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

Base Sheet: Colphene Sanded, Elastophene PS*, Elastophene PS 3.0*, Elastophene Sanded 2.2, Elastophene Sanded 3.0, Elastophene HS, Colphene 180 Sanded, Sopralene 180 Sanded 2.2, Soprabase, Colphene 180 PS*, Sopralene 180 PS 2.2*, Sopralene 180 Sanded, Sopralene 180 PS*, Sopralene 250 Sanded adhered in COLPLY Adhesive, COLPLY EF Adhesive at a rate of 1.5 gal./sq. or adhered in hot asphalt at 25 lbs./sq.
Or
Elastophene Flam*, Elastophene Flam 2.2*, Elastophene SP 2.2, Colphene SP 2.2, Elastophene SP 3.0, Colphene SP 3.0, Elastophene Flam HS*, Sopralene 180 SP 3.0, Sopralene 180 SP 3.5, Colphene 180 SP 3.5, Sopralene Flam 180*, Colphene Flam 180*, Sopralene Flam 250*, Sopralene 250 SP, Colvent TG, Colvent 180 TG, Colvent Flam 180 TG*, torch-applied.
*Requires torch-applied Cap.

Membrane:	Elastophene FR GR, Elastophene LS FR GR, Sopralene 180 FR GR, Colphene 180 FR GR, Sopralene 180 FR+ GR, Sopralene 250 FR GR, Colphene 250 FR GR, Sopralene 250 FR+ GR, Sopralast 50 TV Alu Sanded adhered in COLPLY Adhesive, COLPLY EF Adhesive at a rate of 1.5 gal./sq. or adhered in hot asphalt at 25 lbs./sq. Or Elastophene Flam FR GR, Elastophene Flam LS FR GR, Sopralene Flam 180 GR, Colphene Flam 180 GR, Sopralene Flam 180 FR GR, Colphene Flam 180 FR GR, Sopralene Flam 180 FR GR 3.5, Sopralene Flam 180 FR+ GR, Sopralene Flam 250 FR GR, Colphene Flam 250 FR GR, Sopralene Flam 250 FR+ GR, Sopralast 50 TV Alu, Sopralene Flam Antirock, torch-applied.
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 #7.)

Membrane: SBS

Deck Type 2I: Steel, Insulated

Deck Description: 18-20 ga., Type B, Grade 80 steel deck fastened to min. ¼" thick steel structural supports spaced a maximum 6 ft. o.c. with Traxx/5 screws and ¾" diameter washers spaced maximum 6 in. o.c. Side laps are fastened with Traxx/1 screws spaced maximum 12 in. o.c.
This Tested Assembly has been analyzed for allowable deck stress. See Evidence Submitted Table.

System Type C(11): All layers of insulation simultaneously attached.

All General and System Limitations apply.

Vapor Barrier: (Optional) Sopravap'r, self-adhered.

One or more layers of any of the following insulations.

Base Insulation Layer:	**Insulation Fasteners (Table 3)**	**Fastener Density/ft²**
H-Shield, ACFoam-II, M-Shield, Sopra-ISO r, Sopra-ISO s		
Minimum 1.5" thick	**N/A**	**N/A**

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

Top Insulation Layer:	**Insulation Fasteners (Table 3)**	**Fastener Density/ft²**
SECUROCK Gypsum-Fiber Roof Board		
Minimum ½" thick	**11 with 13; 20 (#14) with 29**	**1:1.33 ft²**
Minimum ½" thick	**11 with 13; 20 (#14) with 29**	**1:1 ft²**

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

Base Sheet: Two or three plies of Sopra IV, Sopra VI or two plies of Colphene Sanded, Elastophene Sanded 2.2, Elastophene Sanded 3.0, Elastophene HS, Colphene 180 Sanded, Sopralene 180 Sanded 2.2, Soprabase, Sopralene 180 Sanded, Elastophene PS*, Elastophene PS 3.0*, Colphene 180 PS*, Sopralene 180 PS 2.2* or Sopralene 180 PS* adhered in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs./sq. or adhered in COLPLY Adhesive, COLPLY EF Adhesive at a rate of 1.5 gal./sq.

Or

Two plies of Elastophene Flam*, Elastophene Flam 2.2*, Elastophene SP 2.2, Colphene SP 2.2, Elastophene SP 3.0, Colphene SP 3.0, Elastophene Flam HS*, Sopralene 180 SP 3.0, Sopralene 180 SP 3.5, Colphene 180 SP 3.5, Sopralene Flam 180*, Colphene Flam 180*, Sopralene Flam 250*, Sopralene 250 SP, Colvent TG, Colvent 180 TG, Colvent Flam 180 TG*, torch-applied over coverboard primed with ASTM D41 primer at a rate of 100-150 ft2/gal.

Or

One layer of Elastophene Stick, Sopralene Stick, Colphene Stick, Elastophene Flam Stick*, Sopralene Flam Stick* self-adhered.

*Requires torch-applied Ply or Cap sheet.

Ply Sheet: (Optional)	One ply of Sopra IV, Sopra VI or Colphene Sanded, Elastophene Sanded 2.2, Elastophene Sanded 3.0, Elastophene HS, Colphene 180 Sanded, Sopralene 180 Sanded 2.2, Soprabase, Sopralene 180 Sanded, Elastophene PS*, Elastophene PS 3.0*, Colphene 180 PS*, Sopralene 180 PS 2.2* or Sopralene 180 PS* adhered in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs./sq. or adhered in COLPLY Adhesive, COLPLY EF Adhesive at a rate of 1.5 gal./sq. Or One ply of Elastophene Flam*, Elastophene Flam 2.2*, Elastophene SP 2.2, Colphene SP 2.2, Elastophene SP 3.0, Colphene SP 3.0, Elastophene Flam HS*, Sopralene 180 SP 3.0, Sopralene 180 SP 3.5, Colphene 180 SP 3.5, Sopralene Flam 180*, Colphene Flam 180*, Sopralene Flam 250*, Sopralene 250 SP, Colvent TG, Colvent 180 TG, Colvent Flam 180 TG*, torch-applied over coverboard primed with ASTM D41 primer at a rate of 100-150 ft^2/gal. Or One layer of Elastophene Stick, Sopralene Stick, Colphene Stick, Elastophene Flam Stick*, Sopralene Flam Stick* self-adhered. *Requires torch-applied Cap.
Membrane:	Elastophene FR GR, Elastophene FR+ GR, Elastophene LS FR GR, Sopralene 180 FR GR, Colphene 180 FR GR, Sopralene 180 FR+ GR, Sopralene 250 FR GR, Colphene 250 FR GR, Sopralene 180 FR+ GR, Sopralast 50 TV Alu Sanded adhered in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs./sq. Or Sopralene Flam 180 GR, Colphene Flam 180 GR, Sopralene Flam 180 FR GR, Colphene Flam 180 FR GR, Sopralene Flam 180 FR GR 3.5, Sopralene Flam 250 FR GR, Colphene Flam 250 FR GR, Sopralene Flam 180 FR+ GR, Sopralene Flam 250 FR+ GR, Sopralast 50 TV Alu, Sopralene Flam Antirock, torch-applied.
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:	-157.5 psf. (fastener density of 1:1.33 ft^2) (See General Limitation #7) -172.5 psf. (fastener density of 1:1 ft^2) (See General Limitation #7)

Membrane Type: SBS

Deck Type 2I: Steel, Insulated

Deck Description: 18-22 ga., ASTM A1008/A1008M-01a SS Grade 80 steel deck fastened 6" o.c. with Traxx/5 fasteners to supports spaced maximum deck spans of 6 ft. o.c. Deck side laps are attached with Traxx/1 screws spaced 30" o.c.

This Tested Assembly has been analyzed for allowable deck stress. See Evidence Submitted Table.

System Type D(1): All layers of insulation and membrane simultaneously attached.

All General and System Limitations apply.

Vapor Barrier: (Optional) Sopravap'r, self-adhered.

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, ACFoam III, Sopra-ISO+ s, EnergyGuard POLYISO Insulation, EnergyGuard Ultra POLYISO Insulation, ENRGY 3, ENRGY 3 FR, ENRGY 3 AGF, ENRGY 3 CGF, H-Shield, Sopra-ISO r, M-Shield, H-Shield CG, Sopra-ISO+ r, Multi-Max FA-3, Sopra-ISO x (flat or tapered)		
Min. 1.5-inch	**N/A**	**N/A**
Top Insulation Layer (Optional):	**Insulation Fasteners (Table 3)**	**Fastener Density/ft2**
Fesco Board (flat or tapered)		
Homogeneous: Minimum 0.75" thick	**N/A**	**N/A**
Laminated: Minimum 1.5" thick		
Retro-Fit Board, DuraBoard, Structodek High Density Fiberboard Roof Insulation, EnergyGuard HD POLYISO Insulation, EnergyGuard HD Plus POLYISO Insulation		
Minimum 0.5" thick	**N/A**	**N/A**
Kingspan GreenGuard-PB6, Kingspan GreenGuard-PB6W, Kingspan GreenGuard-PB6 PLUS, Kingspan GreenGuard-PB3890		
Minimum 0.375" thick	**N/A**	**N/A**
DensDeck, DensDeck Prime, SECUROCK Gypsum-Fiber Roof Board, Invinsa Roof Board, Invinsa FR Roof Board		
Minimum 0.25" thick	**N/A**	**N/A**
Sopraboard		
Minimum 0.125" 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.

Membrane:	One ply of Unilay fastened to the deck as described below:
Fastening:	Soprema #14 MP with Soprafix 2 3/8 in SB Stress Plates spaced 12” o.c. within the minimum 5” wide, hot-air welded side 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:	-60 psf. (See General Limitation #7)

Membrane:	SBS
Deck Type 2I:	Steel, Insulated
Deck Description:	18 ga. Type 3N, Grade 33 steel decking attached to minimum ½" thick, W14 x 43 purlins with an 8" wide top flange spaced maximum 9 ft. o.c. using ¾" puddle welds spaced 8" o.c. (every bottom flute). Two welds per attachment point, spaced 4" apart. Steel deck side laps are attached 24" o.c. with Traxx/1 fasteners. **This Tested Assembly has been analyzed for allowable deck stress. See Evidence Submitted Table.**
System Type D(2):	Membrane fastened over preliminary fastened insulation.

All General and System Limitations apply.

Vapor Barrier: (Optional)	Sopravap'r, self-adhered.

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 Minimum 1.5" 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.

Base Sheet:	One layer of Soprafix Base 614 or Sopralene 250 Flam fastened through the insulation to the structural deck using Dekfast DF-#15-PH3 fasteners or Soprema #15 Fasteners and 70-mm round plates spaced 16" o.c. in a 5" wide lap and 16" o.c. in one center row. The side lap fastener row is encapsulated in the torch-applied lap and the center row is stripped-in with an 8" wide strip of torch-applied membrane.
Ply Sheet: (Optional)	One or more layers of Elastophene Flam, Elastophene Flam 2.2, Elastophene Flam HS, Elastophene SP 2.2, Colphene SP 2.2, Elastophene SP 3.0, Colphene SP 3.0, Sopralene Flam 180, Colphene Flam 180, Sopralene Flam 250, Sopralene 180 SP 3.0, Sopralene 180 SP 3.5, Colphene 180 SP 3.5, Sopralene 250 SP, Soprafix Base 613, Soprafix Base 612, or Soprafix Base 614, torch-applied.
Membrane:	Elastophene Flam FR GR, Elastophene Flam FR+ GR, Elastophene Flam LS FR GR, Sopralene Flam 180 GR, Colphene Flam 180 GR, Sopralene Flam 180 FR GR, Colphene Flam 180 FR GR, Sopralene Flam 180 FR GR 3.5, Sopralene Flam 250 FR GR, Colphene Flam 250 FR GR, Sopralene Flam 180 FR+ GR, Sopralene Flam 250 FR+ GR, Sopralast 50 TV Alu, Sopralene Flam Antirock, torch-applied.
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:	-112.5 psf. (See General Limitation #7.)

Membrane: SBS

Deck Type 2I: Steel, Insulated

Deck Description: 18 ga., Type 3N, Grade 33 steel decking attached to minimum ½" thick, W14 x 43 purlins with an 8" wide top flange spaced maximum 9 ft. o.c. using ¾" puddle welds spaced 8" o.c. (every bottom flute). Two welds per attachment point, spaced 4" apart. Steel deck side laps are attached 24" o.c. with Teks1 fasteners. **This Tested Assembly has been analyzed for allowable deck stress. See Evidence Submitted Table.**

System Type D(3): Membrane fastened 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/ft^2**
Mearlcrete Lightweight Insulating Concrete Minimum 2.0" thick, Minimum 300 psi.	**N/A**	**N/A**

Note: Load capacity of the structural substrate must be verified for the additional load of the LWC. The LWC must be properly vented.

Base Sheet: One layer of Soprafix Base 614 or Sopralene Flam 250 fastened through the lightweight concrete to the deck as described below:

Fastening: Attach base sheet using Soprema #15 Fastener or SFS Dekfast #15 HS Fasteners with approved, 70 mm round, plates spaced 16" o.c. in a 5" wide lap and 16" o.c. in one center row. The side lap fastener row is encapsulated in the torched/heat fused lap and the center row is stripped-in with and 8" wide strip of torch-applied membrane.

Ply Sheet: (Optional) One or more plies of Elastophene Flam, Elastophene Flam 2.2, Elastophene Flam HS, Elastophene SP 2.2, Colphene SP 2.2, Elastophene SP 3.0, Colphene SP 3.0, Sopralene Flam 180, Colphene Flam 180, Sopralene Flam 250, Sopralene 180 SP 3.0, Sopralene 180 SP 3.5, Colphene 180 SP 3.5, Sopralene 250 SP, Soprafix Base 613, Soprafix Base 612, or Soprafix Base 614, torch-applied.

Membrane: Elastophene Flam FR GR, Elastophene Flam FR+GR, Elastophene Flam LS FR GR, Sopralene Flam 180 GR, Colphene Flam 180 GR, Sopralene Flam 180 FR GR, Colphene Flam 180 FR GR, Sopralene Flam 180 FR GR 3.5, Sopralene Flam 250 FR GR, Colphene Flam 250 FR GR, Sopralene Flam 180 FR+ GR, Sopralene Flam 250 FR+ GR, Sopralast 50 TV Alu, Sopralene Flam Antirock, torch-applied.

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

Membrane: SBS

Deck Type 2I: Steel, Insulated

Deck Description: 18-22 ga., Type B, Grade 33 steel deck fastened to structural supports spaced a maximum of 6' o.c. with Tek/5 screws and spaced a maximum 6" o.c. at the supports. Side laps are fastened with Traxx/1 screws spaced maximum 24 in. o.c. **This Tested Assembly has been analyzed for allowable deck stress. See Evidence Submitted Table.**

System Type D(4): Membrane fastened over preliminarily secured insulation.

All General and System Limitations apply.

Vapor Barrier: (Optional) Sopravap'r, self-adhered.

Fire Barrier: (Optional) Minimum ¼" thick DensDeck or DensDeck Prime, loose-laid.

One or more layers of any of the following insulations.

Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft^2
H-Shield, M-Shield, Sopra-ISO r Minimum 1.5" thick	**N/A**	**N/A**

Note: Base 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.

Base Sheet: One layer of Soprafix Base 611, Soprafix Base 622, Soprafix Base 641, Soprafix Base 613, Soprafix Base 612, or Soprafix Base 614 fastened to the deck as described below:

Fastening #1: Attach Soprafix Base 611 using Trufast #15 EHD Fasteners with Trufast 2.4" Scoop Seam Plates or Soprema #15 HD Fasteners with Soprema 2.4" Seam Plates with row spacing at a maximum 35" o.c. The fasteners are spaced 12" o.c. in a 4" wide heat-welded base sheet side laps.

Fastening #2: Attach Soprafix Base 611 using Trufast #15 EHD Fasteners with Trufast 2.4" Scoop Seam Plates or Soprema #15 HD Fasteners with Soprema 2.4" Seam Plates or Dekfast DF-#14-PH3 fasteners with Dekfast 2-3/8" Round Barbed Seam Plates or Soprema #14 Fasteners with Soprafix 2-3/8" SB Stress Plates with row spacing at a maximum 35" o.c. The fasteners are spaced 12" o.c. in a 5" wide heat-welded base sheet side laps.

Fastening #3: Attach Soprafix Base 622, Soprafix Base 641 using Trufast #15 EHD Fasteners or Soprema #15 HD Fasteners with Trufast 2.4" Barbed Metal Seam Plates or Dekfast DF-#14-PH3 fasteners with Dekfast 2-3/8" Round Barbed Seam Plates or Soprema #14 Fasteners with Soprafix 2-3/8" SB Stress Plates with row spacing at a maximum 35" o.c. The fasteners are spaced 12" o.c. in a 4" or 5" wide heat-welded base sheet side laps.

Fastening #4:	Attach Soprafix Base 613 using Trufast #15 EHD Fasteners or Soprema #15 HD Fasteners with Trufast 2.4" Barbed Metal Seam Plates, Trufast 2" Barbed Metal Seam Plates, Soprema 2" Seam Plates or Dekfast DF-#14-PH3 fasteners with Dekfast 2-3/8" Round Barbed Seam Plates, or Soprema #14 Fasteners with Soprafix 2-3/8" SB Stress Plates, Soprafix 2" SB Stress Plates or OMG Heavy-Duty fasteners with OMG 2" Barbed Plates or OMG 2-3/8" Barbed XHD Plates with row spacing at a maximum 35" o.c. The fasteners are spaced 12" o.c. in a 5" wide heat-welded base sheet side laps.
Fastening #5:	Attach Soprafix Base 612 using Trufast #15 EHD Fasteners or Soprema #15 HD Fasteners with Trufast 2.4" Barbed Metal Seam Plates, Trufast 2" Barbed Metal Seam Plates, Soprema 2" Seam Plates or Dekfast DF-#14-PH3 fasteners with Dekfast 2-3/8" Round Barbed Seam Plates or Soprema #14 Fasteners with Soprafix 2-3/8" SB Stress Plates or OMG Heavy Duty fasteners with OMG 2" Barbed Plates or OMG 2-3/8" Barbed XHD Plates with row spacing at a maximum 35" o.c. The fasteners are spaced 12" o.c. in a 4" wide heat-welded base sheet side laps.
Fastening #6:	Attach Soprafix Base 614 using Trufast #15 EHD Fasteners or Soprema #15 HD Fasteners with Trufast 2.4" Barbed Metal Seam Plates, Trufast 2" Barbed Metal Seam Plates, Soprema 2" Seam Plates or Dekfast DF-#14-PH3 fasteners with Dekfast 2-3/8" Round Barbed Seam Plates, Soprema #14 Fasteners with Soprafix 2-3/8" SB Stress Plates, Soprafix 2" SB Stress Plates or OMG Heavy-Duty fasteners with OMG 2" Barbed Plates or OMG 2-3/8" Barbed XHD Plates with row spacing at a maximum 35" o.c. The fasteners are spaced 12" o.c. in a 6" wide heat-welded base sheet side laps.
Ply Sheet: (Optional)	One or more plies of Elastophene Flam, Elastophene Flam 2.2, Elastophene Flam HS, Elastophene SP 2.2, Colphene SP 2.2, Elastophene SP 3.0, Colphene SP 3.0, Sopralene Flam 180, Colphene Flam 180, Sopralene Flam 250, Sopralene 180 SP 3.0, Sopralene 180 SP 3.5, Colphene 180 SP 3.5, Sopralene 250 SP, Soprafix Base 613, Soprafix Base 612, or Soprafix Base 614, torch-applied.
Membrane:	Sopralene Flam 180 GR, Colphene Flam 180 GR, Sopralene Flam 180 FR GR, Colphene Flam 180 FR GR, Sopralene Flam 180 FR GR 3.5, Sopralene Flam 180 FR+ GR, Sopralene Flam 250 FR GR, Colphene Flam 250 FR GR, Sopralene Flam 250 FR+ GR, Sopralast 50 TV Alu, Sopralene Flam Antirock, torch-applied.
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 #7)

Membrane: SBS

Deck Type 2I: Steel, Insulated

Deck Description: 18-22 ga., Type B, Grade 33 steel deck fastened to ¼" thick steel structural supports spaced a maximum of 6' o.c. with Traxx/5 fasteners and ¾" diameter steel washers spaced a maximum 6" o.c. at the supports. Side laps are fastened with Traxx/1 fasteners spaced 24 in. o.c.
This Tested Assembly has been analyzed for allowable deck stress. See Evidence Submitted Table.

System Type D(5): Membrane fastened over preliminarily secured insulation.

All General and System Limitations apply.

Vapor Barrier: (Optional) Sopravap'r, self-adhered.

Fire Barrier: (Optional) Minimum ¼" thick DensDeck or DensDeck Prime, loose-laid.

One or more layers of any of the following insulations.

Base Insulation Layer	**Insulation Fasteners (Table 3)**	**Fastener Density/ft^2**
ACFoam-II, Sopra-ISO s, ISO 95+ GL, Ultra-Max, H-Shield, M-Shield, Sopra-ISO r, TopRock DD, TopRock DD Plus, SopraRock DD, SopraRock DD Plus		
Minimum 1.5" thick	**N/A**	**N/A**

Top Insulation Layer (Optional)	**Insulation Fasteners (Table 3)**	**Fastener Density/ft^2**
Sopraboard		
Minimum $^1/_8$" thick	**N/A**	**N/A**
DensDeck, DensDeck Prime, SECUROCK Gypsum-Fiber Roof Board		
Minimum ¼" 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.

Base Sheet: One layer of Soprafix Base 611, Soprafix Base 622, Soprafix Base 612, Soprafix Base 613, or Soprafix Base 614 fastened to the deck as described below:

Fastening #1: Attach base sheet using Trufast #15 EHD Fasteners with Trufast 2" Barbed Metal Seam Plates or Soprema #15 HD Fasteners with Soprema 2" Seam Plates with row spacing at a maximum 35.5" o.c. The fasteners are spaced 12" o.c. in a 4" wide torch-applied base sheet side laps.
(Meets Maximum Design Pressure of –67.5 psf. See General Limitation #7.)

Fastening #2: Attach base sheet using Trufast #15 EHD Fasteners with Trufast 2.4" Scoop Seam Plates or Soprema #15 HD Fasteners with Soprema 2.4" Seam Plates with row spacing at a maximum 35.5" o.c. The fasteners are spaced 12" o.c. in a 4" wide torch-applied base sheet side laps.
(Meets Maximum Design Pressure of –75 psf. See General Limitation #7.)

Ply Sheet: (Optional)	One or more plies of Elastophene Flam, Elastophene Flam 2.2, Elastophene Flam HS, Elastophene SP 2.2, Colphene SP 2.2, Elastophene SP 3.0, Colphene SP 3.0, Sopralene Flam 180, Colphene Flam 180, Sopralene Flam 250, Sopralene 180 SP 3.0, Sopralene 180 SP 3.5, Colphene 180 SP 3.5, Sopralene 250 SP, Soprafix Base 613, Soprafix Base 612, or Soprafix Base 614, torch-applied.
Membrane:	Sopralene Flam 180 GR, Colphene Flam 180 GR, Sopralene Flam 180 FR GR, Colphene Flam 180 FR GR, Sopralene Flam 180 FR GR 3.5, Sopralene Flam 180 FR+ GR, Sopralene Flam 250 FR GR, Colphene Flam 250 FR GR, Sopralene Flam 250 FR+ GR, Sopralast 50 TV Alu, Sopralene Flam Antirock, torch-applied. The 3" wide side laps of the cap sheets are torch-applied.
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: SBS

Deck Type 2I: Steel, Insulated

Deck Description: 18-22 ga., Type B, Grade 33 steel deck fastened to ¼" thick steel structural supports spaced a maximum of 6' o.c. with Traxx/5 fasteners and ¾" diameter steel washers spaced a maximum 6" o.c. at the supports. Side laps are fastened with Traxx/1 fasteners spaced 24 in. o.c.
This Tested Assembly has been analyzed for allowable deck stress. See Evidence Submitted Table.

System Type D(6): Membrane fastened 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**
Celcore MF Cellular Concrete, Siplast Lightweight Insulating Concrete, Elastizell Lightweight Insulating Concrete, Concrecel Lightweight Insulating Concrete, Mearlcrete Lightweight Insulating Concrete		
Minimum 2.0" thick, Minimum 300 psi.	**N/A**	**N/A**

Note: Load capacity of the structural substrate must be verified for the additional load of the LWC. The LWC must be properly vented.

Middle Insulation Layer (Optional)	**Insulation Fasteners (Table 3)**	**Fastener Density/ft²**
ACFoam-II, Sopra-ISO s, ISO 95+ GL, Ultra-Max, H-Shield, M-Shield, Sopra-ISO r, TopRock DD, TopRock DD Plus, SopraRock DD, SopraRock DD Plus		
Minimum 1.5" thick	**N/A**	**N/A**

Top Insulation Layer (Optional)	**Insulation Fasteners (Table 3)**	**Fastener Density/ft²**
Sopraboard		
Minimum 1/8" thick	**N/A**	**N/A**
DensDeck, DensDeck Prime, SECUROCK Gypsum-Fiber Roof Board		
Minimum ¼" thick	**N/A**	**N/A**

Note: Top layer shall have preliminary attachment, prior to the installation of the base sheet. Insulation shall be limited to maximum 1" thickness. All layers of insulation and base sheet shall be simultaneously fastened. See base/anchor sheet below for fasteners and density.

Base Sheet: One layer of Soprafix Base 611, Soprafix Base 622, Soprafix Base 612, Soprafix Base 613, or Soprafix Base 614 fastened to the deck as described below:

Fastening #1: Attach base sheet using Trufast #15 EHD Fasteners with Trufast 2" Barbed Metal Seam Plates or Soprema #15 HD Fasteners with Soprema 2" Seam Plates with row spacing at a maximum 35.5" o.c. The fasteners are spaced 12" o.c. in a 4" wide torch-applied base sheet side laps.
(Meets Maximum Design Pressure of –67.5 psf.; See General Limitation #7.)

Fastening #2:	Attach base sheet using Trufast #15 EHD Fasteners with Trufast 2.4" Scoop Seam Plates or Soprema #15 HD Fasteners with Soprema 2.4" Seam Plates with row spacing at a maximum 35.5" o.c. The fasteners are spaced 12" o.c. in a 4" wide torch-applied base sheet side laps. ***(Meets Maximum Design Pressure of –75 psf.; See General Limitation #7.)***
Ply Sheet: (Optional)	One or more plies of Elastophene Flam, Elastophene Flam 2.2, Elastophene Flam HS, Elastophene SP 2.2, Colphene SP 2.2, Elastophene SP 3.0, Colphene SP 3.0, Sopralene Flam 180, Colphene Flam 180, Sopralene Flam 250, Sopralene 180 SP 3.0, Sopralene 180 SP 3.5, Colphene 180 SP 3.5, Sopralene 250 SP, Soprafix Base 613, Soprafix Base 612, or Soprafix Base 614, torch-applied.
Membrane:	Elastophene Flam LS FR GR, Sopralene Flam 180 GR, Colphene Flam 180 GR, Sopralene Flam 180 FR GR, Colphene Flam 180 FR GR, Sopralene Flam 180 FR GR 3.5, Sopralene Flam 180 FR+ GR, Sopralene Flam 250 FR GR, Colphene Flam 250 FR GR, Sopralene Flam 250 FR+ GR, Sopralast 50 TV Alu, Sopralene Flam Antirock, torch-applied. The 3" wide side laps of the cap sheets are torch-applied.
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: SBS

Deck Type 2I: Steel, Insulated

Deck Description: 18-22 ga. **(See fastening options for steel gage)**, Type B, Grade 33 steel deck fastened to ¼" thick steel structural supports spaced a maximum of 62"- 72" o.c. **(See fastening options support spans)** with Traxx/5 fasteners and ¾" diameter steel washers spaced a maximum 6" o.c. at the supports. Side laps are fastened with Traxx/1 fasteners spaced 24 in. o.c.
This Tested Assembly has been analyzed for allowable deck stress. See Evidence Submitted Table.

System Type D(7): Membrane fastened over preliminarily secured insulation.

All General and System Limitations apply.

Fire Barrier: (Optional) Minimum ¼" thick DensDeck or DensDeck Prime, loose-laid. Minimum ½" thickness required if applying a vapor barrier.

Vapor Barrier: (Optional) An FM approved vapor barrier approved for use with torch-adhered, self-adhered, hot asphalt or cold applied may be applied to the deck or over the base insulation layer.

One or more layers of any of the following insulations.

Base Insulation Layer	**Insulation Fasteners (Table 3)**	**Fastener Density/ft^2**
ACFoam-II, Sopra-ISO s, ISO 95+ GL, Ultra-Max, H-Shield, M-Shield, Sopra-ISO r		
Minimum 1.5" thick	**N/A**	**N/A**

Top Insulation Layer (Optional)	**Insulation Fasteners (Table 3)**	**Fastener Density/ft^2**
Sopraboard		
Minimum $^1/_8$" thick	**N/A**	**N/A**
DensDeck, DensDeck Prime, SECUROCK Gypsum-Fiber Roof Board		
Minimum ¼" 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.

Base Sheet: One layer of Soprafix Base 622, Colphene 180 Sanded, Sopralene 180 Sanded 2.2, Sopralene 180 Sanded, Sopralene 180 SP 3.0, Sopralene 180 SP 3.5, Colphene 180 SP 3.5, Sopralene 250 Sanded or Sopralene 250 SP fastened to the deck as described below:

Fastening #1: ***(Min. 18-22 ga. Steel in max. 72" support span)***
Attach base sheet using Trufast #15 EHD Fasteners with Trufast 2" Barbed Metal Seam Plates or Soprema #15 HD Fasteners with Soprema 2" Seam Plates with row spacing at a maximum 35.5" o.c. The fasteners are spaced 12" o.c. and centered inside the 4" wide, torch-applied base sheet side laps.
(Meets Maximum Design Pressure of –67.5 psf. See General Limitation #7.)

Fastening #2: ***(Min. 18-22 ga. Steel in max. 72" support span)***
Attach base sheet using Trufast #15 EHD Fasteners with Trufast 2.4" Scoop Seam Plates or Soprema #15 HD Fasteners with Soprema 2.4" Seam Plates with row spacing at a maximum 35.5" o.c. The fasteners are spaced 12" o.c. and centered inside the 4" wide, torch-applied base sheet side laps.
(Meets Maximum Design Pressure of -75 psf. See General Limitation #7.)

Fastening #3: ***(Min. 18 ga. Steel in max. 72" support span; Min. 20 ga. Steel in max. 69" support span; Min. 22 ga. steel in max. 62" support span.)***
Attach base sheet using Trufast #15 EHD Fasteners with Trufast 2" Barbed Metal Seam Plates or Trufast 2.4" Scoop Seam Plates or Soprema #15 HD Fasteners with Soprema 2" Seam Plates or Soprema 2.4" Seam Plates with row spacing at a maximum 35.5" o.c. The fasteners are spaced 6" o.c. and centered inside the 4" wide torch-applied base sheet side laps.
(Meets Maximum Design Pressure of –112.5 psf. See General Limitation #7.)

Membrane: Elastophene FR GR, Elastophene LS FR GR, Sopralene 180 FR GR, Colphene 180 FR GR, Sopralene 180 FR+ GR, Sopralene 250 FR GR, Colphene 250 FR GR, Sopralene 250 FR+ GR, Sopralast 50 TV Alu 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 COLPLY EF Adhesive, COLPLY Adhesive, at 1.5 – 2.0 gallons/square. The 3" wide side laps are adhered with the same adhesive or torch-applied.

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: SBS

Deck Type 2I: Steel, Insulated

Deck Description: 18-22 ga., Type B, Grade 80 steel deck fastened to ¼" thick steel structural supports spaced a maximum of 6' o.c. with Traxx/5 fasteners and ¾" diameter steel washers spaced a maximum 6" o.c. at the supports. Side laps are fastened with Traxx/1 fasteners spaced 12 in. o.c.
This Tested Assembly has been analyzed for allowable deck stress. See Evidence Submitted Table.

System Type D(8): Membrane fastened over preliminarily secured insulation.

All General and System Limitations apply.

Fire Barrier: (Optional) Minimum ¼" thick DensDeck or DensDeck Prime, loose-laid. Minimum ½" thickness required if applying a vapor barrier.

Vapor Barrier: (Optional) An FM approved vapor barrier approved for use with torch-adhered, self-adhered, hot asphalt or cold applied may be applied to the deck or over the base insulation layer.

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, Ultra-Max, H-Shield, M-Shield, Sopra-ISO r		
Minimum 1.5" thick	**N/A**	**N/A**

Top Insulation Layer (Optional)	**Insulation Fasteners (Table 3)**	**Fastener Density/ft²**
Sopraboard		
Minimum 1/8" thick	**N/A**	**N/A**
DensDeck, DensDeck Prime, SECUROCK Gypsum-Fiber Roof Board		
Minimum ¼" 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.

Base Sheet: One layer of Soprafix Base 622, Colphene 180 Sanded, Sopralene 180 Sanded 2.2, Sopralene 180 Sanded, Sopralene 180 SP 3.0, Sopralene 180 SP 3.5, Colphene 180 SP 3.5, Sopralene 250 Sanded or Sopralene 250 SP fastened to the deck as described below:

Fastening #1: Attach base sheet using Trufast #14 HD Fasteners with Trufast 2" Barbed Metal Seam Plates or Soprema #14 MP Fasteners with Soprema 2" Seam Plates with row spacing at a maximum 35.5" o.c. The fasteners are spaced 12" o.c. and centered inside the 4" wide torch-applied base sheet side laps.
(Meets Maximum Design Pressure of -67.5 psf. See General Limitation #7.)

Fastening #2:	Attach base sheet using Trufast #14 HD Fasteners with Trufast 2.4" Scoop Seam Plates or Soprema #14 MP Fasteners with Soprema 2.4" Seam Plates with row spacing at a maximum 35.5" o.c. The fasteners are spaced 12" o.c. and centered inside the 4" wide torch-applied base sheet side laps. ***(Meets Maximum Design Pressure of -75 psf. See General Limitation #7.)***
Fastening #3	Attach base sheet using Trufast #15 EHD Fasteners with Trufast 2.4" Scoop Seam Plates or Soprema #15 HD Fasteners with Soprema 2.4" Seam Plates with row spacing at a maximum 35.5" o.c. The fasteners are spaced 12" o.c. and centered inside the 4" wide torch-applied base sheet side laps. ***(Meets Maximum Design Pressure of -97.5 psf. See General Limitation #7.)***
Fastening #4:	Attach base sheet using Trufast #14 HD or Trufast #15 EHD Fasteners with Trufast 2" Barbed Metal Seam Plates or Trufast 2.4" Scoop Seam Plates or Soprema #14 MP or Soprema #15 HD Fasteners with Soprema 2" Seam Plates or Soprema 2.4" Seam Plates with row spacing at a maximum 35.5" o.c. The fasteners are spaced 6" o.c. and centered inside the 4" wide torch-applied base sheet side laps. ***(Meets Maximum Design Pressure of -120 psf. See General Limitation #7.)***
Membrane:	Elastophene FR GR, Elastophene LS FR GR, Sopralene 180 FR GR, Colphene 180 FR GR, Sopralene 180 FR+ GR, Sopralene 250 FR GR, Colphene 250 FR GR, Sopralene 250 FR+ GR, Sopralast 50 TV Alu 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 COLPLY EF Adhesive, COLPLY Adhesive, at 1.5 – 2.0 gallons/square. The 3" wide side laps are adhered with the same adhesive or torch-applied.
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: SBS

Deck Type 2I: Steel, Insulated

Deck Description: 18-22 ga., Type B, Grade 80 steel deck fastened to ¼" thick steel structural supports spaced a maximum of 6' o.c. with Traxx/5 fasteners and ¾" diameter steel washers spaced a maximum 6" o.c. at the supports. Side laps are fastened with Traxx/1 fasteners spaced 12 in. o.c.
This Tested Assembly has been analyzed for allowable deck stress. See Evidence Submitted Table.

System Type D(9): Membrane fastened over preliminarily secured insulation.

All General and System Limitations apply.

Vapor Barrier: (Optional) Sopravap'r, self-adhered.

Fire Barrier: (Optional) Minimum ¼" thick DensDeck or DensDeck Prime, loose-laid.

One or more layers of any of the following insulations.

Base Insulation Layer	**Insulation Fasteners (Table 3)**	**Fastener Density/ft^2**
ACFoam-II, Sopra-ISO s, ISO 95+ GL, Ultra-Max, H-Shield, M-Shield, Sopra-ISO r, TopRock DD, TopRock DD Plus, SopraRock DD, SopraRock DD Plus		
Minimum 1.5" thick	**N/A**	**N/A**

Top Insulation Layer (Optional)	**Insulation Fasteners (Table 3)**	**Fastener Density/ft^2**
Sopraboard		
Minimum 0.125" thick	**N/A**	**N/A**
DensDeck, DensDeck Prime, SECUROCK Gypsum-Fiber Roof Board		
Minimum 0.25" 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.

Base Sheet: One layer of Soprafix Base 611, Soprafix Base 622, Soprafix Base 612, Soprafix Base 613, or Soprafix Base 614 fastened to the deck as described below:

Fastening #1: Attach base sheet using Trufast #14 HD Fasteners with Trufast 2" Barbed Metal Seam Plates or Soprema #14 MP Fasteners with Soprema 2" Seam Plates with row spacing at a maximum 35.5" o.c. The fasteners are spaced 12" o.c. and centered inside the 4" wide torch-applied base sheet side laps.
(Meets Maximum Design Pressure of -67.5 psf. See General Limitation #7.)

Fastening #2: Attach base sheet using Trufast #14 HD Fasteners with Trufast 2.4" Scoop Seam Plates or Soprema #14 MP Fasteners with Soprema 2.4" Seam Plates with row spacing at a maximum 35.5" o.c. The fasteners are spaced 12" o.c. and centered inside the 4" wide torch-applied base sheet side laps.
(Meets Maximum Design Pressure of -75 psf. See General Limitation #7.)

Fastening #3:	Attach base sheet using Trufast #15 EHD Fasteners with Trufast 2" Barbed Metal Seam Plates or Soprema #15 HD Fasteners with Soprema 2" Seam Plates with row spacing at a maximum 35.5" o.c. The fasteners are spaced 6" o.c. in a 4" wide torch-applied base sheet side laps. ***(Meets Maximum Design Pressure of -120 psf. See General Limitation #7.)***
Fastening #4:	Attach base sheet using Trufast #15 EHD Fasteners with Trufast 2.4" Scoop Seam Plates or Soprema #15 HD Fasteners with Soprema 2.4" Seam Plates with row spacing at a maximum 35.5" o.c. The fasteners are spaced 6" o.c. in a 4" wide torch-applied base sheet side laps. ***(Meets Maximum Design Pressure of -142.5 psf. See General Limitation #7.)***
Ply Sheet: (Optional)	One or more plies of Elastophene Flam, Elastophene Flam 2.2, Elastophene Flam HS, Elastophene SP 2.2, Colphene SP 2.2, Elastophene SP 3.0, Colphene SP 3.0, Sopralene Flam 180, Colphene Flam 180, Sopralene Flam 250, Sopralene 180 SP 3.0, Sopralene 180 SP 3.5, Colphene 180 SP 3.5, Sopralene 250 SP, Soprafix Base 613, Soprafix Base 612, or Soprafix Base 614, torch-applied.
Membrane:	Sopralene Flam 180 GR, Colphene Flam 180 GR, Sopralene Flam 180 FR GR, Colphene Flam 180 FR GR, Sopralene Flam 180 FR GR 3.5, Sopralene Flam 180 FR+ GR, Sopralene Flam 250 FR GR, Colphene Flam 250 FR GR, Sopralene Flam 250 FR+ GR, Sopralast 50 TV Alu, Sopralene Flam Antirock, torch-applied. The 3" wide side laps of the cap sheets are torch-applied.
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: SBS

Deck Type 2I: Steel, Insulated

Deck Description: 18-22 ga., Type B, Grade 80 steel deck fastened to ¼" thick steel structural supports spaced a maximum of 6' o.c. with Traxx/5 fasteners and ¾" diameter steel washers spaced a maximum 6" o.c. at the supports. Side laps are fastened with Traxx/1 fasteners spaced 12 in. o.c.
This Tested Assembly has been analyzed for allowable deck stress. See Evidence Submitted Table.

System Type D(10): Membrane fastened 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**
Celcore MF Cellular Concrete, Siplast Lightweight Insulating Concrete, Elastizell Lightweight Insulating Concrete, Concrecel Lightweight Insulating Concrete, Mearlcrete Lightweight Insulating Concrete Minimum 2.0" thick, Minimum 300 psi.	**N/A**	**N/A**

Note: Load capacity of the structural substrate must be verified for the additional load of the LWC. The LWC must be properly vented.

Middle Insulation Layer (Optional)	**Insulation Fasteners (Table 3)**	**Fastener Density/ft²**
ACFoam-II, Sopra-ISO s, ISO 95+ GL, Ultra-Max, H-Shield, M-Shield, Sopra-ISO r, Sopra-ISO x, TopRock DD, TopRock DD Plus, SopraRock DD, SopraRock DD Plus Minimum 1.5" thick	**N/A**	**N/A**

Top Insulation Layer (Optional)	**Insulation Fasteners (Table 3)**	**Fastener Density/ft²**
Sopraboard Minimum 0.125" thick	**N/A**	**N/A**
DensDeck, DensDeck Prime, SECUROCK Gypsum-Fiber Roof Board Minimum 0.25" thick	**N/A**	**N/A**

Note: Top layer shall have preliminary attachment, prior to the installation of the base sheet. Insulation shall be limited to maximum 1" thickness. All layers of insulation and base sheet shall be simultaneously fastened. See base/anchor sheet below for fasteners and density.

Base Sheet: One layer of Soprafix Base 611, Soprafix Base 622, Soprafix Base 612, Soprafix Base 613, or Soprafix Base 614 fastened to the deck as described below:

Fastening #1: Attach base sheet using Trufast #14 HD Fasteners with Trufast 2" Barbed Metal Seam Plates or Soprema #14 MP Fasteners with Soprema 2" Seam Plates with row spacing at a maximum 35.5" o.c. The fasteners are spaced 12" o.c. and centered inside the 4" wide torch-applied base sheet side laps.
(Meets Maximum Design Pressure of -67.5 psf.; See General Limitation #7.)

Fastening #2:	Attach base sheet using Trufast #14 HD Fasteners with Trufast 2.4" Scoop Seam Plates or Soprema #14 MP Fasteners with Soprema 2.4" Seam Plates with row spacing at a maximum 35.5" o.c. The fasteners are spaced 12" o.c. and centered inside the 4" wide torch-applied base sheet side laps. ***(Meets Maximum Design Pressure of -75 psf.; See General Limitation #7.)***
Fastening #3:	Attach base sheet using Trufast #15 EHD Fasteners with Trufast 2" Barbed Metal Seam Plates or Soprema #15 HD Fasteners with Soprema 2" Seam Plates with row spacing at a maximum 35.5" o.c. The fasteners are spaced 6" o.c. in a 4" wide torch-applied base sheet side laps. ***(Meets Maximum Design Pressure of -120 psf.; See General Limitation #7.)***
Fastening #4:	Attach base sheet using Trufast #15 EHD Fasteners with Trufast 2.4" Scoop Seam Plates or Soprema #15 HD Fasteners with Soprema 2.4" Seam Plates with row spacing at a maximum 35.5" o.c. The fasteners are spaced 6" o.c. in a 4" wide torch-applied base sheet side laps. ***(Meets Maximum Design Pressure of -142.5 psf.; See General Limitation #7.)***
Ply Sheet: (Optional)	One or more plies of Elastophene Flam, Elastophene Flam 2.2, Elastophene Flam HS, Elastophene SP 2.2, Colphene SP 2.2, Elastophene SP 3.0, Colphene SP 3.0, Sopralene Flam 180, Colphene Flam 180, Sopralene Flam 250, Sopralene 180 SP 3.0, Sopralene 180 SP 3.5, Colphene 180 SP 3.5, Sopralene 250 SP, Soprafix Base 613, Soprafix Base 612, or Soprafix Base 614, torch-applied.
Membrane:	Elastophene Flam LS FR GR, Sopralene Flam 180 GR, Colphene Flam 180 GR, Sopralene Flam 180 FR GR, Colphene Flam 180 FR GR, Sopralene Flam 180 FR GR 3.5, Sopralene Flam 180 FR+ GR, Sopralene Flam 250 FR GR, Colphene Flam 250 FR GR, Sopralene Flam 250 FR+ GR, Sopralast 50 TV Alu, Sopralene Flam Antirock, torch-applied. The 3" wide side laps of the cap sheets are torch-applied.
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: SBS

Deck Type 2I: Steel, Insulated

Deck Description: 18-22 ga., Type B, Grade 33 steel deck fastened to structural supports spaced a maximum of 6' o.c. with Tek/5 screws and spaced a maximum 6" o.c. at the supports. Side laps are fastened with Traxx/1 screws spaced maximum 24 in. o.c. **This Tested Assembly has been analyzed for allowable deck stress. See Evidence Submitted Table.**

System Type D(11): Membrane fastened over preliminarily secured insulation.

All General and System Limitations apply.

Vapor Barrier: (Optional) Sopravap'r, self-adhered.

Fire Barrier: (Optional) Minimum ¼" thick DensDeck or DensDeck Prime, loose-laid.

One or more layers of any of the following insulations.

Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft^2
H-Shield, M-Shield, Sopra-ISO r Minimum 1.5" thick	**N/A**	**N/A**

Note: Base 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.

Base Sheet: One layer of Soprafix Base 612, Soprafix Base 613, Soprafix Base 614 fastened to the deck as described below:

Fastening: Attach using Trufast #15 EHD Fasteners with Trufast 2.4" Scoop Seam Plates or Soprema #15 HD Fasteners with Soprema 2.4" Seam Plates with row spacing at a maximum 35" o.c. The fasteners are spaced 12" o.c. in a 4" wide heat-welded base sheet side laps.

Ply Sheet: (Optional) One or more plies of Elastophene Flam, Elastophene Flam 2.2, Elastophene Flam HS, Elastophene SP 2.2, Colphene SP 2.2, Elastophene SP 3.0, Colphene SP 3.0, Sopralene Flam 180, Colphene Flam 180, Sopralene Flam 250, Sopralene 180 SP 3.0, Sopralene 180 SP 3.5, Colphene 180 SP 3.5, Sopralene 250 SP, Soprafix Base 613, Soprafix Base 612, or Soprafix Base 614, torch-applied.

Membrane: Sopralene Flam 180 GR, Colphene Flam 180 GR, Sopralene Flam 180 FR GR, Colphene Flam 180 FR GR, Sopralene Flam 180 FR GR 3.5, Sopralene Flam 180 FR+ GR, Sopralene Flam 250 FR GR, Colphene Flam 250 FR GR, Sopralene Flam 250 FR+ GR, Sopralast 50 TV Alu, Sopralene Flam Antirock, torch-applied.

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. (See General Limitation #7)

Membrane: SBS

Deck Type 2I: Steel, Insulated

Deck Description: 18-22 ga., Type B, Grade 80 steel deck fastened 6" o.c. with Traxx/5 fasteners at supports spaced maximum 6 ft. o.c. Side laps are fastened with Traxx/1 fasteners spaced 30" o.c.
This Tested Assembly has been analyzed for allowable deck stress. See Evidence Submitted Table.

System Type D(12): Membrane fastened over preliminarily secured insulation.

All General and System Limitations apply.

Vapor Barrier: (Optional) Sopravap'r, self-adhered.

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**

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.

Base Sheet: Soprafix Base 622, Soprafix Base 612, Soprafix Base 613, Soprafix Base 614, or Soprafix Base 641, mechanically attached with OMG Polymer Batten Strip and OMG #15 Roofgrip Large Head fasteners, Trufast Recessed Batten Bar, Soprafix MBB-R or Trufast Recessed Batten Bar or Soprafix MBB-R with Trufast #15 EHD Fasteners spaced 12" o.c. in the min. 5" lap.

*Requires torch-applied ply or cap membrane.

Ply Sheet: (Optional) One or more layers of Elastophene Flam, Elastophene Flam 2.2, Elastophene Flam HS, Elastophene SP 2.2, Colphene SP 2.2, Elastophene SP 3.0, Colphene SP 3.0, Sopralene Flam 180, Colphene Flam 180, Sopralene 180 SP 3.0, Sopralene 180 SP 3.5, Colphene 180 SP 3.5, Soprafix Base 622, Sopralene Flam 250, Sopralene 250 SP, Soprafix Base 613, Soprafix Base 612, or Soprafix Base 614, torch-applied.

Membrane: Sopralene Flam 180 GR, Colphene Flam 180 GR, Sopralene Flam 180 FR GR, Colphene Flam 180 FR GR, Sopralene Flam 180 FR GR 3.5, Sopralene Flam 180 FR+ GR, Sopralene Flam 250 FR GR, Colphene Flam 250 FR GR, Sopralene Flam 250 FR+ GR, Sopralene Flam Antirock, torch-applied.

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. (See General Limitation #7.)

Membrane: SBS

Deck Type 2I: Steel, Insulated

Deck Description: 18-22 ga., Type B, Grade 80 Steel decking fastened 6" o.c. with Traxx/5 fasteners to supports spaced maximum 6' o.c. Deck side laps are fastened 30" o.c. with Traxx/1 fasteners.
This Tested Assembly has been analyzed for allowable deck stress. See Evidence Submitted Table.

System Type D(13): Membrane fastened over preliminarily secured insulation.

All General and System Limitations apply.

Vapor Barrier: (Optional) Sopravap'r, self-adhered.

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**
Fesco Board		
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.

Base Sheet: One layer of Soprafix Base 622, Soprafix Base 612, Soprafix Base 613, Soprafix Base [X], Soprafix Base 614, or Soprafix Base 641, fastened to the deck as described below:

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

Ply Sheet: (Optional) One or more layers of Elastophene Flam, Elastophene Flam 2.2, Elastophene Flam HS, Elastophene SP 2.2, Colphene SP 2.2, Elastophene SP 3.0, Colphene SP 3.0, Sopralene Flam 180, Colphene Flam 180, Sopralene Flam 250, Sopralene 180 SP 3.0, Sopralene 180 SP 3.5, Colphene 180 SP 3.5, Sopralene 250 SP, Soprafix Base 613, Soprafix Base 612, or Soprafix Base 614, torch-applied.

Membrane: Elastophene Flam FR GR, Elastophene Flam FR+ GR, Elastophene Flam LS FR GR, Sopralene Flam 180 GR, Colphene Flam 180 GR, Sopralene Flam 180 FR GR, Colphene Flam 180 FR GR, Sopralene Flam 180 FR GR 3.5, Sopralene Flam 250 FR GR, Colphene Flam 250 FR GR, Sopralene Flam 180 FR+ GR, Sopralene Flam 250 FR+ GR, Sopralast 50 TV Alu, Sopralene Flam Antirock, torch-applied.

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: SBS

Deck Type 2I: Steel, Insulated

Deck Description: 18-22 ga., Type B, Grade 33 steel deck fastened to structural supports spaced a maximum of 6' o.c. with Tek/5 screws and spaced a maximum 6" o.c. at the supports. Side laps are fastened with Traxx/1 screws spaced maximum 24 in. o.c. **This Tested Assembly has been analyzed for allowable deck stress. See Evidence Submitted Table.**

System Type D(14): Membrane fastened over preliminarily secured insulation.

All General and System Limitations apply.

Vapor Barrier: (Optional) Sopravap'r, self-adhered.

Fire Barrier: (Optional) Minimum ¼" thick DensDeck or DensDeck Prime, loose-laid.

One or more layers of any of the following insulations.

Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft^2
H-Shield, M-Shield, Sopra-ISO r Minimum 1.5" thick	**N/A**	**N/A**

Note: Base 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.

Base Sheet: One layer of Soprafix Base 611, Soprafix Base 622, Soprafix Base 641, Soprafix Base 613, Soprafix Base 612, or Soprafix Base 614 fastened to the deck as described below:

Fastening #1: Attach Soprafix Base 611 using Trufast #15 EHD Fasteners with Trufast 2.4" Scoop Seam Plates or Soprema #15 HD Fasteners with Soprema 2.4" Seam Plates or Dekfast DF-#14-PH3 fasteners with Dekfast 2-3/8" Round Barbed Seam Plates or Soprema #14 Fasteners with Soprafix 2-3/8" SB Stress Plates with row spacing at a maximum 34" o.c. The fasteners are spaced 6" o.c. in a 4" or 5" wide heat-welded base sheet side laps. Or with Trufast #15 EHD Fasteners with Trufast 2" Barbed Metal Seam Plates or Soprema #15 HD Fasteners with Soprema 2" Seam Plates with row spacing at a maximum 34" o.c. The fasteners are spaced 6" o.c. in a 5" wide heat-welded base sheet side laps

Fastening #2: Attach Soprafix Base 622 using Trufast #15 EHD Fasteners with Trufast 2" Barbed Metal Seam Plates, Trufast 2.4" Barbed Metal Seam Plates or Soprema #15 HD Fasteners with Soprema 2" Seam Plates or Dekfast DF-#14-PH3 fasteners with Dekfast 2-3/8" Round Barbed Seam Plates or Soprema #14 Fasteners with Soprafix 2-3/8" SB Stress Plates or OMG Heavy-Duty fasteners with OMG 2-3/8" Barbed XHD Plates with row spacing at a maximum 34" o.c. The fasteners are spaced 6" o.c. in a 4" or 5" wide heat-welded base sheet side laps.

Fastening #4:	Attach Soprafix Base 641 using Trufast #15 EHD Fasteners or Soprema #15 HD Fasteners with Trufast 2.4" Barbed Metal Seam Plates or Dekfast 14 fasteners with Dekfast 2-3/8" Round Barbed Seam Plates or Soprema #14 Fasteners with Soprafix 2-3/8" SB Stress Plates or OMG Heavy-Duty fasteners with OMG 2-3/8" Barbed XHD Plates with row spacing at a maximum 34" o.c. The fasteners are spaced 6" o.c. in a 4" or 5" wide heat-welded base sheet side laps.
Fastening #3:	Attach Soprafix Base 613 using Trufast #15 EHD Fasteners with Trufast 2" Barbed Metal Seam Plates, Trufast 2.4" Barbed Metal Seam Plates or Soprema #15 HD Fasteners with Soprema 2" Seam Plates or Dekfast DF-#14-PH3 fasteners with Dekfast 2-3/8" Round Barbed Seam Plates, or Soprema #14 Fasteners with Soprafix 2-3/8" SB Stress Plates, Soprafix 2" SB Stress Plates or OMG Heavy-Duty fasteners with OMG 2" Barbed Plates or OMG 2-3/8" Barbed XHD Plates with row spacing at a maximum 34" o.c. The fasteners are spaced 6" o.c. in a 5" wide heat-welded base sheet side laps.
Fastening #4:	Attach Soprafix Base 614 using Trufast #15 EHD Fasteners with Trufast 2" Barbed Metal Seam Plates, Trufast 2.4" Barbed Metal Seam Plates or Soprema #15 HD Fasteners with Soprema 2" Seam Plates or Dekfast DF-#14-PH3 fasteners with Dekfast 2-3/8" Round Barbed Seam Plates, or Soprema #14 Fasteners with Soprafix 2-3/8" SB Stress Plates, Soprafix 2" SB Stress Plates or OMG Heavy-Duty fasteners with OMG 2" Barbed Plates or OMG 2-3/8" Barbed XHD Plates with row spacing at a maximum 34" o.c. The fasteners are spaced 6" o.c. in a 6" wide heat-welded base sheet side laps.
Ply Sheet: (Optional)	One or more plies of Elastophene Flam, Elastophene Flam 2.2, Elastophene Flam HS, Elastophene SP 2.2, Colphene SP 2.2, Elastophene SP 3.0, Colphene SP 3.0, Sopralene Flam 180, Colphene Flam 180, Sopralene Flam 250, Sopralene 180 SP 3.0, Sopralene 180 SP 3.5, Colphene 180 SP 3.5, Sopralene 250 SP, Soprafix Base 613, Soprafix Base 612, or Soprafix Base 614, torch-applied.
Membrane:	Sopralene Flam 180 GR, Colphene Flam 180 GR, Sopralene Flam 180 FR GR, Colphene Flam 180 FR GR, Sopralene Flam 180 FR GR 3.5, Sopralene Flam 180 FR+ GR, Sopralene Flam 250 FR GR, Colphene Flam 250 FR GR, Sopralene Flam 250 FR+ GR, Sopralast 50 TV Alu, Sopralene Flam Antirock, torch-applied.
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 #7)

Membrane: SBS

Deck Type 2I: Steel, Insulated

Deck Description: 18-22 ga., ASTM A1008 Grade 80, Type B steel deck fastened 6" o.c. with Traxx/5 fasteners to supports spaced 6 ft. o.c. Side laps are fastened with Traxx/1 fasteners spaced 30 in. o.c.
This Tested Assembly has been analyzed for allowable deck stress. See Evidence Submitted Table.

System Type D(15): Membrane fastened over preliminarily secured insulation.

All General and System Limitations apply.

Vapor Barrier: (Optional) Sopravap'r, self-adhered.

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, ISO 95+ GL, Ultra-Max, H-Shield, M-Shield, Sopra-ISO r (flat or tapered)		
Minimum 1.5" 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.

Base Sheet: Soprafix Base 622, Soprafix Base 612, Soprafix Base 613, Soprafix Base 614, or Soprafix Base 641, mechanically attached with OMG Polymer Batten Strip and OMG #15 Roofgrip Large Head fasteners, Trufast Flat Batten Bar and Trufast #15 EHD Fasteners, spaced 12" o.c. in the min. 5" lap.

Ply Sheet: (Optional) One or more layers of Elastophene Flam, Elastophene Flam 2.2, Elastophene Flam HS, Elastophene SP 2.2, Colphene SP 2.2, Elastophene SP 3.0, Colphene SP 3.0, Sopralene Flam 180, Colphene Flam 180, Sopralene 180 SP 3.0, Sopralene 180 SP 3.5, Colphene 180 SP 3.5, Soprafix Base 622, Sopralene Flam 250, Sopralene 250 SP, Soprafix Base 613, Soprafix Base 612, or Soprafix Base 614, torch-applied.

Membrane: Sopralene Flam 180 GR, Colphene Flam 180 GR, Sopralene Flam 180 FR GR, Colphene Flam 180 FR GR, Sopralene Flam 180 FR GR 3.5, Sopralene Flam 180 FR+ GR, Sopralene Flam 250 FR GR, Colphene Flam 250 FR GR, Sopralene Flam 250 FR+ GR, Sopralast 50 TV Alu, Sopralene Flam Antirock, torch-applied.

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: SBS

Deck Type 2I: Steel, Insulated

Deck Description: 18-22 ga., Type B, Grade 80 steel deck fastened to ¼" thick steel structural supports spaced a maximum of 6' o.c. with Traxx/5 fasteners spaced a maximum 6" o.c. at the supports. Side laps are fastened with Traxx/1 fasteners spaced 12 in. o.c.
This Tested Assembly has been analyzed for allowable deck stress. See Evidence Submitted Table.

System Type D(16): Membrane fastened over preliminarily secured insulation.

All General and System Limitations apply.

Vapor Barrier: (Optional) Sopravap'r, self-adhered.

Fire Barrier: (Optional) Minimum ¼" thick DensDeck or DensDeck Prime, loose-laid.

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, Ultra-Max, H-Shield, M-Shield, Sopra-ISO r, TopRock DD, TopRock DD Plus, SopraRock DD, SopraRock DD Plus		
Minimum 1.5" thick	**N/A**	**N/A**

Top Insulation Layer (Optional)	**Insulation Fasteners (Table 3)**	**Fastener Density/ft²**
Sopraboard		
Minimum 1/8" thick	**N/A**	**N/A**
DensDeck, DensDeck Prime, SECUROCK Gypsum-Fiber Roof Board		
Minimum ¼" 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.

Base Sheet: One layer of Soprafix Base 614 fastened to the deck as described below:

Fastening: Attach base sheet using Trufast #15 EHD Fasteners and Soprema #15 HD Fasteners with Trufast 2.4" Scoop Seam Plates and Soprema 2.4" Seam Plates with row spacing at a maximum 35.5" o.c. The fasteners are spaced 12" o.c. and centered inside the 4" wide torch-applied base sheet side laps.

Ply Sheet: (Optional) One or more plies of Elastophene Flam, Elastophene Flam 2.2, Elastophene Flam HS, Elastophene SP 2.2, Colphene SP 2.2, Elastophene SP 3.0, Colphene SP 3.0, Sopralene Flam 180, Colphene Flam 180, Sopralene Flam 250, Sopralene 180 SP 3.0, Sopralene 180 SP 3.5, Colphene 180 SP 3.5, Sopralene 250 SP, Soprafix Base 613, Soprafix Base 612, or Soprafix Base 614, torch-applied.

Membrane:	Sopralene Flam 180 GR, Colphene Flam 180 GR, Sopralene Flam 180 FR GR, Colphene Flam 180 FR GR, Sopralene Flam 180 FR GR 3.5, Sopralene Flam 180 FR+ GR, Sopralene Flam 250 FR GR, Colphene Flam 250 FR GR, Sopralene Flam 250 FR+ GR, Sopralast 50 TV Alu, Sopralene Flam Antirock, torch-applied. The 3" wide side laps of the cap sheets are torch-applied.
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: SBS

Deck Type 2I: Steel, Insulated

Deck Description: 18-22 ga. **(See fastening options for steel gage)**, Grade 80, Type B steel deck fastened to ¼" thick steel structural supports spaced a maximum of 6' o.c. with Traxx/5 fasteners spaced a maximum 6" o.c. at the supports. Side laps are fastened with Traxx/1 fasteners spaced 12 in. o.c.
This Tested Assembly has been analyzed for allowable deck stress. See Evidence Submitted Table.

System Type D(17): Membrane fastened 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**
Celcore MF Cellular Concrete, Siplast Lightweight Insulating Concrete, Elastizell Lightweight Insulating Concrete, Concrecel Lightweight Insulating Concrete, Mearlcrete Lightweight Insulating Concrete Minimum 2.0" thick, Minimum 300 psi.	**N/A**	**N/A**

Note: Load capacity of the structural substrate must be verified for the additional load of the LWC. The LWC must be properly vented.

Middle Insulation Layer (Optional)	**Insulation Fasteners (Table 3)**	**Fastener Density/ft²**
ACFoam-II, Sopra-ISO s, ISO 95+ GL, Multi-Max-3, H-Shield, M-Shield, Sopra-ISO r, Sopra-ISO x, TopRock DD, TopRock DD Plus, SopraRock DD, SopraRock DD Plus Minimum 1.5" thick	**N/A**	**N/A**

Top Insulation Layer (Optional)	**Insulation Fasteners (Table 3)**	**Fastener Density/ft²**
Sopraboard Minimum 1/8" thick	**N/A**	**N/A**
DensDeck, DensDeck Prime, SECUROCK Gypsum-Fiber Roof Board Minimum ¼" thick	**N/A**	**N/A**

Note: Top layer shall have preliminary attachment, prior to the installation of the base sheet. Insulation shall be limited to maximum 1" thickness. All layers of insulation and base sheet shall be simultaneously fastened. See base/anchor sheet below for fasteners and density.

Base Sheet: One layer of Soprafix Base 614 fastened to the deck as described below:

Fastening#1: **(*Min. 22 ga. steel deck*)** Attach base sheet using Trufast #15 EHD Fasteners and Soprema #15 HD Fasteners with Trufast 2.4" Scoop Seam Plates and Soprema 2.4" Seam Plates with row spacing at a maximum 35.5" o.c. The fasteners are spaced 12" o.c. and centered inside the 4" wide torch-applied base sheet side laps. ***(Meets Maximum Design Pressure of -97.5 psf.; See General Limitation #7.)***

Fastening #2:	**(*Min. 20 ga. steel deck*)** Attach base sheet using Trufast #15 EHD Fasteners and Soprema #15 HD Fasteners with Trufast 2.4" Scoop Seam Plates and Soprema 2.4" Seam Plates with row spacing at a maximum 35.5" o.c. The fasteners are spaced 6" o.c. and centered inside the 4" wide torch-applied base sheet side laps. ***(Meets Maximum Design Pressure of -172.5 psf.; See General Limitation #7.)***
Ply Sheet: (Optional)	One or more plies of Elastophene Flam, Elastophene Flam 2.2, Elastophene Flam HS, Elastophene SP 2.2, Colphene SP 2.2, Elastophene SP 3.0, Colphene SP 3.0, Sopralene Flam 180, Colphene Flam 180, Sopralene Flam 250, Sopralene 180 SP 3.0, Sopralene 180 SP 3.5, Colphene 180 SP 3.5, Sopralene 250 SP, Soprafix Base 613, Soprafix Base 612, Soprafix Base 614, torch-applied.
Membrane:	Elastophene Flam LS FR GR, Sopralene Flam 180 GR, Colphene Flam 180 GR, Sopralene Flam 180 FR GR, Colphene Flam 180 FR GR, Sopralene Flam 180 FR GR 3.5, Sopralene Flam 180 FR+ GR, Sopralene Flam 250 FR GR, Colphene Flam 250 FR GR, Sopralene Flam 250 FR+ GR, Sopralast 50 TV Alu, Sopralene Flam Antirock, torch-applied. The 3" wide side laps of the cap sheets are torch-applied.
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: SBS

Deck Type 2I: Steel, Insulated

Deck Description: 18-22 ga., ASTM A1008 Grade 80, Type B steel deck fastened 6" o.c. with Traxx/5 fasteners to supports spaced 6 ft. o.c. Side laps are fastened with Traxx/1 fasteners spaced 30 in. o.c.
This Tested Assembly has been analyzed for allowable deck stress. See Evidence Submitted Table.

System Type D(18): Membrane fastened over preliminarily fastened insulation.

All General and System Limitations apply.

Vapor Barrier: (Optional) Sopravap'r, self-adhered.

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, ISO 95+ GL, Ultra-Max, H-Shield, M-Shield, Sopra-ISO r (flat or tapered)		
Minimum 1.5" 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.

Base Sheet: Soprafix Base 622, Soprafix Base 612, Soprafix Base 613, or Soprafix Base 614, mechanically attached with OMG Polymer Batten Strip and OMG #15 Roofgrip Large Head fasteners, Trufast Flat Batten Bar and Trufast #15 EHD Fasteners, spaced 12" o.c. in the min. 4" torch-applied lap.

Ply Sheet: (Optional) One or more layers of Elastophene Flam, Elastophene Flam 2.2, Elastophene Flam HS, Elastophene SP 2.2, Colphene SP 2.2, Elastophene SP 3.0, Colphene SP 3.0, Sopralene Flam 180, Colphene Flam 180, Sopralene Flam 250, Sopralene 180 SP 3.0, Sopralene 180 SP 3.5, Colphene 180 SP 3.5, Sopralene 250 SP, Soprafix Base 613, Soprafix Base 612, or Soprafix Base 614, torch-applied.

Membrane: Sopralene Flam 180 GR, Colphene Flam 180 GR, Sopralene Flam 180 FR GR, Colphene Flam 180 FR GR, Sopralene Flam 180 FR GR 3.5, Sopralene Flam 180 FR+ GR, Sopralene Flam 250 FR GR, Colphene Flam 250 FR GR, Sopralene Flam 250 FR+ GR, Sopralast 50 TV Alu, Sopralene Flam Antirock, torch-applied.

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: SBS

Deck Type 2I: Steel, Insulated

Deck Description: 18-22 ga., **(See Fastening Options for Steel Grade)**, Type B steel deck fastened to ¼" thick steel structural supports spaced a maximum of 6' o.c. with Traxx/5 fasteners and ¾" diameter steel washers spaced a maximum 6" o.c. at the supports. Side laps are fastened with Traxx/1 fasteners spaced 12 in. o.c. **This Tested Assembly has been analyzed for allowable deck stress. See Evidence Submitted Table.**

System Type D(19): Membrane fastened over preliminarily secured insulation.

All General and System Limitations apply.

Vapor Barrier: (Optional) Sopravap'r, self-adhered.

Fire Barrier: (Optional) Minimum ¼" thick DensDeck or DensDeck Prime, loose-laid.

One or more layers of any of the following insulations.

Base Insulation Layer	**Insulation Fasteners (Table 3)**	**Fastener Density/ft^2**
ACFoam-II, Sopra-ISO s, ISO 95+ GL, Ultra-Max, H-Shield, M-Shield, Sopra-ISO r, TopRock DD, TopRock DD Plus, SopraRock DD, SopraRock DD Plus		
Minimum 1.5" thick	**N/A**	**N/A**

Top Insulation Layer (Optional)	**Insulation Fasteners (Table 3)**	**Fastener Density/ft^2**
Sopraboard		
Minimum 1/8" thick	**N/A**	**N/A**
DensDeck, DensDeck Prime, SECUROCK Gypsum-Fiber Roof Board		
Minimum ¼" 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.

Base Sheet: One layer of Soprafix Base 611, Soprafix Base 622, Soprafix Base 612, Soprafix Base 613, or Soprafix Base 614 fastened to the deck as described below:

Fastening #1: **(*Grade 80 steel deck*)** Attach base sheet using Trufast #15 EHD Fasteners with Trufast 2" Barbed Metal Seam Plates or Soprema #15 HD Fasteners with Soprema 2" Seam Plates with row spacing at a maximum 35.5" o.c. The fasteners are spaced 6" o.c. in a 4" wide torch-applied base sheet side laps.

Fastening #2: **(*Grade 33 steel deck*)** Attach base sheet using Trufast #15 EHD Fasteners with Trufast 2.4" Scoop Seam Plates or Soprema #15 HD Fasteners with Soprema 2.4" Seam Plates with row spacing at a maximum 35.5" o.c. The fasteners are spaced 6" o.c. in a 4" wide torch-applied base sheet side laps.

Ply Sheet: (Optional)	One or more plies of Elastophene Flam, Elastophene Flam 2.2, Elastophene Flam HS, Elastophene SP 2.2, Colphene SP 2.2, Elastophene SP 3.0, Colphene SP 3.0, Sopralene Flam 180, Colphene Flam 180, Sopralene Flam 250, Sopralene 180 SP 3.0, Sopralene 180 SP 3.5, Colphene 180 SP 3.5, Sopralene 250 SP, Soprafix Base 613, Soprafix Base 612, or Soprafix Base 614, torch-applied.
Membrane:	Sopralene Flam 180 GR, Colphene Flam 180 GR, Sopralene Flam 180 FR GR, Colphene Flam 180 FR GR, Sopralene Flam 180 FR GR 3.5, Sopralene Flam 180 FR+ GR, Sopralene Flam 250 FR GR, Colphene Flam 250 FR GR, Sopralene Flam 250 FR+ GR, Sopralast 50 TV Alu, Sopralene Flam Antirock, torch-applied. The 3" wide side laps of the cap sheets are torch-applied.
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:	-112.5 psf. (See General Limitation #7.)

Membrane: SBS

Deck Type 2I: Steel, Insulated

Deck Description: 18-22 ga., **(See Fastening Options for Steel Grade)**, Type B steel deck fastened to ¼" thick steel structural supports spaced a maximum of 6' o.c. with Traxx/5 fasteners and ¾" diameter steel washers spaced a maximum 6" o.c. at the supports. Side laps are fastened with Traxx/1 fasteners spaced 12 in. o.c. **This Tested Assembly has been analyzed for allowable deck stress. See Evidence Submitted Table.**

System Type D(20): Membrane fastened 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**
Celcore MF Cellular Concrete, Siplast Lightweight Insulating Concrete, Elastizell Lightweight Insulating Concrete, Concrecel Lightweight Insulating Concrete, Mearlcrete Lightweight Insulating Concrete Minimum 2.0" thick, Minimum 300 psi.	**N/A**	**N/A**

Note: Load capacity of the structural substrate must be verified for the additional load of the LWC. The LWC must be properly vented.

Middle Insulation Layer (Optional)	**Insulation Fasteners (Table 3)**	**Fastener Density/ft²**
ACFoam-II, Sopra-ISO s, ISO 95+ GL, Ultra-Max, H-Shield, M-Shield, Sopra-ISO r, Sopra-ISO x, TopRock DD, TopRock DD Plus, SopraRock DD, SopraRock DD Plus Minimum 1.5" thick	**N/A**	**N/A**

Top Insulation Layer (Optional)	**Insulation Fasteners (Table 3)**	**Fastener Density/ft²**
Sopraboard Minimum 1/8" thick	**N/A**	**N/A**
DensDeck, DensDeck Prime, SECUROCK Gypsum-Fiber Roof Board Minimum ¼" thick	**N/A**	**N/A**

Note: Top layer shall have preliminary attachment, prior to the installation of the base sheet. Insulation shall be limited to maximum 1" thickness. All layers of insulation and base sheet shall be simultaneously fastened. See base/anchor sheet below for fasteners and density.

Base Sheet: One layer of Soprafix Base 611, Soprafix Base 622, Soprafix Base 612, Soprafix Base 613, or Soprafix Base 614 fastened to the deck as described below:

Fastening #1: **(*Grade 80 steel deck*)** Attach base sheet using Trufast #15 EHD Fasteners with Trufast 2" Barbed Metal Seam Plates or Soprema #15 HD Fasteners with Soprema 2" Seam Plates with row spacing at a maximum 35.5" o.c. The fasteners are spaced 6" o.c. in a 4" wide torch-applied base sheet side laps.

Fastening #2: **(*Grade 33 steel deck*)** Attach base sheet using Trufast #15 EHD Fasteners with Trufast 2.4" Scoop Seam Plates or Soprema #15 HD Fasteners with Soprema 2.4" Seam Plates with row spacing at a maximum 35.5" o.c. The fasteners are spaced 6" o.c. in a 4" wide torch-applied base sheet side laps.

Ply Sheet: (Optional)	One or more plies of Elastophene Flam, Elastophene Flam 2.2, Elastophene Flam HS, Elastophene SP 2.2, Colphene SP 2.2, Elastophene SP 3.0, Colphene SP 3.0, Sopralene Flam 180, Colphene Flam 180, Sopralene Flam 250, Sopralene 180 SP 3.0, Sopralene 180 SP 3.5, Colphene 180 SP 3.5, Sopralene 250 SP, Soprafix Base 613, Soprafix Base 612, or Soprafix Base 614, torch-applied.
Membrane:	Elastophene Flam LS FR GR, Sopralene Flam 180 GR, Colphene Flam 180 GR, Sopralene Flam 180 FR GR, Colphene Flam 180 FR GR, Sopralene Flam 180 FR GR 3.5, Sopralene Flam 180 FR+ GR, Sopralene Flam 250 FR GR, Colphene Flam 250 FR GR, Sopralene Flam 250 FR+ GR, Sopralast 50 TV Alu, Sopralene Flam Antirock, torch-applied. The 3" wide side laps of the cap sheets are torch-applied.
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:	-112.5 psf.; (See General Limitation #7.)

Membrane: SBS

Deck Type 2I: Steel, Insulated

Deck Description: 18 ga. ASTM A1008 Grade 80, Type B steel deck fastened 6" o.c. with Traxx/5 fasteners to supports spaced 6 ft. o.c. Side laps are fastened with Traxx/1 fasteners spaced 30 in. o.c.
This Tested Assembly has been analyzed for allowable deck stress. See Evidence Submitted Table.

System Type D(21): Membrane fastened over preliminarily secured insulation.

All General and System Limitations apply.

Vapor Barrier: (Optional) Sopravap'r, self-adhered.

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, ISO 95+ GL, Ultra-Max, H-Shield, M-Shield, Sopra-ISO r (flat or tapered)		
Minimum 1.5" 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.

Base Sheet: One layer of Soprafix Base 622, Soprafix Base 612, Soprafix Base 613, or Soprafix Base 614, mechanically attached with OMG Polymer Batten Strip and OMG #15 Roofgrip Large Head fasteners, Trufast Flat Batten Bar and Trufast #15 EHD Fasteners, spaced 6" o.c. in every other minimum 4" torch-applied lap. Intermediate, non-fastened laps are 3" wide and torch-applied.

Ply Sheet: (Optional) One or more layers of Elastophene Flam, Elastophene Flam 2.2, Elastophene Flam HS, Elastophene SP 2.2, Colphene SP 2.2, Elastophene SP 3.0, Colphene SP 3.0, Sopralene Flam 180, Colphene Flam 180, Sopralene Flam 250, Sopralene 180 SP 3.0, Sopralene 180 SP 3.5, Colphene 180 SP 3.5, Sopralene 250 SP, Soprafix Base 613, Soprafix Base 612, or Soprafix Base 614, torch-applied.

Membrane: Sopralene Flam 180 GR, Colphene Flam 180 GR, Sopralene Flam 180 FR GR, Colphene Flam 180 FR GR, Sopralene Flam 180 FR GR 3.5, Sopralene Flam 180 FR+ GR, Sopralene Flam 250 FR GR, Colphene Flam 250 FR GR, Sopralene Flam 250 FR+ GR, Sopralast 50 TV Alu, Sopralene Flam Antirock, torch-applied.

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: SBS

Deck Type 2I: Steel, Insulated

Deck Description: Min. 18-22 ga., Type B, Grade 80 steel deck fastened to ¼" thick steel structural supports spaced a maximum of 6' o.c. with Traxx/5 fasteners spaced a maximum 6" o.c. at the supports. Side laps are fastened with Traxx/1 fasteners spaced 12 in. o.c.
This Tested Assembly has been analyzed for allowable deck stress. See Evidence Submitted Table.

System Type D(22): Membrane fastened over preliminarily secured insulation.

All General and System Limitations apply.

Vapor Barrier: (Optional) Sopravap'r, self-adhered.

Fire Barrier: (Optional) Minimum ¼" thick DensDeck or DensDeck Prime, loose-laid.

One or more layers of any of the following insulations.

Base Insulation Layer	**Insulation Fasteners (Table 3)**	**Fastener Density/ft^2**
ACFoam-II, Sopra-ISO s, ISO 95+ GL, Ultra-Max, H-Shield, M-Shield, Sopra-ISO r, TopRock DD, TopRock DD Plus, SopraRock DD, SopraRock DD Plus		
Minimum 1.5" thick	**N/A**	**N/A**

Top Insulation Layer (Optional)	**Insulation Fasteners (Table 3)**	**Fastener Density/ft^2**
Sopraboard		
Minimum 0.125" thick	**N/A**	**N/A**
DensDeck, DensDeck Prime, SECUROCK Gypsum-Fiber Roof Board		
Minimum 0.25" 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.

Base Sheet: One layer of Soprafix Base 611, Soprafix Base 622, Soprafix Base 612, Soprafix Base 613, or Soprafix Base 614 fastened to the deck as described below:

Fastening #1: Attach base sheet using Trufast #14 HD Fasteners and Soprema #14 MP Fasteners with Trufast 2" Barbed Metal Seam Plates and Soprema 2" Seam Plates with row spacing at a maximum 35.5" o.c. The fasteners are spaced 6" o.c. and centered inside the 4" wide torch-applied base sheet side laps.
(Meets Maximum Design Pressure of -120 psf. See General Limitation #7.)

Fastening #2: Attach base sheet using Trufast #14 HD Fasteners with Trufast 2.4" Scoop Seam Plates or Soprema #14 MP Fasteners with Soprema 2.4" Seam Plates with row spacing at a maximum 35.5" o.c. The fasteners are spaced 6" o.c. and centered inside the 4" wide torch-applied base sheet side laps.
(Meets Maximum Design Pressure of -135 psf. See General Limitation #7.)

Ply Sheet: (Optional)	One or more plies of Elastophene Flam, Elastophene Flam 2.2, Elastophene Flam HS, Elastophene SP 2.2, Colphene SP 2.2, Elastophene SP 3.0, Colphene SP 3.0, Sopralene Flam 180, Colphene Flam 180, Sopralene Flam 250, Sopralene 180 SP 3.0, Sopralene 180 SP 3.5, Colphene 180 SP 3.5, Sopralene 250 SP, Soprafix Base 613, Soprafix Base 612, or Soprafix Base 614, torch-applied.
Membrane:	Sopralene Flam 180 GR, Colphene Flam 180 GR, Sopralene Flam 180 FR GR, Colphene Flam 180 FR GR, Sopralene Flam 180 FR GR 3.5, Sopralene Flam 180 FR+ GR, Sopralene Flam 250 FR GR, Colphene Flam 250 FR GR, Sopralene Flam 250 FR+ GR, Sopralast 50 TV Alu, Sopralene Flam Antirock, torch-applied. The 3" wide side laps of the cap sheets are torch-applied.
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: SBS

Deck Type 2I: Steel, Insulated

Deck Description: 18-22 ga., Type B, Grade 80 steel deck fastened to ¼" thick steel structural supports spaced a maximum of 6' o.c. with Traxx/5 fasteners spaced a maximum 6" o.c. at the supports. Side laps are fastened with Traxx/1 fasteners spaced 12 in. o.c.
This Tested Assembly has been analyzed for allowable deck stress. See Evidence Submitted Table.

System Type D(23): Membrane fastened 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/ft^2**
Celcore MF Cellular Concrete, Siplast Lightweight Insulating Concrete, Elastizell Lightweight Insulating Concrete, Concrecel Lightweight Insulating Concrete, Mearlcrete Lightweight Insulating Concrete Minimum 2.0" thick, Minimum 300 psi.	**N/A**	**N/A**

Note: Load capacity of the structural substrate must be verified for the additional load of the LWC. The LWC must be properly vented.

Middle Insulation Layer (Optional)	**Insulation Fasteners (Table 3)**	**Fastener Density/ft^2**
ACFoam-II, Sopra-ISO s, ISO 95+ GL, Ultra-Max, H-Shield, M-Shield, Sopra-ISO r, Sopra-ISO x, TopRock DD, TopRock DD Plus, SopraRock DD, SopraRock DD Plus Minimum 1.5" thick	**N/A**	**N/A**

Top Insulation Layer (Optional)	**Insulation Fasteners (Table 3)**	**Fastener Density/ft^2**
Sopraboard Minimum 0.125" thick	**N/A**	**N/A**
DensDeck, DensDeck Prime, SECUROCK Gypsum-Fiber Roof Board Minimum 0.25" thick	**N/A**	**N/A**

Note: Top layer shall have preliminary attachment, prior to the installation of the base sheet. Insulation shall be limited to maximum 1" thickness. All layers of insulation and base sheet shall be simultaneously fastened. See base/anchor sheet below for fasteners and density.

Base Sheet: One layer of Soprafix Base 611, Soprafix Base 622, Soprafix Base 612, Soprafix Base 613, or Soprafix Base 614 fastened to the deck as described below:

Fastening #1: Attach base sheet using Trufast #14 HD Fasteners with Trufast 2" Barbed Metal Seam Plates or Soprema #14 MP Fasteners with Soprema 2" Seam Plates with row spacing at a maximum 35.5" o.c. The fasteners are spaced 6" o.c. and centered inside the 4" wide torch-applied base sheet side laps.
(Meets Maximum Design Pressure of -120 psf.; See General Limitation #7.)

Fastening #2:	Attach base sheet using Trufast #14 HD Fasteners with Trufast 2.4" Scoop Seam Plates or Soprema #14 MP Fasteners with Soprema 2.4" Seam Plates with row spacing at a maximum 35.5" o.c. The fasteners are spaced 6" o.c. and centered inside the 4" wide torch-applied base sheet side laps. ***(Meets Maximum Design Pressure of -135 psf.; See General Limitation #7.)***
Ply Sheet: (Optional)	One or more plies of Elastophene Flam, Elastophene Flam 2.2, Elastophene Flam HS, Elastophene SP 2.2, Colphene SP 2.2, Elastophene SP 3.0, Colphene SP 3.0, Sopralene Flam 180, Colphene Flam 180, Sopralene Flam 250, Sopralene 180 SP 3.0, Sopralene 180 SP 3.5, Colphene 180 SP 3.5, Sopralene 250 SP, Soprafix Base 613, Soprafix Base 612, or Soprafix Base 614, torch-applied.
Membrane:	Elastophene Flam LS FR GR, Sopralene Flam 180 GR, Colphene Flam 180 GR, Sopralene Flam 180 FR GR, Colphene Flam 180 FR GR, Sopralene Flam 180 FR GR 3.5, Sopralene Flam 180 FR+ GR, Sopralene Flam 250 FR GR, Colphene Flam 250 FR GR, Sopralene Flam 250 FR+ GR, Sopralast 50 TV Alu, Sopralene Flam Antirock, torch-applied. The 3" wide side laps of the cap sheets are torch-applied.
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: SBS

Deck Type 2I: Steel, Insulated

Deck Description: 18 ga., Type B, Grade 33 steel deck fastened to structural supports spaced a maximum of 6' o.c. with Tek/5 screws and spaced a maximum 6" o.c. at the supports. Side laps are fastened with Traxx/1 screws spaced maximum 24 in. o.c. **This Tested Assembly has been analyzed for allowable deck stress. See Evidence Submitted Table.**

System Type D(24): Membrane fastened over preliminarily secured insulation.

All General and System Limitations apply.

Vapor Barrier: (Optional) Sopravap'r, self-adhered.

Fire Barrier: (Optional) Minimum ¼" thick DensDeck or DensDeck Prime, loose-laid.

One or more layers of any of the following insulations.

Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft^2
H-Shield, M-Shield, Sopra-ISO r Minimum 1.5" thick	**N/A**	**N/A**

Note: Base 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.

Base Sheet: One layer of Soprafix Base 613, Soprafix Base 612, or Soprafix Base 614 fastened to the deck as described below:

Fastening #1: Attach Soprafix Base 613 using Trufast #15 EHD Fasteners with Trufast 2" Barbed Metal Seam Plates, Trufast 2.4" Barbed Metal Seam Plates or Soprema #15 HD Fasteners with Soprema 2" Seam Plates or Soprema #14 Fasteners with Soprafix 2-3/8" SB Stress Plates or Dekfast DF-#14-PH3 fasteners with Dekfast 2-3/8" Round Barbed Seam Plates or OMG Heavy-Duty fasteners with OMG 2-3/8" Barbed XHD Plates with row spacing at a maximum 34" o.c. The fasteners are spaced 6" o.c. in a 5" wide heat-welded base sheet side laps.

Fastening #2: Attach Soprafix Base 612 using Trufast #15 EHD Fasteners with Trufast 2" Barbed Metal Seam Plates, Trufast 2.4" Barbed Metal Seam Plates or Soprema #15 HD Fasteners with Soprema 2" Seam Plates or Soprema #14 Fasteners with Soprafix 2-3/8" SB Stress Plates or Dekfast DF-#14-PH3 fasteners with Dekfast 2-3/8" Round Barbed Seam Plates or OMG Heavy-Duty fasteners with OMG 2-3/8" Barbed XHD Plates with row spacing at a maximum 34" o.c. The fasteners are spaced 6" o.c. in a 4" wide heat-welded base sheet side laps.

Fastening #3:	Attach Soprafix Base 614 using Trufast #15 EHD Fasteners with Trufast 2.4" Scoop Seam Plates, Trufast 2" Barbed Metal Seam Plates or Soprema #15 HD Fasteners with Soprema 2.4" Seam Plates, Soprema 2" Seam Plates or Dekfast DF-#14-PH3 fasteners with Dekfast 2-3/8" Round Barbed Seam Plates, Soprema #14 Fasteners with Soprafix 2-3/8" SB Stress Plates, Soprafix 2" SB Stress Plates or OMG Heavy-Duty with OMG 2" Barbed Plates or OMG 2-3/8" Barbed XHD Plates with row spacing at a maximum 35" o.c. The fasteners are spaced 12" o.c. in a 5" or 6" wide heat-welded base sheet side laps.
Ply Sheet: (Optional)	One or more plies of Elastophene Flam, Elastophene Flam 2.2, Elastophene Flam HS, Elastophene SP 2.2, Colphene SP 2.2, Elastophene SP 3.0, Colphene SP 3.0, Sopralene Flam 180, Colphene Flam 180, Sopralene Flam 250, Sopralene 180 SP 3.0, Sopralene 180 SP 3.5, Colphene 180 SP 3.5, Sopralene 250 SP, Soprafix Base 613, Soprafix Base 612 or Soprafix Base 614, torch-applied.
Membrane:	Sopralene Flam 180 GR, Colphene Flam 180 GR, Sopralene Flam 180 FR GR, Colphene Flam 180 FR GR, Sopralene Flam 180 FR GR 3.5, Sopralene Flam 180 FR+ GR, Sopralene Flam 250 FR GR, Colphene Flam 250 FR GR, Sopralene Flam 250 FR+ GR, Sopralast 50 TV Alu, Sopralene Flam Antirock, torch-applied.
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:	-142.5 psf. (See General Limitation #7)

Membrane: SBS

Deck Type 2I: Steel, Insulated

Deck Description:

1. Minimum 20 ga., Grade 80, Type B steel deck attached to supports having a maximum span of 72" o.c.
2. Minimum 22 ga., Grade 80, Type B steel deck attached to supports having a maximum span of 71" o.c.
3. Minimum 22 ga., Grade 33, Type B steel deck attached to supports having a maximum span of 52" o.c.
4. Minimum 20 ga., Grade 33, Type B steel deck attached to supports having a maximum span of 58" o.c.
5. Minimum 18 ga., Grade 33, Type B steel deck attached to supports having a maximum span of 68" o.c

All of the above steel deck options are attached to structural supports with two Traxx/5 fasteners and 0.75" diameter washer spaced 6" o.c. at each corrugation.

All of the above steel deck options; panel side laps are fastened 13" o.c. with Traxx/1 fasteners.

This Tested Assembly has been analyzed for allowable deck stress. See Evidence Submitted Table.

System Type D(25): Membrane fastened over preliminarily secured insulation.

All General and System Limitations apply.

Vapor Barrier: (Optional) Sopravap'r, self-adhered.

One or more layers of any of the following insulations.

Base Insulation Layer	**Insulation Fasteners (Table 3)**	**Fastener Density/ft^2**
ACFoam-II, Sopra-ISO s, H-Shield, M-Shield, Sopra-ISO r, ENRGY 3, ISO 95+ GL, Ultra-Max (flat or tapered)		
Minimum 1.5" thick	**N/A**	**N/A**
Middle Insulation Layer	**Insulation Fasteners (Table 3)**	**Fastener Density/ft^2**
DensDeck (staggered from base layer)		
Minimum 0.5" thick	**N/A**	**N/A**
Top Insulation Layer	**Insulation Fasteners (Table 3)**	**Fastener Density/ft^2**
Sopraboard		
Minimum 0.25" thick	**1 (#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.

Base Sheet: One layer of Soprafix Base 614, torch-applied to insulation with a minimum 6" wide lap, then fastened to the deck as described below:

Fastening #1:	Attach base sheet using Dekfast DF-#15-PH3 and Soprema #15 Fasteners with Dekfast 2-3/8" Round Barbed Seam Plates and Soprafix 2-3/8" SB Stress Plates in rows spaced maximum 18" o.c., with fasteners spaced maximum 6" o.c. within each row.
Fastening #2:	Attach base sheet using Dekfast DF-#15-PH3 and Soprema #15 Fasteners with Dekfast 2-3/8" Round Barbed Seam Plates and Soprafix 2-3/8" SB Stress Plates in rows spaced maximum 12" o.c., with fasteners spaced maximum 12" o.c. within each row.
Ply Sheet:	Sopralene Flam 180, Colphene Flam 180, Sopralene Flam 250, torch-applied with minimum 3" wide lap.
Membrane:	Sopralene Flam 180 GR, Colphene Flam 180 GR, Sopralene Flam 180 FR GR, Colphene Flam 180 FR GR, Sopralene Flam 180 FR GR 3.5, Colphene Flam 250 FR GR, Sopralene Flam 250 FR GR, Sopralast 50 TV Alu, Sopralene Flam Antirock, torch-applied with minimum 3" wide 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:	-157.5 psf. (See General Limitation #7)

Membrane: SBS

Deck Type 2I: Steel, Insulated

Deck Description:

1. Minimum 22 ga., Grade 80, Type B steel deck attached to supports having a maximum span of 72" o.c.
2. Minimum 22 ga., Grade 33, Type B steel deck attached to supports having a maximum span of 54" o.c.
3. Minimum 20 ga., Grade 33, Type B steel deck attached to supports having a maximum span of 60" o.c.
4. Minimum 18 ga., Grade 33, Type B steel deck attached to supports having a maximum span of 70" o.c

All of the above steel deck options are attached to structural supports with two Traxx/5 fasteners and 0.75" diameter washer spaced 6" o.c. at each corrugation.

All of the above steel deck options; panel side laps are fastened 12" o.c. with Traxx/1 fasteners.

This Tested Assembly has been analyzed for allowable deck stress. See Evidence Submitted Table.

System Type D(26): Membrane fastened over preliminarily secured insulation.

All General and System Limitations apply.

Fire Barrier: (Optional) Minimum 5/8" thick SECUROCK Gypsum-Fiber Roof Board, DensDeck, DensDeck Prime, pre-secured with a maximum contributory area of 1:4 ft²

Vapor Barrier: (Optional) One or more layers of Colphene Sanded, Elastophene Sanded 2.2, Elastophene Sanded 3.0, Elastophene HS, Colphene 180 Sanded, Sopralene 180 Sanded 2.2, Sopralene 180 Sanded, Sopralene 250 Sanded, Elastophene PS, Elastophene PS 3.0, Colphene 180 PS, Sopralene 180 PS 2.2, adhered in hot asphalt at 25 lbs./sq. or applied in COLPLY Adhesive at a rate of 1.5 gal./sq.
Or
One or two layers of Sopra IV or Sopra VI adhered in hot asphalt at 25 lbs./sq.
Or
Sopravap'r, self-adhered.
Or
Elastophene Flam, Elastophene Flam 2.2, Elastophene SP 2.2, Colphene SP 2.2, Elastophene SP 3.0, Colphene SP 3.0, Elastophene Flam HS, Sopralene 180 SP 3.0, Sopralene 180 SP 3.5, Colphene 180 SP 3.5, Sopralene 250 SP, Sopralene Flam 180, Colphene Flam 180 or Sopralene Flam 250, torch-applied.

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, Ultra-Max, 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		
Minimum 0.5" thick	**2, 3, 10, 35, 36**	**1:4 ft²**

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

Base Sheet: One layer of Sopralene Flam 180, Colphene Flam 180, Sopralene Flam 250, Soprafix Base 622, Soprafix Base 613, Soprafix Base 612, Soprafix Base 614, Soprafix Base 641, Soprafix Base 611*, fastened as specified below.
*For use only when using 2 in. diameter plates.

Fastening: Mechanically attach base sheet with Soprema #14 fasteners or Soprema #15 fasteners and Soprema Soprafix 2" SB Stress Plates or Soprafix 2-3/8 in. SB Stress Plates, Dekfast DF-#14-PH3 or Dekfast DF-#15-PH3 fasteners with Dekfast PLT-R-2-4B, 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 Metal Seam Plates, Soprema #15 HD Fasteners with Soprema 2" Seam 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.

Ply Sheet: Elastophene Flam, Elastophene Flam 2.2, Elastophene Flam HS, Sopralene Flam 180, Colphene Flam 180, Sopralene Flam 250, torch-applied.

Membrane: Elastophene Flam FR GR, Elastophene Flam LS FR GR, Sopralast 50 TV Alu, Sopralene Flam 180 FR GR, Colphene Flam 180 FR GR, Sopralene Flam 180 FR GR 3.5, Sopralene Flam 180 GR, Colphene Flam 180 GR, Sopralene Flam 250 FR GR, Colphene Flam 250 FR GR, Sopralene Flam 180 FR+ GR, Sopralene Flam 250 FR+ GR, Sopralene Flam Antirock, torch-applied.

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

Membrane: SBS

Deck Type 2I: Steel Insulated

Deck Description:

1. Minimum 22 ga., Grade 80, Type B steel deck attached to supports having a maximum span of 72" o.c.
2. Minimum 22 ga., Grade 33, Type B steel deck attached to supports having a maximum span of 54" o.c.
3. Minimum 20 ga., Grade 33, Type B steel deck attached to supports having a maximum span of 60" o.c.
4. Minimum 18 ga., Grade 33, Type B steel deck attached to supports having a maximum span of 70" o.c

All of the above steel deck options are attached to structural supports with two Traxx/5 fasteners and 0.75" diameter washer spaced 6" o.c. at each corrugation.

All of the above steel deck options; panel side laps are fastened 12" o.c. with Traxx/1 fasteners.

This Tested Assembly has been analyzed for allowable deck stress. See Evidence Submitted Table.

System Type D(27): Membrane fastened over preliminarily secured insulation.

All General and System Limitations apply.

Fire Barrier: (Optional) Minimum 5/8" thick SECUROCK Gypsum-Fiber Roof Board, DensDeck, DensDeck Prime, pre-secured with a maximum contributory area of 1:4 ft²

Vapor Barrier: (Optional) One or more layers of Colphene Sanded, Elastophene Sanded 2.2, Elastophene Sanded 3.0, Elastophene HS, Colphene 180 Sanded, Sopralene 180 Sanded 2.2, Sopralene 180 Sanded, Sopralene 250 Sanded, Elastophene PS, Elastophene PS 3.0, Colphene 180 PS, Sopralene 180 PS 2.2, adhered in hot asphalt at 25 lbs./sq. or applied in COLPLY Adhesive at a rate of 1.5 gal./sq.
Or
One or two layers of Sopra IV or Sopra VI adhered in hot asphalt at 25 lbs./sq.
Or
Sopravap'r, self-adhered.
Or
Elastophene Flam, Elastophene Flam 2.2, Elastophene SP 2.2, Colphene SP 2.2, Elastophene SP 3.0, Colphene SP 3.0, Elastophene Flam HS, Sopralene 180 SP 3.0, Sopralene 180 SP 3.5, Colphene 180 SP 3.5, Sopralene 250 SP, Sopralene Flam 180, Colphene Flam 180 or Sopralene Flam 250, torch-applied.

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, Ultra-Max, 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		
Minimum 0.5" thick	**2, 21, 3, 11 or 12**	**1:4 ft²**

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: (Optional) Coverboard is primed with an approved ASTM D41 asphalt primer at a rate of 100-150 ft^2/gal.

Base Sheet: One Layer of Sopralene 180 SP 3.0, Sopralene 180 SP 3.5, Colphene 180 SP 3.5, Sopralene 250 SP, fastened as specified below:

Fastening: Mechanically attach torch-applied base sheet with Soprema #14 or Soprema #15 fasteners and Soprema Soprafix 2" SB Stress plates, Dekfast DF-#14-PH3 or Dekfast DF-#15-PH3 fasteners with Dekfast PLT-R-2-4B, Dekfast PLT-R-2-3/8-6Bs, Trufast #15 EHD Fasteners with Trufast 2" Barbed Metal Stress Plates or Trufast 2.4" Barbed Metal 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

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

Membrane: Elastophene Flam FR GR, Elastophene Flam LS FR GR, Sopralast 50 TV Alu, Sopralene Flam 180 FR GR, Colphene Flam 180 FR GR, Sopralene Flam 180 FR GR 3.5, Sopralene Flam 180 FR+ GR, Sopralene Flam 180 GR, Colphene Flam 180 GR, Sopralene Flam 250 FR GR, Colphene Flam 250 FR GR, Sopralene Flam 250 FR+ GR, Sopralene Flam Antirock, torch-applied 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: –150 psf. (See General Limitation #7.)

Membrane: SBS

Deck Type 2I: Steel, Insulated

Deck Description:

1. Minimum 22 ga., Grade 80, Type B steel deck attached to supports having a maximum span of 72" o.c.
2. Minimum 22 ga., Grade 33, Type B steel deck attached to supports having a maximum span of 54" o.c.
3. Minimum 20 ga., Grade 33, Type B steel deck attached to supports having a maximum span of 60" o.c.
4. Minimum 18 ga., Grade 33, Type B steel deck attached to supports having a maximum span of 70" o.c

All of the above steel deck options are attached to structural supports with two Traxx/5 fasteners and 0.75" diameter washer spaced 6" o.c. at each corrugation.

All of the above steel deck options; panel side laps are fastened 12" o.c. with Traxx/1 fasteners.

This Tested Assembly has been analyzed for allowable deck stress. See Evidence Submitted Table.

System Type D(28): Membrane fastened over preliminarily secured insulation.

All General and System Limitations apply.

Vapor Barrier: (Optional) Sopravap'r, self-adhered.

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, Ultra-Max, 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		
Minimum 0.5" thick	**2, 20, 3, 11, 12**	**1:4 ft²**

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: (Optional)	Coverboard is primed with an approved ASTM D41 asphalt primer at a rate of 100-150 ft^2/gal.
Base Sheet:	One layer of Sopralene 180 SP 3.0, Sopralene 180 SP 3.5, Colphene 180 SP 3.5, Sopralene 250 SP, Soprafix Base 613*, Soprafix Base 612*, Soprafix Base 614*, Soprafix Base 622*, Soprafix Base 641, Soprafix Base 611**, torch-applied to coverboard. *Requires torch-applied cap membrane. ** For use only when using 2 in. diameter plates and requires torch-applied cap membrane.
Fastening:	Mechanically attach base sheet with Soprema #14 fasteners or Soprema #15 fasteners and Soprema Soprafix 2" SB Stress Plates or Soprafix 2-3/8 in. SB Stress Plates, Dekfast DF-#14-PH3 Dekfast DF-#15-PH3 fasteners with Dekfast PLT-R-2-4B, 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 Metal Seam Plates, Soprema #15 HD Fasteners with Soprema 2" Seam 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
Ply Sheet:	Elastophene SP 2.2, Colphene SP 2.2, Elastophene SP 3.0, Colphene SP 3.0, Sopralene 180 SP 3.0, Sopralene 180 SP 3.5, Colphene 180 SP 3.5, Sopralene 250 SP, torch-applied. Or Colphene 180 Sanded, Sopralene 180 Sanded 2.2, Soprabase, Elastophene HS, Elastophene Sanded 2.2, Elastophene Sanded 3.0, Colphene 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.
Membrane:	Elastophene FR GR, Elastophene LS FR GR, Sopralene 180 FR GR, Colphene 180 FR GR, Sopralene 180 FR+ GR, Sopralene 250 FR GR, Colphene 250 FR GR, Sopralene 250 FR+ GR, Sopralast 50 TV Alu Sanded adhered in full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs./sq.
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:	-150 psf. (See General Limitation #7.)

Membrane: SBS

Deck Type 2I: Steel, Insulated

Deck Description:

1. Minimum 20 ga., Grade 80, Type B steel deck attached to supports having a maximum span of 72" o.c.
2. Minimum 22 ga., Grade 80, Type B steel deck attached to supports having a maximum span of 69" o.c.
3. Minimum 22 ga., Grade 33, Type B steel deck attached to supports having a maximum span of 51" o.c.
4. Minimum 20 ga., Grade 33, Type B steel deck attached to supports having a maximum span of 57" o.c.
5. Minimum 18 ga., Grade 33, Type B steel deck attached to supports having a maximum span of 66" o.c

All of the above steel deck options are attached to structural supports with two Traxx/5 fasteners and 0.75" diameter washer spaced 6" o.c. at each corrugation.

All of the above steel deck options; panel side laps are fastened 12" o.c. with Traxx/1 fasteners.

This Tested Assembly has been analyzed for allowable deck stress. See Evidence Submitted Table.

System Type D(29): Membrane fastened over preliminarily secured insulation.

All General and System Limitations apply.

Fire Barrier: (Optional) Minimum 5/8" thick SECUROCK Gypsum-Fiber Roof Board, DensDeck, DensDeck Prime, pre-secured with a maximum contributory area of 1:4 ft²

Vapor Barrier: (Optional) One or more layers of Colphene Sanded, Elastophene Sanded 2.2, Elastophene Sanded 3.0, Elastophene HS, Colphene 180 Sanded, Sopralene 180 Sanded 2.2, Sopralene 180 Sanded, Sopralene 250 Sanded, Elastophene PS, Elastophene PS 3.0, Colphene 180 PS, Sopralene 180 PS 2.2, adhered in hot asphalt at 25 lbs./sq. or applied in COLPLY Adhesive at a rate of 1.5 gal./sq.
Or
One or two layers of Sopra IV or Sopra VI adhered in hot asphalt at 25 lbs./sq.
Or
Sopravap'r, self-adhered.
Or
Elastophene Flam, Elastophene Flam 2.2, Elastophene SP 2.2, Colphene SP 2.2, Elastophene SP 3.0, Colphene SP 3.0, Elastophene Flam HS, Sopralene 180 SP 3.0, Sopralene 180 SP 3.5, Colphene 180 SP 3.5, Sopralene 250 SP, Sopralene Flam 180, Colphene Flam 180 or Sopralene Flam 250, torch-applied.

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, Ultra-Max, 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		
Minimum 0.5" thick	**2, 3, 10, 35, 36**	**1:4 ft²**

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: (Optional)	Coverboard is primed with an approved ASTM D41 asphalt primer at a rate of 100-150 ft2/gal.
Base Sheet:	One layer of Sopralene Flam 180, Colphene Flam 180, Sopralene Flam 250, Soprafix Base 622, Soprafix Base 613, Soprafix Base 612, Soprafix Base 614, Soprafix Base 641, Soprafix Base 611*, fastened as specified below. *For use only when using 2 in. diameter plates.
Fastening:	Torch-applied base membrane to the coverboard with minimum 3" laps. Mechanically attach torch-applied base sheet with Soprema #14 fasteners or Soprema #15 fasteners and Soprema Soprafix 2" SB Stress Plates or Soprafix 2-3/8 in. SB Stress Plates, Dekfast DF-#14-PH3 or Dekfast DF-#15-PH3 fasteners with Dekfast PLT-R-2-4B or 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 Metal Seam Plates, Soprema #15 HD Fasteners with Soprema 2" Seam Plates spaced maximum 12" o.c. through the side laps and two equally spaced staggered rows in the field of the membrane.
Ply Sheet:	Elastophene Flam, Elastophene Flam 2.2, Elastophene Flam HS, Sopralene Flam 180, Colphene Flam 180, Sopralene Flam 250, torch-applied.
Membrane:	Elastophene Flam FR GR, Elastophene Flam LS FR GR, Sopralast 50 TV Alu, Sopralene Flam 180 FR GR, Colphene Flam 180 FR GR, Sopralene Flam 180 FR GR 3.5, Sopralene Flam 180 GR, Colphene Flam 180 GR, Sopralene Flam 250 FR GR, Colphene Flam 250 FR GR, Sopralene Flam 180 FR+ GR, Sopralene Flam 250 FR+ GR, Sopralene Flam Antirock, torch-applied.
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:	–165 psf. (See General Limitation #7.)

Membrane: SBS

Deck Type 2I: Steel Insulated

Deck Description:

1. Minimum 20 ga., Grade 80, Type B steel deck attached to supports having a maximum span of 72" o.c.
2. Minimum 22 ga., Grade 80, Type B steel deck attached to supports having a maximum span of 69" o.c.
3. Minimum 22 ga., Grade 33, Type B steel deck attached to supports having a maximum span of 51" o.c.
4. Minimum 20 ga., Grade 33, Type B steel deck attached to supports having a maximum span of 57" o.c.
5. Minimum 18 ga., Grade 33, Type B steel deck attached to supports having a maximum span of 66" o.c

All of the above steel deck options are attached to structural supports with two Traxx/5 fasteners and 0.75" diameter washer spaced 6" o.c. at each corrugation.

All of the above steel deck options; panel side laps are fastened 12" o.c. with Traxx/1 fasteners.

This Tested Assembly has been analyzed for allowable deck stress. See Evidence Submitted Table.

System Type D(30): Membrane fastened over preliminarily secured insulation.

All General and System Limitations apply.

Fire Barrier: (Optional) Minimum 5/8" thick SECUROCK Gypsum-Fiber Roof Board, DensDeck, DensDeck Prime, pre-secured with a maximum contributory area of 1:4 ft²

Vapor Barrier: (Optional) One or more layers of Colphene Sanded, Elastophene Sanded 2.2, Elastophene Sanded 3.0, Elastophene HS, Colphene 180 Sanded, Sopralene 180 Sanded 2.2, Sopralene 180 Sanded, Sopralene 250 Sanded, Elastophene PS, Elastophene PS 3.0, Colphene 180 PS, Sopralene 180 PS 2.2, adhered in hot asphalt at 25 lbs./sq. or applied in COLPLY Adhesive at a rate of 1.5 gal./sq.
Or
One or two layers of Sopra IV or Sopra VI adhered in hot asphalt at 25 lbs./sq.
Or
Sopravap'r, self-adhered.
Or
Elastophene Flam, Elastophene Flam 2.2, Elastophene SP 2.2, Colphene SP 2.2, Elastophene SP 3.0, Colphene SP 3.0, Elastophene Flam HS, Sopralene 180 SP 3.0, Sopralene 180 SP 3.5, Colphene 180 SP 3.5, Sopralene 250 SP, Sopralene Flam 180, Colphene Flam 180 or Sopralene Flam 250, torch-applied.

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, Ultra-Max, 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		
Minimum 0.5" thick	**2, 21, 3, 11 or 12**	**1:4 ft²**

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: (Optional) Coverboard is primed with an approved ASTM D41 asphalt primer at a rate of 100-150 ft^2/gal.

Base Sheet: One Layer of Sopralene 180 SP 3.0, Sopralene 180 SP 3.5, Colphene 180 SP 3.5, Sopralene 250 SP, fastened as specified below:

Fastening: Torch-applied base sheet to coverboard with minimum 3" wide side lap. Mechanically attach torch-applied base sheet with Soprema #14 or Soprema #15 fasteners and Soprema Soprafix 2" SB Stress plates, Dekfast DF-#14-PH3 or Dekfast DF-#15-PH3 fasteners with Dekfast PLT-R-2-4B, Dekfast PLT-R-2-3/8-6Bs, Trufast#15 EHD Fasteners with Trufast 2" Barbed Metal Stress Plates or Trufast 2.4" Barbed Metal 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.

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

Membrane: Elastophene Flam FR GR, Elastophene Flam LS FR GR, Sopralast 50 TV Alu, Sopralene Flam 180 FR GR, Colphene Flam 180 FR GR, Sopralene Flam 180 FR GR 3.5, Sopralene Flam 180 FR+ GR, Sopralene Flam 180 GR, Colphene Flam 180 GR, Sopralene Flam 250 FR GR, Colphene Flam 250 FR GR, Sopralene Flam 250 FR+ GR, Sopralene Flam Antirock, torch-applied 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: –165 psf. (See General Limitation #7.)

Membrane: SBS

Deck Type 2I: Steel, Insulated

Deck Description:

1. Minimum 20 ga., Grade 80, Type B steel deck attached to supports having a maximum span of 72" o.c.
2. Minimum 22 ga., Grade 80, Type B steel deck attached to supports having a maximum span of 69" o.c.
3. Minimum 22 ga., Grade 33, Type B steel deck attached to supports having a maximum span of 51" o.c.
4. Minimum 20 ga., Grade 33, Type B steel deck attached to supports having a maximum span of 57" o.c.
5. Minimum 18 ga., Grade 33, Type B steel deck attached to supports having a maximum span of 66" o.c

All of the above steel deck options are attached to structural supports with two Traxx/5 fasteners and 0.75" diameter washer spaced 6" o.c. at each corrugation.

All of the above steel deck options; panel side laps are fastened 12" o.c. with Traxx/1 fasteners.

This Tested Assembly has been analyzed for allowable deck stress. See Evidence Submitted Table.

System Type D(31): Membrane fastened over preliminarily secured insulation.

All General and System Limitations apply.

Vapor Barrier: (Optional) Sopravap'r, self-adhered.

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, Ultra-Max, 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		
Minimum 0.5" thick	**2, 20, 3, 11, 12**	**1:4 ft²**

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

Base Sheet:	One layer of Sopralene 180 SP 3.0, Sopralene 180 SP 3.5, Colphene 180 SP 3.5, Sopralene 250 SP, Soprafix Base 613*, Soprafix Base 612*, Soprafix Base 614*, Soprafix Base 622*, Soprafix Base 641, Soprafix Base 611**, torch-applied to coverboard. *Requires torch-applied cap membrane. ** For use only when using 2 in. diameter plates and requires torch-applied cap membrane.
Fastening:	Torch-applied base sheet to coverboard with minimum 3" wide side lap. Mechanically attach torch-applied base sheet with Soprema #14 fasteners or Soprema #15 fasteners and Soprema Soprafix 2" SB Stress Plates or Soprafix 2-3/8 in. SB Stress Plates, Dekfast DF-#14-PH3 or Dekfast DF-#15-PH3 fasteners with Dekfast PLT-R-2-4B, 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 Metal Seam Plates, Soprema #15 HD Fasteners with Soprema 2" Seam Plates, spaced maximum 12" o.c. through the side laps and two equally spaced staggered rows in the field of the membrane.
Ply Sheet:	Elastophene SP 2.2, Colphene SP 2.2, Elastophene SP 3.0, Colphene SP 3.0, Sopralene 180 SP 3.0, Sopralene 180 SP 3.5, Colphene 180 SP 3.5, Sopralene 250 SP, torch-applied. Or Colphene 180 Sanded, Sopralene 180 Sanded 2.2, Soprabase, Elastophene HS, Elastophene Sanded 2.2, Elastophene Sanded 3.0, Colphene 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.
Membrane:	Elastophene FR GR, Elastophene LS FR GR, Sopralene 180 FR GR, Colphene 180 FR GR, Sopralene 180 FR+ GR, Sopralene 250 FR GR, Colphene 250 FR GR, Sopralene 250 FR+ GR, Sopralast 50 TV Alu Sanded adhered in full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs./sq.
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:	-165 psf. (See General Limitation #7.)

Membrane: SBS

Deck Type 2I: Steel, Insulated

Deck Description:

1. Minimum 20 ga., Grade 80, Type B steel deck attached to supports having a maximum span of 72" o.c.
2. Minimum 22 ga., Grade 80, Type B steel deck attached to supports having a maximum span of 68" o.c.

All of the above steel deck options are attached to structural supports with two Traxx/5 fasteners spaced 6" o.c. at each corrugation.

All of the above steel deck options; panel side laps are fastened 12" o.c. with Traxx/1 fasteners.

This Tested Assembly has been analyzed for allowable deck stress. See Evidence Submitted Table.

System Type D(32): Membrane fastened over preliminarily secured insulation.

All General and System Limitations apply.

Vapor Barrier: (Optional) Sopravap'r, self-adhered.

Fire Barrier: (Optional) Minimum ¼" thick DensDeck or DensDeck Prime, loose-laid.

One or more layers of any of the following insulations.

Base Insulation Layer	**Insulation Fasteners (Table 3)**	**Fastener Density/ft^2**
ACFoam-II, Sopra-ISO s, ISO 95+ GL, Ultra-Max, H-Shield, M-Shield, Sopra-ISO r, TopRock DD, TopRock DD Plus, SopraRock DD, SopraRock DD Plus		
Minimum 1.5" thick	**N/A**	**N/A**

Top Insulation Layer (Optional)	**Insulation Fasteners (Table 3)**	**Fastener Density/ft^2**
Sopraboard		
Minimum 1/8" thick	**N/A**	**N/A**
DensDeck, DensDeck Prime, SECUROCK Gypsum-Fiber Roof Board		
Minimum ¼" 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.

Base Sheet: One layer of Soprafix Base 614 fastened to the deck as described below:

Fastening: Attach base sheet using Trufast #15 EHD Fasteners and Soprema #15 HD Fasteners with Trufast 2.4" Scoop Seam Plates and Soprema 2.4" Seam Plates with row spacing at a maximum 35.5" o.c. The fasteners are spaced 6" o.c. and centered inside the 4" wide torch-applied base sheet side laps.

Ply Sheet: (Optional)	One or more plies of Elastophene Flam, Elastophene Flam 2.2, Elastophene Flam HS, Elastophene SP 2.2, Colphene SP 2.2, Elastophene SP 3.0, Colphene SP 3.0, Sopralene Flam 180, Colphene Flam 180, Sopralene Flam 250, Sopralene 180 SP 3.0, Sopralene 180 SP 3.5, Colphene 180 SP 3.5, Sopralene 250 SP, Soprafix Base 613, Soprafix Base 612 or Soprafix Base 614, torch-applied.
Membrane:	Sopralene Flam 180 GR, Colphene Flam 180 GR, Sopralene Flam 180 FR GR, Colphene Flam 180 FR GR, Sopralene Flam 180 FR GR 3.5, Sopralene Flam 180 FR+ GR, Sopralene Flam 250 FR GR, Colphene Flam 250 FR GR, Sopralene Flam 250 FR+ GR, Sopralast 50 TV Alu, Sopralene Flam Antirock, torch-applied. The 3" wide side laps of the cap sheets are torch-applied.
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:	-172.5 psf. (See General Limitation #7.)

STEEL DECK SYSTEM LIMITATIONS:

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

GENERAL LIMITATIONS:

1. Fire classification is not part of this acceptance; refer to a current Approved Roofing Materials Directory for fire ratings of this product.
2. Insulation may be installed in multiple layers. The first layer shall be attached in compliance with Product Control Approval guidelines. All other layers shall be adhered in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs./sq., or mechanically attached using the fastening pattern of the top layer
3. All standard panel sizes are acceptable for mechanical attachment. When applied in approved asphalt, panel size shall be 4' x 4' maximum.
4. An overlay and/or recovery board insulation panel is required on all applications over closed cell foam insulations when the base sheet is fully mopped. If no recovery board is used the base sheet shall be applied using spot mopping with approved asphalt, 12" diameter circles, 24" o.c.; or strip mopped 8" ribbons in three rows, one at each side lap and one down the center of the sheet allowing a continuous area of ventilation. Encircling of the strips is not acceptable. A 6" break shall be placed every 12' in each ribbon to allow cross ventilation. Asphalt application of either system shall be at a minimum rate of 12 lbs./sq.
   Note: Spot attached systems shall be limited to a maximum design pressure of -45 psf.
5. Fastener spacing for insulation attachment is based on a Minimum Characteristic Force (F') value of 275 lbf., as tested in compliance with Testing Application Standard TAS 105. If the fastener value, as field-tested, are below 275 lbf. Insulation attachment shall not be acceptable.
6. Fastener spacing for mechanical attachment of anchor/base sheet or membrane attachment is based on a minimum fastener resistance value in conjunction with the maximum design value listed within a specific system. Should the fastener resistance be less than that required, as determined by the Building Official, a revised fastener spacing, prepared, signed and sealed by a Florida registered Professional Engineer, Registered Architect, or Registered Roof Consultant may be submitted. Said revised fastener spacing shall utilize the withdrawal resistance value taken from Testing Application Standards TAS 105 and calculations in compliance with Roofing Application Standard RAS 117.
7. Perimeter and corner areas shall comply with the enhanced uplift pressure requirements of these areas. Fastener densities shall be increased for both insulation and base sheet as calculated in compliance with Roofing Application Standard RAS 117. Calculations prepared, signed and sealed by a Florida registered Professional Engineer, Registered Architect, or Registered Roof Consultant **(When this limitation is specifically referred within this NOA, General Limitation #9 will not be applicable.)**
8. All attachment and sizing of perimeter nailers, metal profile, and/or flashing termination designs shall conform to Roofing Application Standard RAS 111 and applicable wind load requirements.
9. The maximum designed pressure limitation listed shall be applicable to all roof pressure zones (i.e. field, perimeters, and corners). Neither rational analysis, nor extrapolation shall be permitted for enhanced fastening at enhanced pressure zones (i.e. perimeters, extended corners and corners). **(When this limitation is specifically referred within this NOA, General Limitation #7 will not be applicable.)**
10. All products listed herein shall have a quality assurance audit in accordance with the Florida Building Code and Rule 61G20-3 of the Florida Administrative Code.

END OF THIS ACCEPTANCE