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 Lightweight Concrete Decks.

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

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

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

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

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

This NOA renews and revises NOA No. 15-0709.11 and consists of pages 1 through 63.
The submitted documentation was reviewed by Jorge L. Acebo.

ROOFING SYSTEM APPROVAL

Category:	Roofing
Sub-Category:	Modified Bitumen
Material:	SBS
Deck Type:	Lightweight Insulating Concrete
Maximum Design Pressure:	-410 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-surfaced base sheet. **For use as a base/ply sheet only.**
Soprabase S	39” x 65’ (2 sq.)	ASTM D4601	SBS modified bitumen, polyester reinforced, sand-surfaced base sheet. **For use as a base/ply sheet only.**
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 VI	Type VI, fiberglass reinforced, smooth surfaced plysheet used in multi-ply systems and complies with ASTM and UL Standards. Applied in hot asphalt or cold adhesive.
Sopra 4897	39” x 41’	ASTM D4897	Fiberglass reinforced, smooth surfaced, modified bitumen venting base sheet for mechanically attaching to substrate.
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.
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.

Product	Dimensions	Test Specification	Product Description
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.
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' (1.5sq.)	ASTM D6163	Glass reinforced modified bitumen membrane with a plastic burn-off film for heat weld bonding to the top side. Applied in hot asphalt, cold adhesive or ribbon stripping.
Elastophene SP 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
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).
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.

Product	Dimensions	Test Specification	Product Description
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.
Elastophene Flam FR GR	39" x 33' (1 sq.)	ASTM D6163	Fiberglass reinforced modified bitumen membrane with fire retardants a plastic burn-off film on the bottom and mineral granules on the top. Applied by heat welding.
Elastophene Flam FR+ GR	39" x 33' (1 sq.)	ASTM D6163	Fiberglass reinforced modified bitumen membrane with fire retardants a plastic burn-off film on the bottom and mineral granules on the top. Applied by heat welding.
Elastophene Stick FR GR	39" x 33' (1 sq.)	ASTM D6163	Self-adhered, granule surfaced, fiberglass reinforced membranes.
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.

Product	Dimensions	Test Specification	Product Description
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.
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.

Product	Dimensions	Test Specification	Product Description
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).
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).

Product	Dimensions	Test Specification	Product Description
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).
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).

Product	Dimensions	Test Specification	Product Description
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.
Sopralene Flam Stick	39" x 33' (1 sq.)	ASTM D6164	Self-adhered, polyester reinforced membrane with a release film on the bottom and a plastic burn-off film on the top.
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).

Product	Dimensions	Test Specification	Product Description
Elastocol 500	various	ASTM D41	Asphalt primers.
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.
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.
Duotack	5, 50 gallon pail	Proprietary	Two part elastomeric urethane foam adhesive.
Duotack Neo	5, 50 gallon pail	Proprietary	Two part polyurethane foam adhesive.

APPROVED INSULATIONS:

TABLE 2

Product Name	Product Description	Manufacturer (With Current NOA)
SECUROCK Gypsum-Fiber Roof Board	Gypsum board	USG Corp.
ACFoam-II, ACFoam-III	Polyisocyanurate foam insulation	Atlas Roofing Corporation
EnergyGuard Polyiso Insulation	Composite polyisocyanurate insulation	GAF
DensDeck	Water resistant gypsum board	Georgia-Pacific Gypsum LLC
Sopra-ISO s, Sopra-ISO+ s	Polyisocyanurate foam insulation	SOPREMA, Inc.
M-Shield, M-Shield CG	Polyisocyanurate foam insulation	SOPREMA, Inc.
Sopra-ISO r, Sopra-ISO+ r	Polyisocyanurate foam insulation	SOPREMA, Inc.
Sopra-ISO x	Polyisocyanurate foam insulation	SOPREMA, Inc.
H-Shield, H-Shield CG	Polyisocyanurate foam insulation	Hunter Panels, LLC
ENRGY 3, ENRGY 3 AGF, ENRGY 3 CGF	Polyisocyanurate foam insulation	Johns Manville Corp.
Ultra-Max, Multi-Max FA-3	Polyisocyanurate foam insulation	RMax Operating, LLC
Sopraboard	Mineral fortified asphaltic cored coverboard	SOPREMA, Inc.
DEXcell FA Glass Mat Roof Board	Gypsum board	National Gypsum Company
DEXcell Cement Roof Board	Cementitious insulation board	National Gypsum Company

APPROVED FASTENERS/ADHESIVES:

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 Fasteners	Fasteners for membrane or insulation attachment to wood, steel or concrete decks.	Various	SOPREMA, Inc.
3.	Dekfast DF-#14-PH3 & DF-#15-PH3	Insulation fastener	Various	SFS Group USA, Inc.
4.	Trufast Twin Loc-Nail Assembled Fastener	Base ply fastening systems for lightweight concrete, gypsum or cementitious wood fiber decks	Various	Altenloh, Brinck & Co. U.S., Inc.
5.	Trufast FM-90 Base Sheet Fastener	Base ply fastening systems for lightweight concrete decks	2.7" head 1.7" long	Altenloh, Brinck & Co. U.S., Inc.
6.	CR Assembled Base Sheet Fastener (1.2") or (1.7")	Base ply fastening assembly		OMG, Inc.
7.	Trufast Twin Loc-Nail Batten Fastener	Batten bar	Various	Altenloh, Brinck & Co. U.S., Inc.
8.	Trufast Twin Loc Coiled Batten Bar	Batten bar	Various	Altenloh, Brinck & Co. U.S., Inc.
9.	OMG Heavy Duty	Insulation fastener	Various	OMG, Inc.
10.	Dekfast PLT-R-3	Galvalume AZ50 steel plate	3" round	SFS Group USA, Inc.
11.	Soprema 3" Round Insulation Plate	Stress plate	3" diameter	SOPREMA, Inc.
12.	Soprafix 2-3/8" SB Stress Plate	Stress plate	2-$^{3}/_{8}$" diameter	SOPREMA, Inc.
13.	Soprema #14 MP Fastener	Insulation and membrane fasteners		SOPREMA, Inc.
14.	Soprema #15 HD Fastener	Insulation and membrane fasteners		SOPREMA, Inc.
15.	Trufast 3" Metal Insulation Plate	Galvalume steel plate	3" round	Altenloh, Brinck & Co. U.S., Inc.
16.	Trufast #14 HD Fastener	Insulation fastener fro wood, steel and concrete	Various	Altenloh, Brinck & Co. U.S., Inc.
17.	Trufast #15 EHD Fasteners	Insulation fastener for wood, steel and concrete.	Various	Altenloh, Brinck & Co. U.S., Inc.
18.	Dekfast PLT-R-2-3/8-6B	Galvalume AZ55 steel barbed plate	2.37" Round	SFS Group USA, Inc.
19.	Dekfast PLT-H-2-7/8	Galvalume steel plate	2 $^{7}/_{8}$" x 3 ¼"	SFS Group USA, Inc.
20.	OMG XHD	Insulation fastener	Various	OMG, Inc.

APPROVED FASTENERS/ADHESIVES:

TABLE 3

Fastener Number	Product Name	Product Description	Dimensions	Manufacturer (With Current NOA)
21.	OMG 3” Galvalume Steel Plate	Galvalume stress plate	3” round	OMG, Inc.
22.	Soprema 3" Metal Insulation Plate	Stress plate	3” diameter	SOPREMA, Inc.
23.	SOPREMA 1.7 in. Base Sheet Fastener	Base ply fastening systems for lightweight concrete decks	2.7” head 1.7” long	SOPREMA, Inc.
24.	SOPREMA Twin Loc-Nail	Base ply fastening systems for lightweight concrete, gypsum or cementitious wood fiber decks	Various	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 or COLPLY Adhesive at 4 gal./sq.
3.	Karnak Corporation	Karnak (#97 AF) Fibered 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	Name	Report	Date
Atlantic & Caribbean Roof Consulting	ACRC 03008	TAS 114	07/11/03
	ACRC 15-049	TAS 114	01/08/16
	ACRC 15-032	TAS 114	12/15/15
	ACRC 15-033	TAS 114	12/15/15
	ACRC 15-034	TAS 114	12/16/15
	ACRC 15-036	TAS 114	12/17/15
UL LLC	R11436	UL 790	01/15/21
FM Approvals	0PA2.AM	FM 4470	11/29/89
	2P2A7.AM	FM 4470	11/29/89
	1W8A1.AM	FM 4470	07/15/93
	1Z3A6.AM	FM 4470	04/27/95
	152A1.AM	FM 4470	11/28/84
	2D0A0.AM	FM 4470	08/15/97
	2B8A4.AM	FM 4470	07/02/97
	3001334	FM 4470	01/25/00
	3002351	FM 4470	02/28/03
	3014614	FM 4470	02/27/06
	3023749	FM 4470	09/28/06
	3029098	FM 4470	10/25/07
	3032109	FM 4470	07/21/08
	3045101	FM 4470	11/05/12
	3017614	FM 4470	02/27/06
	3022038	FM 4470	04/05/06
	3025185	FM 4470	05/22/07
	3047439	FM 4470	07/22/13
	3047351	FM 4470	10/09/14
	3044801	FM 4470	02/27/12
	3024594	FM 4470	05/19/06
	3025185	FM 4470	05/22/07
	3042559	FM4470	10/18/11
	3046765	FM 4470	02/15/13
	3053841	FM 4470	03/27/15
	RR201595	FM 4470	06/17/15
	RR203157	FM 4470	11/06/15
Dynatech Engineering Corp.	10.94.27	TAS 114	10/27/94
	2491-04.95	TAS 114	01/04/95
Exterior Research & Design, LLC.	2003.02.97-1	TAS 114	02/15/97
	2003-2.04.97-1	TAS 114	04/15/97
	2002.07.97-1	TAS 114	08/15/97
	2716.05.98-1	TAS 114	05/11/98
	2109.08.02	TAS 114	08/06/02
	2761.09.03	TAS 114	09/02/03
	2766.12.03	TAS 114	12/01/03
	2760.12.04-R1	TAS 114	12/23/04
	2777.09.05-R2	TAS 114	04/18/07

EVIDENCE SUBMITTED: (CONTINUED)

Test Agency/Identifier	Name	Report	Date
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
	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
	S32700.12.10-R2	ASTM D6162	07/07/14
	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	03/14/13
	S47160.01.14-R1	TAS 114	12/11/14
	S47170.11.14	TAS 114	11/10/14
	S35860.05.12-2-R3	ASTM D6164	08/28/14
	S43400.08.14-5	ASTM D6163	08/26/14
	S43400.08.14-6	ASTM D6164	08/26/14
	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
	S45010.02.14	ASTM D6506	02/07/14
	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
	S43210.11.14	ASTM D1876	11/20/14
	S35860.05.12-3	ASTM D6164	05/08/12
	S35860.09.12-R2	ASTM D6163	12/12/14
	M45560.10.13-1-R2	ASTM D4897/TAS 117	12/11/14
	S39970.07.12-2	ASTM D6164	07/12/12
	S39970.07.12-R1	ASTM D6162	12/12/14
	S47160.01.14-R1	TAS 114	12/11/14
	S47170.11.14	TAS 114	11/10/14
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
	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-012-02-01	TAS 114-J	08/29/11
	SOP-012-02-02	TAS 114-J	05/08/12
	SOP-050-02-01	ASTM D3019	07/12/12
	SOP-056-02-01	Physical Properties	09/12/12

EVIDENCE SUBMITTED: (CONTINUED)

Test Agency/Identifier	Name	Report	Date
Certified Testing Laboratories	CTLA 101R	TAS 114-J	09/23/08
	CTLA 101R-A	TAS 114-J	09/23/08

DECK STRESS ANALYSIS CALCULATIONS/REPORTS

Engineer/Agency	Identifier	Assemblies	Date
Robert Nieminen, P.E.	Signed/Sealed Calculations	E(2), E(8), E(14), E(18), E(19)	02/10/16
FM Approval Deck Limitations	N/A	E(1), E(3), E(5), E(6), E(9), E(10), E(11), E(12), E(13), E(15)	01/01/13
Randall E. Fowler, P.E.	Signed/Sealed Calculations	E(17)	01/15/16

APPROVED ASSEMBLIES:

Membrane Type: SBS

Deck Type 4I: Lightweight Concrete, Insulated

Deck Description: Min. 2" thick, min. 350 psi, Cellular Lightweight Concrete over structural concrete. *The deck shall record a Minimum Characteristic Resistance Force (MCRF) of 100.9 lbf when tested with SOPREMA 1.7 in. Base Sheet Fastener or OMG CR Assembled Base Sheet Fasteners (1.7") in accordance with TAS 105.

System Type A(1): Vapor barrier adhered, all layers of insulation adhered with approved asphalt or adhesive

All General and System Limitations apply.

Secondary Roof/ Vapor Barrier: (Optional) One layer of 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, Colvent TG, Colvent 180 TG, torch-applied over structural concrete deck primed with Elastocol 500 primer.

LWC Deck: Min. 2" thick, min. 350 psi, Cellular Lightweight Concrete listed above cast over unprimed structural concrete deck or over optional Vapor Barrier listed above applied over primed structural concrete deck.

Vapor Barrier: (Required) One layer of Modified Sopra G, Soprabase, Colphene Sanded, Elastophene Sanded 2.2, Elastophene Sanded 3.0, Elastophene HS, Colphene 180 Sanded, Sopralene 180 Sanded 2.2, Soprabase, Sopralene 180 Sanded or Sopralene 250 Sanded adhered in hot asphalt at 25 lbs./sq. or applied in COLPLY EF Adhesive applied in ½" to ¾" wide ribbons spaced 12" o.c. to lightweight insulating concrete.

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, Multi-Max FA-3, Ultra-Max, Sopra-ISO x, ENRGY 3, H-Shield CG, Sopra-ISO+ r, M-Shield CG, ACFoam-II, ACFoam-III, Sopra-ISO s, Sopra-ISO+ s, 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**
Sopraboard		
Minimum 1/8" thick	**N/A**	**N/A**
SECUROCK Gypsum-Fiber Roof Board, DensDeck, DEXcell FA Glass Mat Roof Board		
Minimum 1/4" thick	**N/A**	**N/A**
DEXcell Cement Roof Board		
Minimum 7/16" thick	**N/A**	**N/A**

Note: All insulation shall be adhered to the vapor barrier in Duotack or Duotack Neo in ½" to ¾" wide ribbons spaced 12" o.c. Please refer to Roofing Application Standard RAS 117 for insulation attachment. Insulation listed as base layer only shall be used only as base layers with a second layer of approved top layer insulation installed as a final membrane substrate.

Base Layer:

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 or 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 to substrate primed with 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 or COLPLY Adhesive 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 EF Adhesive or COLPLY Adhesive at 1.5 – 2.0 gallons/square to sand surfaced base/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: -63.0 psf. (See General Limitation #9.)

Membrane Type: SBS

Deck Type 4I: Lightweight Concrete, Insulated

Deck Description: Min. 2" thick, min. 300 psi, Celcore MF Cellular Concrete with Celcore HS Rheology Modifying Admixture. Celcore PVA Curing Compound is spray applied to the lightweight concrete at a rate of 300 ft^2/gal.

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

All General and System Limitations apply.

Structural Deck: Structural concrete deck.

One or more layers of any of the following insulations.

Base Insulation Layer	**Insulation Fasteners (Table 3)**	**Fastener Density/ft^2**
Sopraboard		
Minimum 1/8" thick	**N/A**	**N/A**
SECUROCK Gypsum-Fiber Roof Board, DensDeck, DEXcell FA Glass Mat Roof Board		
Minimum 1/4" thick	**N/A**	**N/A**
DEXcell Cement Roof Board		
Minimum 7/16" thick	**N/A**	**N/A**

Note: All insulation shall be adhered in Duotack or Duotack Neo in ½" to ¾" wide ribbons spaced 12" o.c. Please refer to Roofing Application Standard RAS 117 for insulation attachment. Insulation listed as base layer only shall be used only as base layers with a second layer of approved top layer insulation installed as a final membrane substrate.

Base Layer: 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 or COLPLY Adhesive 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 to substrate primed with 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 or COLPLY Adhesive 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 GRSopralene 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 or COLPLY Adhesive at 1.5 – 2.0 gallons/square to sand surfaced base/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:	-97.5 psf. (See General Limitation #9.)

Membrane Type: SBS

Deck Type 4I: Lightweight Concrete, Insulated

Deck Description: Min. 2" thick, min. 300 psi, Celcore MF Cellular Concrete with Celcore HS Rheology Modifying Admixture. Celcore PVA Curing Compound is spray applied to the lightweight concrete at a rate of 300 ft^2/gal.

System Type A(3): All layers of insulation adhered with approved adhesive.

All General and System Limitations apply.

Structural Deck: Structural concrete deck.

One or more layers of any of the following insulations.

Base Insulation Layer	**Insulation Fasteners (Table 3)**	**Fastener Density/ft^2**
Ultra-Max, ENRGY 3, H-Shield CG, Sopra-ISO+ r, M-Shield CG, ACFoam-II, ACFoam-III, Sopra-ISO s, Sopra-ISO+ s, ENRGY 3 AGF, ENRGY 3 CGF, EnergyGuard Polyiso Insulation		
Minimum 2.0" thick	**N/A**	**N/A**
Top Insulation Layer	**Insulation Fasteners (Table 3)**	**Fastener Density/ft^2**
Sopraboard		
Minimum 1/8" thick	**N/A**	**N/A**
SECUROCK Gypsum-Fiber Roof Board, DensDeck, DEXcell FA Glass Mat Roof Board		
Minimum 1/4" thick	**N/A**	**N/A**
DEXcell Cement Roof Board		
Minimum 7/16" thick	**N/A**	**N/A**

Note: All insulation shall be adhered in Duotack or Duotack Neo in ½" to ¾" wide ribbons spaced 12" o.c. Please refer to Roofing Application Standard RAS 117 for insulation attachment. Insulation listed as base layer only shall be used only as base layers with a second layer of approved top layer insulation installed as a final membrane substrate.

Base Layer: 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 or COLPLY Adhesive 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 to substrate primed with 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 or COLPLY Adhesive 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 EF Adhesive or COLPLY Adhesive at 1.5 – 2.0 gallons/square to sand surfaced base/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:	-170 psf. (See General Limitation #9.)

Membrane Type: SBS

Deck Type 4: Lightweight Concrete, Non-Insulated

Deck Description: Mearlcrete Lightweight Insulting Concrete, Min. 200 psi, cast over deck with min. 1" EPS Holey Board embedded in 1/8" slurry. Followed by a min. 2" top coat of Mearlcrete Lightweight Insulting Concrete. Cast over structural concrete or steel deck.

System Type E(1): Base sheet mechanically fastened to substrate.

All General and System Limitations apply.

Structural Deck: Minimum 22 ga., Grade 33, Type BV vented steel decking attached to supports spaced 5' o.c. maximum using min. 3/8" welds with washers (every 6" o.c.). Steel deck side laps are attached with Traxx 1 #10 evenly spaced 20" o.c. or structural concrete deck.
This Tested Assembly has been analyzed for allowable deck stress. See Evidence Submitted Table.

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

Base Sheet: One layer of Modified Sopra G, Sopra 4897, Soprabase*, Soprabase S* fastened to the deck as described. Attach base sheet using Trufast FM-90 Base Sheet Fastener, SOPREMA 1.7 in. Base Sheet Fastener or OMG CR Assembled Base Sheet Fasteners (1.7") spaced 7" o.c. in a 4" lap and 7" o.c. in two staggered rows in the center of the sheet.
*require asphalt applied or cold applied ply sheets.

Ply Sheet: 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* or 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 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 EF Adhesive or COLPLY Adhesive at 1.5 – 2.0 gallons/square 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. or in COLPLY EF Adhesive or COLPLY Adhesive at 1.5 – 2.0 gallons/square to sand surfaced ply membrane.
Surfacing:	Surfacing is Optional on granular surfaced field cap membranes. Surfacing is Required for smooth or sanded surfaced field cap membranes. Refer to Underwriters Laboratories or Intertek Testing Services listings for applicable fire classifications. Apply any coating listed in Table 4 above or any Miami-Dade approved coating system.
Maximum Design Pressure:	-45 psf. (See General Limitation #7.)

Membrane Type: SBS

Deck Type 4: Lightweight Concrete, Non-Insulated

Deck Description: Mearlcrete Lightweight Concrete, min. 225 psi. cast over deck with 1" EPS board embedded in 1/8" slurry. Followed by 3" top coat of Mearlcrete Lightweight Concrete.

System Type E(2): Base sheet mechanically fastened to substrate.

All General and System Limitations apply.

Structural Deck: Minimum 22 ga., Type B, Grade 33 vented steel decking washed with a weak acid solution attached to supports spaced 6' o.c. maximum using 5/8" puddle welds spaced 6" o.c. Steel deck side laps are attached with #1/4-14 x 7/8", DP1, HWH self-drilling screws with ¼" washers evenly spaced 12" o.c. or structural concrete deck.
This Tested Assembly has been analyzed for allowable deck stress. See Evidence Submitted Table.

Base Sheet: One layer of Modified Sopra G, Soprabase*, Soprabase S*, Sopra 4897 fastened to the deck as described below:
*Requires asphalt applied or cold applied ply sheets.

Fastening: Attach base sheet using Trufast FM-90 Base Sheet Fastener, SOPREMA 1.7 in. Base Sheet Fastener or OMG CR Base Ply Fasteners (1.7") spaced 7" o.c. in a 4" lap and 7" o.c. in two staggered rows in the field of the sheet.

Ply Sheet: Colphene Sanded, Elastophene Sanded 2.2, Elastophene Sanded 3.0, Colphene 180 Sanded, Sopralene 180 Sanded 2.2, 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 Sopra IV or Sopra 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. or in COLPLY Adhesive at 1.5 – 2.0 gallons/square to sand surfaced base membrane.
*Requires torch-applied cap membrane.

Or

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 180 SP 3.0, Sopralene 180 SP 3.5, Colphene 180 SP 3.5 or Sopralene Flam 250, torch-applied.

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

Membrane: (Continued)	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 at 1.5 – 2.0 gallons/square to sand surfaced ply membrane.
Surfacing:	Surfacing is Optional on granular surfaced field cap membranes. Surfacing is Required for smooth or sanded surfaced field cap membranes. Refer to Underwriters Laboratories or Intertek Testing Services listings for applicable fire classifications. Apply any coating listed in Table 4 above or any Miami-Dade approved coating system.
Maximum Design Pressure:	-45 psf. (See General Limitation #7.)

Membrane Type:	SBS
Deck Type 4:	Lightweight Concrete, Non-Insulated
Deck Description:	Mearlcrete Lightweight Insulting Concrete, Min. 200 psi, wet cast density 40 pcf, min. 2" thick top coat. Over 1/8" slurry and an optional minimum 1" thick EPS Holey Board. Cast over structural concrete or steel deck.
System Type E(3):	Base sheet mechanically fastened to substrate.

All General and System Limitations apply.

Structural Deck:	Minimum 22 ga., Grade 33, Type BV vented steel decking attached to supports spaced 5' o.c. maximum using min. 3/8" welds with washers (every 6" o.c.). Steel deck side laps are attached with Traxx 1 #10 evenly spaced 20" o.c. or structural concrete deck. **This Tested Assembly has been analyzed for allowable deck stress. See Evidence Submitted Table.**
Primer: (Optional)	Elastocol 500, Elastocol Stick, Elastocol Stick Zero applied at a rate of 1 gal./sq., to top surface of any base or ply sheet prior to application of next layer
Base Sheet:	One layer of Soprafix Base 612*, Soprafix Base 613*, Soprafix Base 614*, Soprafix Base 622, or Soprafix Base 641 fastened to the deck as described below. *Requires torch-applied ply membrane.
Fastening #1:	Attach base sheet using Tri-Fix Fastening System spaced 9" o.c. in a 5" lap. The side lap fastener row is encapsulated in the torch-applied lap. ***(Maximum Design Pressure –45 psf. See General Limitation #7.)***
Fastening #2:	Attach base sheet using Tri-Fix Fastening System spaced 8" o.c. in a 5" lap and 8" 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 a min. 6" wide strip of torch-applied membrane. ***(Maximum Design Pressure –67.5 psf with torch-applied ply/cap sheets. See General Limitation #7.)***
Ply Sheet: (Optional)	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, torch-applied. Or 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 to three plies of Sopra IV or Sopra VI ply sheet, adhered in COLPLY EF Adhesive or COLPLY Adhesive at 1.5 – 2.0 gallons/square 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 COLPLY EF Adhesive or COLPLY Adhesive at 1.5 – 2.0 gallons/square to sand surfaced ply membrane.
Surfacing:	Surfacing is Optional on granular surfaced field cap membranes. Surfacing is Required for smooth or sanded surfaced field cap membranes. Refer to Underwriters Laboratories or Intertek Testing Services listings for applicable fire classifications. Apply any coating listed in Table 4 above or any Miami-Dade approved coating system.
Maximum Design Pressure:	See Fastening Requirements above.

Membrane Type: SBS

Deck Type 4: Lightweight Concrete, Non-Insulated

Deck Description: Elastizell Range II Cellular Lightweight Insulating Concrete, Min. 160 psi, min. 2½" thick top coat. Over 1/8" slurry and an optional minimum 2" thick EPS Holey Board. Cast over structural concrete.

System Type E(4): Base sheet mechanically fastened to substrate.

All General and System Limitations apply.

Structural Deck: Structural concrete deck.

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

Base Sheet: One layer of Soprafix Base 612*, Soprafix Base 613*, Soprafix Base 614*, Soprafix Base 622, or Soprafix Base 641 fastened to the deck as described below. *Requires torch-applied ply membrane.

Fastening: Attach base sheet using Tri-Fix Fastening System spaced 8" o.c. in a 5" lap and 8" 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 a min. 6" wide strip of torch-applied membrane.

Ply Sheet: (Optional) 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, torch-applied.

Or

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 to three plies of Sopra IV or Sopra VI ply sheet, adhered in COLPLY EF Adhesive or COLPLY Adhesive at 1.5 – 2.0 gallons/square 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 COLPLY EF Adhesive or COLPLY Adhesive at 1.5 – 2.0 gallons/square to sand surfaced ply membrane.

Surfacing:	Surfacing is Optional on granular surfaced field cap membranes. Surfacing is Required for smooth or sanded surfaced field cap membranes. Refer to Underwriters Laboratories or Intertek Testing Services listings for applicable fire classifications. Apply any coating listed in Table 4 above or any Miami-Dade approved coating system.
Maximum Design Pressure:	–67.5 psf. See General Limitation #7.)

Membrane Type:	SBS
Deck Type 4:	Lightweight Concrete, Non-Insulated
Deck Description:	Mearlcrete Lightweight Insulating Concrete, min. 200 psi, wet cast density 40 pcf, min. 2" thick top coat. Over 1/8" slurry and an optional minimum 1" thick EPS Holey Board.
System Type E(5):	Base sheet mechanically fastened to substrate.

All General and System Limitations apply.

Structural Deck:	Minimum 22 ga., Grade 33, Type BV steel decking attached to support spaced at 5' o.c. maximum using min. 3/8" puddle welds with washer (every 6" o.c.). Steel deck side laps are attached Traxx 1 #10 evenly spaced 20" o.c. or structural concrete deck. **This Tested Assembly has been analyzed for allowable deck stress. See Evidence Submitted Table.**
Base Sheet:	One layer of Soprafix Base 622, Soprafix Base 641, Soprafix Base 612, Soprafix Base 613, or Soprafix Base 622 fastened to the deck as described below:
Fastening #1:	Attach base sheet using Tri-Fix Fasteners spaced 9" o.c. in a 5" lap. The side lap fastener row is encapsulated in the torch-applied lap. ***(Maximum Design Pressure –45 psf. See General Limitation #7.)***
Fastening #2:	Attach base sheet using Tri-Fix Fasteners spaced 8" o.c. in a 5" lap and 8" o.c. in one center rows. 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. ***(Maximum Design Pressure –67.5 psf. See General Limitation #7.)***
Ply Sheet: (Optional)	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:	See Fastening Requirements above

Membrane Type: SBS

Deck Type 4: Lightweight Concrete, Non-Insulated

Deck Description: Mearlcrete Lightweight Insulting Concrete, min. 200 psi., wet cast density 40 pcf, with 1.5" EPS board embedded in 1/8" slurry. Followed by, wet cast density 40 pcf, min. 2" thick top coat.

System Type E(6): Base sheet mechanically fastened to substrate.

All General and System Limitations apply.

Structural Deck: Minimum 22 ga., Grade 33, Type BV steel decking attached to support spaced at 5' o.c. maximum using min. 3/8" puddle welds with washer (every 6" o.c.). Steel deck side laps are secured with Traxx 1 #10 evenly spaced 20" o.c. or structural concrete deck.
This Tested Assembly has been analyzed for allowable deck stress. See Evidence Submitted Table.

Base Sheet: One layer of Modified Sopra G, Soprabase*, Soprabase S*, Sopra 4897 fastened to the deck as described below:

*Requires asphalt applied or cold applied ply sheets.

Fastening: Attach anchor sheet using OMG CR Assembled Base Sheet Fasteners, Trufast FM-90 Base Sheet Fastener or SOPREMA 1.7 in. Base Sheet Fastener spaced 7" o.c. in a 4" lap and 7" o.c. in two staggered rows in the center of the sheet.

Ply Sheet: Colphene Sanded, Elastophene Sanded 2.2, Elastophene Sanded 3.0, Elastophene HS, Colphene 180 Sanded, Sopralene 180 Sanded 2.2, 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 Sopra IV or Sopra VI ply sheets adhered in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs./sq. to sand surfaced base membrane.
Or
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 180 SP 3.0, Sopralene 180 SP 3.5, Colphene 180 SP 3.5, Sopralene Flam 250* or Sopralene 250 SP, torch-applied.
*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 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 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:	-52.5 psf. (See General Limitation #7.)

Membrane Type: SBS

Deck Type 4: Lightweight Concrete, Non-Insulated

Deck Description: Elastizell Range II Cellular Lightweight Insulating Concrete with Vermiculite Additive, Min. 200 psi, wet cast density 36 pcf, min. 2½" thick top coat. Over an optional minimum 2" thick EPS Holey Board

System Type E(7): Base sheet mechanically fastened to substrate.

All General and System Limitations apply.

Structural Deck: Structural concrete deck.

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

Base Sheet: Modified Sopra G, Sopra 4897, Soprabase*, Soprabase S* fastened to the deck as described. Attach base sheet using Trufast FM-90 Base Sheet Fastener, SOPREMA 1.7 in. Base Sheet Fastener or OMG CR Assembled Base Sheet Fasteners (1.7") spaced 9" o.c. in a 4" lap and 9" o.c. in two staggered rows in the center of the sheet.
*Requires asphalt applied or cold applied ply sheets.

Ply Sheet: 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* or 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 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 EF Adhesive or COLPLY Adhesive at 1.5 – 2.0 gallons/square 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. or in COLPLY EF Adhesive or COLPLY Adhesive at 1.5 – 2.0 gallons/square to sand surfaced ply membrane.

Surfacing:	Surfacing is Optional on granular surfaced field cap membranes. Surfacing is Required for smooth or sanded surfaced field cap membranes. Refer to Underwriters Laboratories or Intertek Testing Services listings for applicable fire classifications. Apply any coating listed in Table 4 above or any Miami-Dade approved coating system.
Maximum Design Pressure:	-52.5 psf. (See General Limitation #7.)

Membrane Type: SBS

Deck Type 4: Lightweight Concrete, Non-Insulated

Deck Description: Aggregate Lightweight Concrete, min. 360 psi, wet cast density of 65 pcf. LWC shall consist of a minimum 2" EPS board with minimum 3" top coat. *The deck shall record a Minimum Characteristic Resistance Force (MCRF) of 88 lbf. When tested with Trufast Twin Loc-Nail Assembled Fasteners or SOPREMA Twin Loc-Nails in accordance with TAS 105.

System Type E(8): Base sheet mechanically fastened to substrate.

All General and System Limitations apply.

Structural Deck: 18-22 ga., Type B, Grade 33, vented steel deck fastened 6" o.c. with Traxx/5 fasteners to supports spaced 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.

Base Sheet: Soprabase*, Soprabase S*, Soprabase TG or Sopra 4897 fastened to the deck as described. Attach base sheet using Trufast Twin Loc-Nail Assembled Fastener or SOPREMA Twin Loc-Nails spaced 9" o.c. in a 4" lap and 9" o.c. in two staggered rows in the center of the sheet.
*Requires asphalt applied or cold applied ply sheets.

Ply Sheet: (Optional) 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

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 Sopra IV or Sopra VI ply sheets, adhered in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs./sq. to sand surfaced base membrane.
*Requires torch-applied cap membrane.

Membrane: 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 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 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 Type:	SBS
Deck Type 4:	Lightweight Concrete, Non-Insulated
Deck Description:	Celcore HS Cellular Concrete; minimum wet cast density of 38 lbs./ft^3, 350 psi, over 18-22 ga steel decking or structural concrete deck.
System Type E(9):	Base sheet mechanically fastened to substrate.

All General and System Limitations apply.

Structural Deck:	18-22 ga., Grade 33, Type B steel decking attached to supports spaced maximum 6' o.c. using 0.5" puddle welds and washers 6" o.c. Steel deck side laps are attached with three Traxx/1 fasteners spaced maximum 12" o.c. or structural concrete deck. **This Tested Assembly has been analyzed for allowable deck stress. See Evidence Submitted Table.**
LWC Deck:	Celcore HS Cellular Concrete with a minimum wet cast density of 38 lbs./ft^3, minimum 2" thick top coat. Over a minimum 1" thick EPS Holey Board.
LWC Deck Preparation:	Celcore PVA Curing Compound spray applied to lightweight concrete at a rate of 0.33 gal./sq.
Base Sheet:	Soprafix Base 622, Soprafix Base 612, Soprafix Base 613, Soprafix Base 614, or Soprafix Base 641 mechanically attached through lightweight concrete to steel decking with Dekfast PLT-R-2-3/8-6B and Dekfast DF-#15-PH3 fasteners or Soprema #15 Fasteners with Soprafix 2-3/8" –SB Stress Plates space maximum 12" o.c. through minimum 5" wide laps and maximum 12" o.c. in one central row in the field. A minimum 6" wide strip of Sopralene Flam 180 or Colphene Flam 180 is torch-applied over field fasteners.
Ply Sheet: (Optional)	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:	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 with minimum 3" wide 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 Type:	SBS
Deck Type 4:	Lightweight Concrete, Non-Insulated
Deck Description:	Celcore MF Cellular Concrete; min. wet cast density of 38 lbs./ft^3, min. 350 psi, over 18-22 ga steel decking or structural concrete.
System Type E(10):	Base sheet mechanically fastened to substrate.

All General and System Limitations apply.

Structural Deck:	Structural concrete or 18-22 ga., Grade 33, Type B steel deck installed and welded to minimum 0.25 in. thick steel structural supports spaced maximum 6' o.c. using 3/8" diameter weld and washers 6" o.c. at each bearing. The deck side laps are fastened at 30" o.c. using Traxx/1 fasteners. **This Tested Assembly has been analyzed for allowable deck stress. See Evidence Submitted Table.**
Thermal Barrier: (Optional)	(*With steel deck only*) Min. 0.625-inch SECUROCK Gypsum-Fiber Roof Board mechanically attached with OMG Heavy-Duty fasteners and OMG 3" Galvalume Steel Plates at 1.6 ft^2.
Vapor Barrier: (Optional)	Elastophene SP 2.2, Elastophene SP 3.0, Colphene SP 2.2, 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 substrate primed with Elastocol 500, Elastocol Stick or ASTM D41 primer.
LWC Deck:	Celcore MF Cellular Concrete with Celcore HS Rheology Modifying Admixture with a minimum wet cast density of 38 lbs./ft^3, filling the corrugation with a minimum depth of 1/8". The Celcore HS admixture was added to the mixture during the mixing process at a rate of 3.4 fl. oz. per 100 lbs. of cement. Minimum 1" thick Holey Boards are then immediately placed in a brick-like pattern into the wet concrete and allowed to set overnight. The following day, a minimum 2" thick topping layer of Celcore MF Cellular Concrete with Celocre HS Rheology Modifying Admixture is placed atop the EPS at a wet cast density of 38 lbs./ft^3. After an overnight set, Celcore PVA Curing Compound is spray applied to the lightweight concrete at a rate of 0.33 gal./sq. and allowed to dry for 48 hours.
Base Sheet:	Colphene 180 Sanded, Colphene Sanded, Elastophene Sanded 2.2, Elastophene Sanded 3.0, Modified Sopra G, Sopra IV, Sopra VI, Soprafix Base 622, Sopra 4897, Soprabase*, Soprabase S* mechanically attached with Trufast FM-90 Base Sheet Fastener or SOPREMA 1.7 in. Base Sheet Fastener spaced 9" o.c. at the 4" laps and 12" o.c. in two equally spaced, staggered rows. *Requires asphalt applied or cold applied ply sheets.
Ply Sheet: (Optional)	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* or Sopralene 250 SP, torch-applied with minimum 3" wide lap.

Ply Sheet (Optional): (Continued)	Or Elastophene PS*, Elastophene PS 3.0*, Colphene Sanded, Elastophene Sanded 2.2, Elastophene Sanded 3.0, Colphene 180 Sanded, Sopralene 180 Sanded 2.2, Colphene 180 PS*, Sopralene 180 PS 2.2*, Sopralene 180 Sanded, Sopralene 250 Sanded, Sopralene 180 PS*, Elastophene HS 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 or COLPLY Adhesive at 1.5 – 2.0 gallons/square. *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, 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 EF Adhesive or COLPLY Adhesive at 1.5 – 2.0 gallons/square to sand surfaced ply membrane.
Surfacing:	Surfacing is Optional on granular surfaced field cap membranes. Surfacing is Required for smooth or sanded surfaced field cap membranes. Refer to Underwriters Laboratories or Intertek Testing Services listings for applicable fire classifications. Apply any coating listed in Table 4 above or any Miami-Dade approved coating system.
Maximum Design Pressure:	-60 psf. (See General Limitation #7)

Membrane Type: SBS

Deck Type 4: Lightweight Concrete, Non-Insulated

Deck Description: Celcore MF Cellular Concrete; minimum wet cast density of 38 lbs./ft^3, minimum 350 psi, over 18-22 ga steel decking

System Type E(11): Base sheet mechanically fastened to substrate.

All General and System Limitations apply.

Structural Deck: 22 ga., Grade 33, Type B vented or non-vented galvanized steel deck installed and welded to minimum 0.25 in. thick steel structural supports spaced maximum 6' o.c. using min. 3/8" diameter weld and washers 6" o.c. at each bearing. The deck side laps are fastened at 24" o.c. (three evenly spaced fasteners between supports) using Teks 1 or Traxx/1 fasteners between supports. or structural concrete deck.
This Tested Assembly has been analyzed for allowable deck stress. See Evidence Submitted Table.

LWC Deck: Celcore MF Cellular Concrete with Celcore HS Rheology Modifying Admixture with a minimum wet cast density of 38 lbs./ft3, filling the corrugation with a minimum depth of 1/8". The Celcore HS admixture was added to the mixture during the mixing process at a rate of 3.4 fl. oz. per 100 lbs. of cement. Minimum 1" thick Insulfoam EPS Holey Boards are then immediately placed in a brick-like pattern into the wet concrete and allowed to set overnight. The following day, a minimum 2" thick topping layer of Celcore MF Cellular Concrete with Celocre HS Rheology Modifying Admixture is placed atop the EPS at a wet cast density of38 lbs./ft^3.

LWC Deck Preparation: After an overnight set, Celcore PVA Curing Compound is spray applied to the lightweight concrete at a rate of 0.33 gal./sq.

Base Sheet: Colphene 180 Sanded, Colphene Sanded, Elastophene Sanded 2.2, Elastophene Sanded 3.0, Modified Sopra G, Sopra IV, Sopra VI, Soprafix Base 622, Sopra 4897, Soprabase*, Soprabase S* mechanically attached with Trufast FM-90 Base Sheet Fastener or SOPREMA 1.7 in. Base Sheet Fastener spaced 7" o.c. at the 3" laps and 7" o.c. in two equally spaced, staggered rows.
*Requires asphalt applied or cold applied ply sheets.

Ply Sheet: 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 or Sopralene 250 SP, torch-applied with minimum 3" wide lap.
Or
Elastophene PS*, Elastophene PS 3.0*, Colphene Sanded, Elastophene Sanded 2.2, Elastophene Sanded 3.0, Colphene 180 Sanded, Sopralene 180 Sanded 2.2, Colphene 180 PS*, Sopralene 180 PS 2.2*, Sopralene 180 Sanded, Sopralene 250 Sanded, Sopralene 180 PS*, Elastophene HS 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 or COLPLY Adhesive at 1.5 – 2.0 gallons/square.
*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.
Surfacing:	Surfacing is Optional on granular surfaced field cap membranes. Surfacing is Required for smooth or sanded surfaced field cap membranes. Refer to Underwriters Laboratories or Intertek Testing Services listings for applicable fire classifications. Apply any coating listed in Table 4 above or any Miami-Dade approved coating system.
Maximum Design Pressure:	-60 psf. (See General Limitation #7)

Membrane Type: SBS

Deck Type 4: Lightweight Concrete, Non-Insulated

Deck Description: Celcore MF Cellular Concrete; minimum wet cast density of 38 lbs./ft^3, minimum 350 psi, over 18-22 ga steel decking or structural concrete deck.

System Type E(12): Base sheet mechanically fastened to substrate.

All General and System Limitations apply.

Structural Deck: 18-22 ga., Grade 33, Type WR steel deck installed and welded to minimum 0.25 in. thick steel structural supports spaced maximum 6' o.c. using min. 3/8" diameter weld washers 6" o.c. at each bearing. The deck side laps are fastened at 24" o.c. (three evenly spaced fasteners between supports) using Teks 1 or Traxx/1 fasteners between supports. Or structural concrete deck.
This Tested Assembly has been analyzed for allowable deck stress. See Evidence Submitted Table.

Thermal Barrier: (*With steel deck only*) One layer of 5/8" SECUROCK Gypsum-Fiber Roof Board mechanically attached with OMG 3" Galvalume Steel Plates and OMG Heavy Duty fasteners, Dekfast PLT-H-2-7/8 plates or Dekfast PLT-R-3 plates and Dekfast DF-#14-PH3 fasteners or Soprema 3" Round Insulation Plates and Soprema #14 Fasteners or Trufast 3" Metal Insulation Plates and Trufast #14 HD Fasteners or Soprema 3" Metal Insulation Plates and Soprema #14 MP Fasteners at a rate of 1.6 ft^2 per fastener.

Vapor Barrier: One layer of Elastophene SP 2.2 or Colphene SP 2.2, torch-applied with minimum 3" wide lap.

Or

One layer of Colphene 180 Sanded, Colphene Sanded, Elastophene Sanded 2.2, Elastophene Sanded 3.0, Sopralene 180 Sanded or Sopralene 250 Sanded, hot asphalt applied.

LWC Deck: Celcore MF Cellular Concrete with Celcore HS Rheology Modifying Admixture with a minimum wet cast density of 38 lbs./ft^3, filling the corrugation with a minimum depth of 1/8". The Celcore HS admixture was added to the mixture during the mixing process at a rate of 3.4 fl. oz. per 100 lbs. of cement. Minimum 1" thick Insulfoam EPS Holey Boards are then immediately placed in a brick-like pattern into the wet concrete and allowed to set overnight. The following day, a minimum 2" thick topping layer of Celcore MF Cellular Concrete with Celocre HS Rheology Modifying Admixture is placed atop the EPS at a wet cast density of 38 lbs./ft^3.

LWC Deck Preparation: After an overnight set, Celcore PVA Curing Compound is spray applied to the lightweight concrete at a rate of 0.33 gal./sq.

Base Sheet: Modified Sopra G, Sopra VI, Sopra 4897, Soprabase, Soprabase S mechanically attached with Trufast FM-90 Base Sheet Fastener or SOPREMA 1.7 in. Base Sheet Fastener spaced 7" o.c. at the 3" laps and 7" o.c. in two equally spaced, staggered rows.

Ply Sheet (Optional):	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 180 SP 3.0, Sopralene 180 SP 3.5, Colphene 180 SP 3.5, Sopralene Flam 250*, Sopralene 250 SP, torch-applied with minimum 3" wide lap. Or Elastophene PS*, Elastophene PS 3.0*, Colphene Sanded, Elastophene Sanded 2.2, Elastophene Sanded 3.0, Colphene 180 Sanded, Sopralene 180 Sanded 2.2, Colphene 180 PS*, Sopralene 180 PS 2.2*, Sopralene 180 Sanded, Sopralene 250 Sanded, Sopralene 180 PS*, Elastophene HS 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 or COLPLY Adhesive at 1.5 – 2.0 gallons/square. *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, 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 EF Adhesive or COLPLY Adhesive at 1.5 – 2.0 gallons/square to sand surfaced ply membrane.
Surfacing:	Surfacing is Optional on granular surfaced field cap membranes. Surfacing is Required for smooth or sanded surfaced field cap membranes. Refer to Underwriters Laboratories or Intertek Testing Services listings for applicable fire classifications. Apply any coating listed in Table 4 above or any Miami-Dade approved coating system.
Maximum Design Pressure:	-60 psf. (See General Limitation #7) -75 psf. (with torch applied vapor barriers) (See General Limitation #7)

Membrane Type: SBS

Deck Type 4: Lightweight Concrete, Non-Insulated

Deck Description: Celcore MF Cellular Concrete, min. 350 psi.

System Type E(13): Base sheet mechanically fastened to primed substrate.

All General and System Limitations apply.

Structural Deck:	18-22 ga., Grade 33, Type WR steel deck attached 6" o.c. with min. 3/8" weld and washers to steel supports spaced max 6 ft o.c. Deck side laps are attached with Traxx/1 screws spaced 24" o.c or min. 2,500 structural concrete. **This Tested Assembly has been analyzed for allowable deck stress. See Evidence Submitted Table.**
Thermal Barrier: (Optional)	(*With steel deck only*) Min. 0.625-inch SECUROCK Gypsum-Fiber Roof Board mechanically fastened with OMG Heavy Duty fasteners, OMG 3" Galvalume Steel Plates, Dekfast PLT-H-2-7/8 plates, Dekfast PLT-R-3 plates, Dekfast DF-#14-PH3, Trufast 3" Metal Insulation Plates and Trufast #14 Stainless Steel HD Fasteners, Soprema 3" Metal Insulation Plates and Soprema #14 MP Fasteners or Soprema 3" Round Insulation Plate and Soprema #14 Fasteners at a rate of 1 per 1.6 ft^2.
Vapor Barrier: (Optional)	Colphene 180 Sanded, Colphene Sanded, Elastophene Sanded 2.2, Elastophene Sanded 3.0, Sopralene 180 Sanded or Sopralene 250 Sanded, hot asphalt applied. Or Elastophene SP 2.2, Elastophene SP 3.0, Colphene SP 2.2, 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 substrate primed with Elastocol 500, Elastocol Stick, Elastocol Stick Zero or ASTM D41 primer.
LWC Deck:	A 1/8" slurry coat of, min. 350 psi, Celcore MF Cellular Concrete with Celcore HS Rheology Modifying Admixture with min. 1" thick Holy Board and a minimum 2" thick top coat. After setting to support foot traffic, Celcore PVA Curing Compound is applied at a rate of 0.33 gal./square.
Base Sheet:	One ply of Modified Sopra G, Sopra VI, Sopra 4897, Soprabase, Soprabase S mechanically attached with Trufast FM-90 Base Sheet Fastener, SOPREMA 1.7 in. Base Sheet Fastener or OMG CR Base Ply Fasteners (1.7") spaced 7-inch o.c. at the 3-inch laps and 7-inch o.c. in two equally spaced, staggered center rows.

Ply Sheet: (Optional)	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 Flam 250* or Sopralene 250 SP, torch-applied. Or Elastophene PS*, Elastophene PS 3.0*, Colphene Sanded, Elastophene Sanded 2.2, Elastophene Sanded 3.0, Colphene 180 Sanded, Sopralene 180 Sanded 2.2, Colphene 180 PS*, Sopralene 180 PS 2.2*, Sopralene 180 Sanded, Sopralene 250 Sanded, Sopralene 180 PS*, Elastophene HS 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 or COLPLY Adhesive at 1.5 – 2.0 gallons/square. *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, 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 EF Adhesive or COLPLY Adhesive at 1.5 – 2.0 gallons/square to sand surfaced ply membrane.
Surfacing:	Surfacing is Optional on granular surfaced field cap membranes. Surfacing is Required for smooth or sanded surfaced field cap membranes. Refer to Underwriters Laboratories or Intertek Testing Services listings for applicable fire classifications. Apply any coating listed in Table 4 above or any Miami-Dade approved coating system.
Maximum Design Pressure:	-60 psf. (See General Limitation #7) -75 psf. (with torch applied vapor barriers) (See General Limitation #7.)

Membrane Type:	SBS
Deck Type 4:	Lightweight Concrete, Non-Insulated
Deck Description:	Aggregate Lightweight Concrete, 360 psi. min. wet cast density of 65 pcf. LWC shall consist of a minimum 2" EPS board with minimum 3" top coat. *The deck shall record a Minimum Characteristic Resistance Force (MCRF) of 110 lbf when tested with Trufast Twin Loc-Nail Assembled Fasteners or SOPREMA Twin Loc-Nails in accordance with TAS 105.
System Type E(14):	Base sheet mechanically fastened to substrate.

All General and System Limitations apply.

Structural Deck:	18-22 ga. Type B, Grade 33, vented steel deck fastened 6" o.c. with Traxx/5 fasteners to supports spaced 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.**
Base Sheet:	One layer of Soprabase fastened to the deck as described. Attach base sheet using Trufast Twin Loc-Nail Assembled Fasteners or Twin Loc-Nails spaced 9" o.c. in a 4" lap and 9" o.c. in two staggered rows in the center of the sheet.
Ply Sheet:	Colphene Sanded, Elastophene Sanded 2.2, Elastophene Sanded 3.0, Colphene 180 Sanded, Sopralene 180 Sanded 2.2, Sopralene 180 Sanded, Sopralene 250 Sanded or one or more plies of Sopra IV or Sopra 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. or in COLPLY EF Adhesive or COLPLY Adhesive at 1.5 – 2.0 gallons/square.
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 or COLPLY Adhesive at 1.5 – 2.0 gallons/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 Type:	SBS
Deck Type 4:	Lightweight Concrete, Non-Insulated
Deck Description:	Celcore MF Cellular Concrete; minimum wet cast density of 42 lbs./ft3, minimum 300 psi, over 18-22 ga steel decking or min. 2,500 structural concrete.
System Type E(15):	Base sheet mechanically fastened to substrate.

All General and System Limitations apply.

Structural Deck:	22 ga., Grade 33, Type B steel deck secured to the structural supports 6" o.c. with ½" welds and washers spaced maximum 6' o.c. The deck side laps are fastened at 30" o.c. using Traxx/1 screws or min. 2,500 structural concrete. **This Tested Assembly has been analyzed for allowable deck stress. See Evidence Submitted Table.**
Vapor Barrier (Optional):	(With concrete deck) UL or FM approved asphaltic vapor retarder may be installed over the deck or the base layer of insulation.
LWC Deck: (Option 1)	Celcore MF Cellular Concrete, minimum wet cast density of 42 lbs./ft^3, with Celcore HS Rheology Modifying Admixture applied in a min. 1/8" slury. Minimum 1" thick Holey Boards are then immediately placed into the wet concrete and allowed to set overnight. The following day, a min. 2" thick topping layer of Celcore MF Cellular Concrete with Celocre HS Rheology Modifying Admixture is placed atop the EPS. After an overnight set, Celcore PVA Curing Compound is spray applied to the lightweight concrete at a rate of 300 ft^2/gal.
LWC Deck: (Option 2)	(Only with concrete deck) Min. 2" thick Celcore MF Cellular Concrete, minimum wet cast density of 42 lbs./ft^3 After an overnight set, Celcore PVA Curing Compound is spray applied to the lightweight concrete at a rate of 300 ft^2/gal.
Base Sheet:	One ply of Modified Sopra G, Soprabase, Soprabase S, Sopra 4897 or Sopra VI mechanically attached with Trufast FM-90 Base Sheet Fastener, SOPREMA 1.7 in. Base Sheet Fastener or OMG CR Base Ply Fasteners (1.7") spaced 7" o.c. at the 3" laps and 7" o.c. in two equally spaced, staggered center rows.
Ply Sheet: (Optional)	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* or Sopralene 250 SP, torch-applied with minimum 3" wide lap. Or Elastophene PS*, Elastophene PS 3.0*, Colphene Sanded, Elastophene Sanded 2.2, Elastophene Sanded 3.0, Colphene 180 Sanded, Sopralene 180 Sanded 2.2, Colphene 180 PS*, Sopralene 180 PS 2.2*, Sopralene 180 Sanded, Sopralene 250 Sanded, Sopralene 180 PS*, Elastophene HS 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 or COLPLY Adhesive at 1.5 – 2.0 gallons/square. *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, 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 EF Adhesive or COLPLY Adhesive at 1.5 – 2.0 gallons/square to sand surfaced ply membrane.
Surfacing:	Surfacing is Optional on granular surfaced field cap membranes. Surfacing is Required for smooth or sanded surfaced field cap membranes. Refer to Underwriters Laboratories or Intertek Testing Services listings for applicable fire classifications. Apply any coating listed in Table 4 above or any Miami-Dade approved coating system.
Maximum Design Pressure:	-75 psf. (See General Limitation #7)

Membrane Type:	SBS
Deck Type 4:	Lightweight Concrete, Non-Insulated
Deck Description:	Mearlcrete Lightweight Insulting Concrete, wet cast density 35 pcf, min. 200 psi, with optional 1" EPS board embedded in 1/8" slurry. Min. 2" thick top coat.
System Type E(16):	Base sheet mechanically fastened to substrate.

All General and System Limitations apply.

Structural Deck:	2500 psi, structural concrete deck.
Vapor Barrier: (Optional)	UL or FM approved asphaltic vapor retarder may be installed over the deck.
Base Sheet:	One layer of Soprafix Base 622 fastened to the deck as described below:
Fastening:	Attach base sheet using Tri-Fix Fasteners spaced 8" o.c. in 5" side laps and 8" o.c. in one center row. The side laps are torch-applied and the center row is covered with a 6" wide strip of Soprafix Base 622.
Ply Sheet: (Optional)	Elastophene Flam, Elastophene Flam 2.2, Elastophene Flam HS, Elastophene SP 2.2, Colphene SP 2.2, Elastophene SP 3.0, Soprafix Base 613, Soprafix Base 612, or Soprafix Base 614, Sopralene 180 SP 3.0, Sopralene 180 SP 3.5, Colphene 180 SP 3.5, Sopralene 250 SP, Sopralene Flam 180, Colphene Flam 180, Sopralene Flam 250, 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. (See Limitation #7)

Membrane Type:	SBS
Deck Type 4:	Lightweight Concrete, Non-Insulated
Deck Description:	Min. 2" thick, min. 500 psi, Cellular Lightweight Concrete. *The deck shall record a Minimum Characteristic Resistance Force (MCRF) of 291.3 lbf when tested with OMG Olylok Locking Impact Nails in accordance with TAS 105.
System Type E(17):	Base sheet mechanically fastened to substrate.

All General and System Limitations apply.

Structural Deck:	18-22 ga., WR Type B, minimum 48 ksi, vented steel deck attached to supports spaced maximum 6' o.c. using 5/8" puddle welds spaced 6" o.c. Steel deck side laps are attached with #12 SD screws spaced 12" o.c. or min. 2,500 structural concrete. **This Tested Assembly has been analyzed for allowable deck stress. See Evidence Submitted Table.**
Vapor Barrier: (Optional)	One layer of 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 structural concrete deck primed with Elastocol 500 primer.
Base Sheet:	One layer of Soprafix Base 613, Soprafix Base 614 fastened as described below:
Fastening:	Attach base sheet using Tri-Fix Fasteners spaced 8" o.c. in 5" side laps and 8" o.c. in one center row. The side laps are torch-applied and the center row is covered with a 8" wide strip of Soprafix Base 613.
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 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:	-82.5 psf. (See Limitation #7)

Membrane Type:	SBS
Deck Type 4:	Lightweight Concrete, Non-Insulated
Deck Description:	Concrecel Lightweight Concrete, min. 140 psi. cast over deck with 1" EPS board embedded in 1/8" slurry. Followed by 3" top coat of Concrecel Lightweight Concrete.
System Type E(18):	Base sheet mechanically fastened to substrate.

All General and System Limitations apply.

Structural Deck Options:	1. Minimum 22 ga. Type B, Grade 33 vented steel decking washed with a weak acid solution attached to supports spaced 6' o.c. Or 2. Minimum 22 ga., Type B, Grade 80 steel deck attached to supports spaced maximum 6' o.c. using 5/8" puddle welds spaced 6" o.c. All of the above deck options; panel side laps are attached with #1/4-14 x 7/8", DP1, HWH self-drilling screws with ¼" washers evenly spaced 12" o.c. **This Tested Assembly has been analyzed for allowable deck stress. See Evidence Submitted Table.**
Base Sheet:	One layer of Soprafix Base 612, Soprafix Base 613, Soprafix Base 614 fastened to the deck as described below:
Fastening:	Attach base sheet using Trufast Twin Loc Coiled Batten Bar, Trufast #15 EHD Fasteners, Soprema #15 HD Fasteners with spaced 6" o.c. in a 4" lap.
Ply Sheet	None
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 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.
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.; with Structural Deck Option #1 (See General Limitation #7.) -97.5 psf.; with Structural Deck Option #2 (See General Limitation #7.)

Membrane Type:	SBS
Deck Type 4:	Lightweight Concrete, Non-Insulated
Deck Description:	Celcore MF Cellular Concrete; minimum wet cast density of 38-42 lbs.ft/3, minimum 340 psi, over 18-22 ga steel decking or structural concrete deck.
System Type E(19):	Base sheet mechanically fastened to substrate.

All General and System Limitations apply.

Structural Deck Options:

1. Minimum 18-22 ga., Grade 33, steel deck type B, BV attached to supports spaced max. 5' o.c. Or
2. Minimum 18-22 ga., Grade 80, Type B steel deck attached to supports spaced max. 5' o.c. using ITW Buildex Driller Screw fasteners with nickel plated washers spaced maximum 6" o.c. Or
3. Structural Concrete Deck.

All of the above deck options; panel side laps attached with ITW Buildex Driller Screw fasteners spaced maximum 12" o.c. or structural concrete deck.

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

LWC Deck: Celcore MF Cellular Concrete with Celcore HS Rheology Modifying Admixture with a minimum wet cast density of 38-42 lbs./ft^3, filling the corrugation with a minimum depth of 1/8". Minimum 1" thick Insulfoam EPS Holey Boards are then immediately placed in a brick-like pattern into the wet concrete and is allowed to set overnight. The following day, a minimum 2" thick topping layer of Celcore MF Cellular Concrete with Celcore HS Rheology Modifying Admixture is placed atop the EPS at a wet cast density of 38-42 lbs./ft^3.

LWC Deck Preparation: After an overnight set, Celcore PVA Curing Compound is spray applied to lightweight concrete at a rate of 0.5 gal./sq.

Base Sheet: One layer of Soprafix Base 612, Soprafix Base 613, or Soprafix Base 614 mechanically attached through LWC into steel decking, perpendicular to the direction of the steel decking with Soprema #15 fasteners spaced in the following pattern: 6" x 12" x 6", repeated until end of batten is reached, within a torch-applied minimum 3" side lap and one row in the field of the sheet with Soprema #15 fasteners spaced 12" o.c. Apply a 6" wide strip of Soprafix Base 612 torch-applied over the exposed center row of fasteners.

Ply Sheet (Optional): 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 with minimum 3" wide lap.

Membrane: 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 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:	-135 psf.; with Structural Deck Option #1 (See General Limitation #7.) -150 psf.; with Structural Deck Option #2 or #3 (See General Limitation #7.)

Membrane Type:	SBS
Deck Type 4:	Lightweight Concrete, Non-Insulated
Deck Description:	Min. 2" thick, min. 350 psi, Cellular Lightweight Concrete over structural concrete. *The deck shall record a Minimum Characteristic Resistance Force (MCRF) of 100.9 lbf when tested with SOPREMA 1.7 in. Base Sheet Fastener or OMG CR Assembled Base Sheet Fasteners (1.7") in accordance with TAS 105.
System Type F(1):	Base sheet adhered to substrate

All General and System Limitations apply.

Vapor Barrier: (Optional)	One layer of 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 structural concrete deck primed with Elastocol 500 primer.
LWC Deck:	Min. 2" thick, min. 350 psi, Cellular Lightweight Concrete cast over structural concrete.
Base Layer:	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 in COLPLY EF Adhesive applied in ½" to ¾" wide ribbons spaced 12" o.c. to lightweight insulating concrete. *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 or COLPLY Adhesive 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*, 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 EF Adhesive or COLPLY Adhesive at 1.5 – 2.0 gallons/square to sand surfaced ply membrane.
Surfacing:	Surfacing is Optional on granular surfaced field cap membranes. Surfacing is Required for smooth or sanded surfaced field cap membranes. Refer to Underwriters Laboratories or Intertek Testing Services listings for applicable fire classifications Apply any coating listed in Table 4 above, or any Miami-Dade approved coating system
Maximum Design Pressure:	-130 psf. (See General Limitation #9.)

Membrane Type:	SBS
Deck Type 4:	Lightweight Concrete, Non-Insulated
Deck Description:	Celcore Cellular Lightweight Insulating Concrete, Min. 300 psi, min. wet cast density of 38 lbs./ft^3, over structural concrete deck.
System Type F(2):	Base sheet adhered to substrate

All General and System Limitations apply.

Primer: (Optional)	Primed with an ASTM D41 primer at a rate of ¾ to 1 gal./sq.
LWC Deck:	Celcore MF Cellular Concrete with Celcore HS Rheology Modifying Admixture with a minimum wet cast density of 38 lbs./ft^3, with a minimum depth of 1/8". The Celcore HS admixture was added to the mixture during the mixing process at a rate of 3.4 fl. oz. per 100 lbs. of cement. Minimum 1" thick Holey Boards are then immediately placed into wet LWC and allowed to set overnight. The following day, a minimum 2" thick topping layer of Celcore MF Cellular Concrete with Celcore HS Rheology Modifying Admixture is placed atop the EPS at a wet cast density of 38 lbs./ft^3.
LWC Deck Preparation:	After an overnight set, Celcore PVA Curing Compound is spray applied to the lightweight concrete at a rate of 0.33 gal./sq.
Base Sheet:	One layer of Colvent TG, Colvent 180 TG, Colvent Flam 180 TG, torch-applied to primed lightweight concrete.
Ply Sheet:	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 180 SP 3.0, Sopralene 180 SP 3.5, Colphene 180 SP 3.5 or Sopralene Flam 250, torch-applied.
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, 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:	-187.5 psf. (See General Limitation #9.) -410 psf. with primed concrete substrate. (See General Limitation #9.)

Membrane Type:	SBS
Deck Type 4:	Lightweight Concrete, Non-Insulated
Deck Description:	Min. 2" thick, min. 350 psi, Cellular Lightweight Concrete over structural concrete. *The deck shall record a Minimum Characteristic Resistance Force (MCRF) of 100.9 lbf when tested with SOPREMA 1.7 in. Base Sheet Fastener or OMG CR Assembled Base Sheet Fasteners (1.7") in accordance with TAS 105.
System Type F(3):	Base sheet adhered to substrate

All General and System Limitations apply.

Vapor Barrier: (Optional)	One layer of 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 structural concrete deck primed with Elastocol 500 primer.
LWC Deck:	Min. 2" thick, min. 350 psi, Cellular Lightweight Concrete cast over structural concrete deck.
Base Layer:	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 COLPLY EF Adhesive applied in ½" to ¾" wide ribbons spaced 6" o.c. to lightweight insulating concrete. *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 or COLPLY Adhesive 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 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 EF Adhesive or COLPLY Adhesive at 1.5 – 2.0 gallons/square to sand surfaced base/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:	-167.5 psf. (See General Limitation #9.)

Membrane Type:	SBS
Deck Type 4:	Lightweight Concrete, Non-Insulated
Deck Description:	Celcore Cellular Lightweight Insulating Concrete, Min. 300 psi cast over structural concrete deck.
System Type F(4):	Base sheet adhered to substrate

All General and System Limitations apply.

Primer:	Structural concrete deck primed with ASTM D41 primer.
Vapor Barrier: (Optional)	One layer of Elastophene SP 2.2, Colphene SP 2.2, Elastophene SP 3.0, Colphene SP 3.0, Sopralene 180 SP 3.5, Colphene 180 SP 3.5, Soprafix Base 622 or Sopralene 250 SP, torch-applied. Or One layer of Colphene Sanded, Elastophene Sanded 2.2, Elastophene Sanded 3.0, Elastophene HS, Colphene 180 Sanded, Sopralene 180 Sanded 2.2, Sopralene 180 Sanded or Sopralene 250 Sanded adhered in hot asphalt at 25 lbs./sq. or in COLPLY Adhesive or COLPLY EF Adhesive at 1.5 – 2.0 gallons/square.
LWC Deck:	Celcore HS Cellular Concrete with a minimum wet cast density of 38 lbs./ft^3, with a minimum depth of 1/8". Minimum 1" thick EPS Holey Board placed into wet LWC. The following day a minimum 2" thick top of Celcore HS Cellular Concrete is placed atop the EPS at a wet cast density of 38 lbs./ft^3.
LWC Deck Preparation:	After an overnight set, Celcore PVA Curing Compound is spray applied to the lightweight concrete at a rate of 0.33 gal./sq.
Primer: (Optional)	ASTM D 41, Elastocol 500, Elastocol Stick, Elastocol Stick Zero applied at a rate of 1 gal./sq., to top surface of lightweight concrete.
Base Sheet:	One layer of Colvent TG, Colvent 180 TG, Colvent Flam 180 TG*, Elastophene SP 2.2, Colphene SP 2.2, Elastophene Flam*, Elastophene Flam 2.2*, Sopralene Flam 180*, Colphene Flam 180*, Sopralene Flam 250*, Sopralene 180 SP 3.0, Sopralene 180 SP 3.5, Colphene 180 SP 3.5, torch-applied to lightweight concrete. *Requires torch-applied ply or cap membrane.
Ply Sheet: (Optional)	One or more layers of 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* or Sopralene 250 SP, torch-applied. Or One or more layers of Sopralene 180 Sanded, Sopralene 180 PS* or Sopralene 250 Sanded adhered in hot asphalt at 25 lbs./sq. to sand surfaced base membrane. *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.
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:	-262.5 psf. (See General Limitation #9.)

LIGHTWEIGHT INSULATING CONCRETE SYSTEM LIMITATIONS:

1. If mechanical attachment to the structural deck through the lightweight insulating concrete is proposed, a field withdrawal resistance testing shall be performed to determine equivalent or enhanced fastener patterns and density. All testing and fastening design shall be in compliance with Testing Application Standard TAS 105 and Roofing Application Standard RAS 117; calculations shall be signed and sealed by a Florida Registered Engineer, Architect, or Registered Roof Consultant.
2. For steel deck application where specific deck construction is not referenced: The deck shall be a minimum 22 gage attached with 5/8" puddle welds with weld washers at every flute with maximum deck spans of 5 ft. o.c.
3. For systems where specific lightweight insulating concrete is not referenced, the minimum design mix shall be a minimum of 300 psi.

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