MIAMI-DADE COUNTY
PRODUCT CONTROL SECTION
11805 SW 26 Street, Room 208
Miami, Florida 33175-2474
T (786)315-2590 F (786) 31525-99
www.miamidade.gov/economy

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 Recover 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. 15-0709.16 and consists of pages 1 through 76.
The submitted documentation was reviewed by Jorge L. Acebo.

ROOFING SYSTEM APPROVAL

Category:	Roofing
Sub-Category:	Modified Bitumen
Material:	SBS
Deck Type:	Recover
Maximum Design Pressure:	See Specific Deck Type

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 ply sheet 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.
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.

Product	Dimensions	Test Specification	Product Description
Elastophene Sanded 2.2	39" x 49' (1.5 sq.)	ASTM D6163	Fiberglass reinforced modified bitumen membrane sanded on both sides. Applied in hot asphalt, cold adhesive or ribbon stripping.
Elastophene Sanded 3.0	39" x 33' (1sq.)	ASTM D6163	Fiberglass reinforced modified bitumen membrane sanded on both sides. Applied in hot asphalt, cold adhesive or ribbon stripped.
Elastophene HS	39” x 66’ (2 sq.)	ASTM D6163	Fiberglass reinforced modified bitumen membrane with fire retardants and sanded on both sides. Applied in hot asphalt, cold adhesive or ribbon stripping.
Elastophene PS	39" x 49' (1.5 sq.)	ASTM D6163	Glass reinforced modified bitumen membrane with a plastic burn-off film for heat weld bonding to the top side. Applied in hot asphalt, cold adhesive or ribbon stripping.
Elastophene PS 3.0	39" x 49' (1.5 sq.)	ASTM D6163	Glass reinforced modified bitumen membrane with a plastic burn-off film for heat weld bonding to the top side. Applied in hot asphalt, cold adhesive or ribbon stripping.
Elastophene SP 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).
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.

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

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.
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).

Product	Dimensions	Test Specification	Product Description
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 180GR	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).
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 250 FR GR	39" x 33' (1 sq.)	ASTM D6164	Non-woven polyester reinforced modified bitumen membrane with fire retardants a sanded bottom and a mineral granules top. Applied in hot asphalt, cold applied adhesive or ribbon stripping (after removal of plastic burn-off film).
Colphene 250 FR GR	39" x 33' (1 sq.)	ASTM D6164	Non-woven polyester reinforced modified bitumen membrane with fire retardants a sanded bottom and a mineral granules top. Applied in hot asphalt, cold applied adhesive or ribbon stripping (after removal of plastic burn-off film).
Sopralene 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).

Product	Dimensions	Test Specification	Product Description
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 250 FR GR	39" x 33' (1 sq.)	ASTM D6164	Non-woven polyester reinforced modified bitumen membrane with fire retardants a plastic burn-off film on the bottom and mineral granules on the top. Applied by heat welding or ribbon stripping (after removal of plastic burn-off film).
Colphene Flam 250 FR GR	39" x 33' (1 sq.)	ASTM D6164	Non-woven polyester reinforced modified bitumen membrane with fire retardants a plastic burn-off film on the bottom and mineral granules on the top. Applied by heat welding or ribbon stripping (after removal of plastic burn-off film).
Sopralene Flam 180 FR+ GR	39" x 33' (1 sq.)	ASTM D6164	Non-woven polyester reinforced modified bitumen membrane with fire retardants a plastic burn-off film on the bottom and mineral granules on the top. Applied by heat welding or ribbon stripping (after removal of plastic burn-off film).
Sopralene Flam 250 FR+ GR	39" x 33' (1 sq.)	ASTM D6164	Non-woven polyester reinforced modified bitumen membrane with fire retardants a plastic burn-off film on the bottom and mineral granules on the top. Applied by heat welding or ribbon stripping (after removal of plastic burn-off film).
Sopralene Flam Antirock	39" x 33' (1 sq.)	ASTM D6164	Non-woven polyester reinforced modified bitumen membrane with a plastic burn-off film on the bottom and mineral granules on the top. Applied by heat welding.
Sopralast 50 TV Alu	various	ASTM D6298	Fiberglass reinforced modified bitumen sheeting faced with aluminum foil. Applied by heat welding of ribbon stripping (after removal of plastic burn-off film).
Sopralast 50 TV Alu Sanded	various	ASTM D6298	Fiberglass reinforced modified bitumen sheeting sanded on the bottom and faced with aluminum foil. Applied in hot asphalt, cold adhesive or ribbon stripping.
UNILAY	39" x 33' (1 sq.)	ASTM D6164	Non-woven polyester reinforced modified bitumen membrane with fire retardants and surfaced with mineral granules. Applied by mechanical attachment, heat welding or ribbon stripping (after removal of plastic burn-off film).
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.

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.
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.
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.
Duotack	5, 50 gallon pail	Proprietary	Two part elastomeric urethane foam adhesive.
Duotack Neo	5, 50 gallon pail	Proprietary	Two part polyurethane foam adhesive.
COLPLY Adhesive	5 gallon pail or 55 gallon drum	Proprietary	Polymer modified cold process membrane adhesive.
COLPLY EF Adhesive	5 gallon pail	Proprietary	Solvent free, polymeric adhesive.

APPROVED INSULATIONS:

TABLE 2

Product Name	Product Description	Manufacturer (With Current NOA)
ACFoam-II, ACFoam-III	Polyisocyanurate foam insulation	Atlas Roofing Corporation
ISO 95+ GL	Polyisocyanurate foam insulation	Firestone Building Products Company, LLC
DensDeck, DensDeck Prime	Water resistant gypsum board	Georgia Pacific Gypsum LLC
H-Shield	Polyisocyanurate foam insulation	Hunter Panels LLC
ENRGY 3, ENRGY 3 25 PSI	Polyisocyanurate foam insulation	Johns Manville Corp.
Multi-Max FA-3, Ultra-Max	Polyisocyanurate foam insulation	RMax Operating, LLC
SECUROCK Gypsum-Fiber Roof Board	Gypsum board	USG Corp.
Structodek High Density Fiberboard Roof Insulation	High Density wood fiber insulation board	Blue Ridge Fiberboard
Fesco Board	Expanded perlite and fiber insulation	Johns Manville Corp.
Sopraboard	Mineral fortified asphaltic cored coverboard	SOPREMA, Inc.
M-Shield	Polyisocyanurate foam insulation	SOPREMA, Inc.
Sopra-ISO s, Sopra-ISO+ s	Polyisocyanurate foam insulation	SOPREMA, Inc.
Sopra-ISO r	Polyisocyanurate foam insulation	SOPREMA, Inc.
Sopra-ISO x	Polyisocyanurate foam insulation	SOPREMA, Inc.
SopraRock DD, SopraRock DD Plus	Mineral wool insulation	SOPREMA, Inc.
TopRock DD, TopRock DD Plus	Mineral wool insulation	ROXUL, Inc. dba ROCKWOOL

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 LWC, gypsum or CWF 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-#12-PH3, Dekfast DF-#14-PH3 & Dekfast DF-#15-PH3	Insulation fastener	various	SFS Group USA, Inc.
4.	Dekfast PLT-H-2-7/8	Galvalume AZ50 steel plate	2 7/8” x 3 ¼”	SFS Group USA, Inc.
5.	Dekfast PLT-P-R-3	Polypropylene locking plate.	3” x 3 ¼”	SFS Group USA, Inc.
6.	Trufast Twin Loc-Nail Assembled Fastener	Base ply fastening systems for LWC, gypsum or CWF decks.		Altenloh, Brinck & Co. U.S., Inc.
7.	OMG 3” Galvalume Steel Plate	Galvalume stress plate.	3” diameter	OMG, Inc.
8.	Flat Bottom Metal Plate	Galvalume stress plate.	3” square	OMG, Inc.
9.	CR Assembled Base Sheet Fastener (1.2”) or (1.7”)	Base ply fastening assembly	various	OMG, Inc.
10.	Polymer GypTec	Glass reinforced Nylon insulation fastener for gypsum & CWF decks with barbs.	various	OMG, Inc.
11.	Polymer GypTec Insulation Plate	Galvalume stress plate	3" diameter	OMG, Inc.
12.	Lite Deck	Insulation fastener for CWF and Gypsum decks.		OMG, Inc.
13.	Lite Deck Plate	Galvalume stress plate	3" diameter	OMG, Inc.
14.	#12 Standard Roofgrip, #14 Roofgrip & #15 Roofgrip	Insulation fastener.	various	OMG, Inc.
15.	CD-10	Insulation fastener.	various	OMG, Inc.
16.	Fluted Nail	Insulation fastener.	various	OMG, Inc.
17.	3 in. Round Metal Plate	Galvalume AZ50 steel plate	3" diameter	OMG, Inc.
18.	OMG Plastic Plate	Polypropylene stress plate	3.25" diameter	OMG, Inc.
19.	Trufast TL Fastener	Insulation fastener for lightweight concrete, CWF and gypsum decks	various	Altenloh, Brinck & Co. U.S., Inc.
20.	Trufast #14 HD Fastener	Insulation fastener for wood, steel and concrete.	various	Altenloh, Brinck & Co. U.S., Inc.
21.	Trufast #15 EHD Fastener	Insulation fastener for wood, steel and concrete.	various	Altenloh, Brinck & Co. U.S., Inc.

APPROVED FASTENERS/ADHESIVES: TABLE 3

Fastener Number	Product Name	Product Description	Dimensions	Manufacturer (With Current NOA)
22.	Trufast 3” Metal Insulation Plate	Galvalume AZ50 steel plate	3" diameter	Altenloh, Brinck & Co. U.S., Inc.
23.	Trufast Twin Loc-Nail Batten Fastener	Batten bar		Altenloh, Brinck & Co. U.S., Inc.
24.	Polymer Batten Strip	Modified polymer batten bar		OMG, Inc.
25.	OMG Heavy Duty	Insulation fastener	various	OMG, Inc.
26.	Galvalume Steel 3” Round	Galvalume AZ50 steel plate	3” diameter	SFS Group USA, Inc.
27.	Soprema 3” Round Insulation Plate	Stress plate	3” diameter	SOPREMA, Inc.
28.	Soprafix 2” SB Stress Plate	Stress plate	2” diameter	SOPREMA, Inc.
29.	Soprafix MBB-R	Metal Batten Bar		SOPREMA, Inc.
30.	Soprema #12 DP, #14 MP, #15 HD Fastener	Insulation and membrane fasteners		SOPREMA, Inc.
31.	Trufast Flat Batten Bar	Galvalume AZ55 steel batten bar		Altenloh, Brinck & Co. U.S., Inc.
32.	Trufast Recessed Batten Bar	Galvalume AZ55 steel batten bar with recessed holes		Altenloh, Brinck & Co. U.S., Inc.
33.	Trufast TL Insulation Plate	Galvalume AZ50 steel stress plate	3” diameter	Altenloh, Brinck & Co. U.S., Inc.
34.	Tru-Fast 2” Barbed Metal Seam Plate	Galvalume steel barbed plate	2” diameter	Altenloh, Brinck & Co. U.S., Inc.
35.	Trufast 2.4” Barbed Seam Plate	Galvalume steel barbed plate	2.4” diameter	Altenloh, Brinck & Co. U.S., Inc.
36.	Dekfast PLT-R-2-4B	Galvalume AZ55 steel plate	2” diameter	SFS Group USA, Inc.
37.	Dekfast PLT-R-2-3/8-6B	Galvalume AZ55 steel barbed plate	2.37” diameter	SFS Group USA, Inc.
38.	Soprema 2" Seam Plate	Stress plate	2” diameter	SOPREMA, Inc.
39.	Soprema 3" Metal Insulation Plate	Stress plate	3” diameter	SOPREMA, Inc.
40.	Trufast 3” Recessed Metal Insulation Plate	Galvalume AZ50 steel plate	3” diameter	Altenloh, Brinck & Co. U.S., Inc.
41.	SOPREMA Twin Loc-Nail	Base ply fastening systems for lightweight concrete, gypsum or cementitious wood fiber decks	Various	SOPREMA, Inc.
42.	Trufast 2.4” Scoop Seam Plate	Galvalume steel stress plate	2.4” Round	Altenloh, Brinck & Co. U.S., Inc.
43.	Soprema 2.4” Seam Plates	Galvalume steel stress plate	2.4” Round	SOPREMA, Inc.
44.	Millennium One Step Foamable Adhesive	Polyurethane two component high rise insulation adhesive		H.B. Fuller Company
45.	Millennium One Step Green Foamable Adhesive	Polyurethane two component high rise insulation adhesive		H.B. Fuller Company

APPROVED FASTENERS/ADHESIVES:

TABLE 3

Fastener Number	Product Name	Product Description	Dimensions	Manufacturer (With Current NOA)
46.	Millennium PG-1 Low Viscosity Insulation Adhesive	Polyurethane two component high rise insulation adhesive		H.B. Fuller Company
47.	Insta-Stik Quik Set Insulation Adhesive	Polyurethane one component moisture curing adhesive		DuPont de Nemours, Inc.
48.	OMG OlyBond Classic	Polyurethan adhesive		OMG, Inc.

APPROVED SURFACING/COATING OPTIONS:

TABLE 4

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

System Number	Manufacturer	Application
1.	Generic	Flood coat and gravel/slag with an application rate of 60 lbs./sq. & 400 lbs./sq., respectively.
2.	SOPREMA, Inc.	Gravel applied at 400 lbs./sq., adhered with COLPLY EF Adhesive, COLPLY Adhesive, at 4 gal./sq.
3.	Karnak Corporation	Karnak (#97 AF) Fibrated Aluminum Roof Coating applied at an application rate of 1.5 gal./sq.
4.	SOPREMA, Inc.	Cural Aluminizer applied at an application rate of 2 gal./sq.
5.	Thermo Manufacturing Systems, LLC	Super Prep Elastomeric Roof Maintenance Coating applied in two coats at an application rate of 1.5 gal./sq./coat.
6.	Quest Construction Products LLC dba United Coatings	United Coatings Roof Mate Coating, applied in one base coat at a rate of 1.5 gal./sq., and one finish coat at a rate of 1.5 gal./sq.
7.	Insulating Coatings Corporation	Astec 2000 Finish Coat applied in two base coats at a rate of 0.75 gal./sq./coat and two finish coats at a rate of 0.75 gal./sq./coat.
8.	Henry Company	HE280DC White Elastomeric Roof Coating applied in two coats at an application rate of 1 gal./sq./coat.
9.	National Coating Corp.	Acryshield® A500 applied in two coats at an application rate of 1 gal./sq./coat.
10.	SOPREMA, Inc.	R Nova Plus applied in two coats. Base coat is applied at 3 gal/sq. (1.2 L/m^2) and allowed to dry. A top coat is applied at 1 gal/sq. (0.4 L/m^2).
11.	Generic	Semi-ceramic coated colored granules.

EVIDENCE SUBMITTED:

Test Agency/Identifier	Report	Name	Date
FM Approvals	3002351	FM 4470	02/28/03
	3017614	FM 4470	02/27/06
	3023749	FM 4470	09/28/06
	3029098	FM 4470	10/25/07
	3032109	FM 4470	07/21/08
	3008441	FM 4470	10/17/00
	3026128	FM 4470	08/04/06
	3024311	FM 4470	11/01/06
	3036182	FM 4470	07.31.09
	3014751	FM 4470	08/27/03
	3023458	FM 4470	07/18/06
	3008869	FM 4470	03/19/01
	3045101	FM 4470	11/05/12
	3009814	FM 4470	09/06/02
	3000507	FM 4450	02/16/00
	3022038	FM 4454	04/05/06
	3025185	FM 4454	05/22/07
	3047439	FM 4470	07/22/13
	3X3A7.AM	FM 4470	09/08/94
	4D2A3.AM	FM 4457	09/14/99
	1W8A1.AM	FM 4470	02/04/94
	2B8A4.AM	FM 4470	07/02/97
	3045734	FM 4470	04/04/12
	3046765	FM 4470	02/15/13
	3044801	FM 4470	02/27/12
	3049322	FM 4470	01/17/14
	3047351	FM 4470	10/09/14
	3047439	FM 4470	07/22/13
	RR201064	FM 4470	05/01/15
	3051109	FM 4470	05/11/15
	3054633	FM 470	12/18/15
	RR203157	FM 4470	11/06/15
	RR201595	FM 4470	06/17/15
	RR203472	FM 4470	02/05/16
UL LLC	R11436	UL 790	01/15/21
Dynatech Engineering Corp.	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
	2109.08.02	TAS 114	08/06/02
	2109.09.02	TAS 114	09/19/02
Trinity | ERD	2764.09.03	TAS 114	09/16/03
	2766.12.03	TAS 114	12/01/03
	2779.11.05-R1	TAS 114	04/18/07

EVIDENCE SUBMITTED: (CONTINUED)

Test Agency/Identifier	Report	Name	Date
Trinity | ERD	2774.04.05-R1	TAS 114	04/18/07
	S12370.03.09-1	ASTM D 6164	03/06/09
	S12370.03.09-2	ASTM D 6164	03/06/09
	S12370.03.09-3	ASTM D 6162	03/06/09
	2752.02LAB.05.02-1	TAS 114	05/24/02
	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
	S11440.12.10-1-R1	ASTM D6163	06/07/12
	S35860.12.11-1-R1	ASTM D2178	12/12/14
	S35860.12.11-2	ASTM D4601	12/12/11
	S35860.05.12-1-R2	ASTM D6163	02/14/13
	S35860.05.12-2-R3	ASTM D6164	08/28/14
	S35860.05.12-3	ASTM D6164	05/08/12
	S35860.09.12-R2	ASTM D6163	12/12/14
	S11440.11.10-3-R2	ASTM D4601 & TAS 117(B)	08/26/14
	S43210.11.14	ASTM D1876	11/10/14
	S47160.01.14-R1	FM 4470 & TAS 114 (H)	12/11/14
	M45560.10.13-1-R2	ASTM D4897 & TAS 117	12/11/14
	S39970.07.12-2	ASTM D6164	07/12/12
	S32700.12.10-R2	ASTM D6162	07/07/14
	S39970.07.12-R1	ASTM D6162	12/12/14
	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
PRI Construction Materials Technologies, LLC	SOP-049-02-01	ASTM D1644/ASTM 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-050-02-01	ASTM D3019	07/12/12
	SOP-056-02-01	Various	09/12/12
Atlantic & Caribbean Roof Consulting	ACRC 15-049	TAS 114	01/08/16

DECK STRESS ANALYSIS CALCULATIONS/REPORTS

Engineer/Agency	Identifier	Assemblies	Date
Robert Nieminen, P.E.	Signed/Sealed Calculations	C(1), C(2), D(11), D(14), D(18), E(2), E(3)	02/10/16
FM Approval Deck Limitations	N/A	D(1), D(2), D(3), D(4), D(5), D(6), D(7), D(8), D(12), D(13), D(15), D(16), D(17), D(19), D(20)	01/01/13
Randall E. Fowler, P.E.	Signed/Sealed Calculations	E(4)	01/15/16

APPROVED ASSEMBLIES:

Membrane Type: SBS

Deck Type 7I: Recover, Insulated

Deck Description: Cementitious Wood Fiber over steel structural supports spaced 36" o.c. and secured with three, equally spaced, Dekfast #14 fasteners with 2" plates spaced 16" o.c. *The deck shall record a Minimum Characteristic Resistance Force (MCRF) of 40 lbf when tested with fasteners, listed in this assembly, installed through to the deck in accordance with TAS 105.

System Type A(1): Anchor sheet mechanically fastened, all layers of insulation adhered with approved asphalt or adhesive

All General and System Limitations apply.

Anchor Sheet: One layer Soprabase, Soprabase S, mechanically attached with 1.8" long Trufast Twin Loc-Nail Assembled Fasteners or SOPREMA Twin Loc-Nails spaced 6" o.c. in min. 4" lap and 6" o.c. in two evenly spaced, staggered rows in the field.

One or more layers of any of the following insulations.

Base Insulation Layer	**Insulation Fasteners (Table 3)**	**Fastener Density/ft^2**
ACFoam-II, Sopra-ISO s Minimum 1.5" thick	**N/A**	**N/A**
ENRGY 3, Multi-Max FA-3, Sopra-ISO x, H-Shield, M-Shield, Sopra-ISO r (*not with Duotack or Duotack Neo*) **Minimum 1.5" thick**	**N/A**	**N/A**
Top Insulation Layer	**Insulation Fasteners (Table 3)**	**Fastener Density/ft^2**
DensDeck Minimum ¼" thick	**N/A**	**N/A**
Sopraboard Minimum 1/8" thick	**N/A**	**N/A**

Note: All insulation shall be adhered to the vapor barrier in full mopping of approved hot asphalt within the EVT range and at a rate of 20-40 lbs./100 ft^2, or in Duotack, Duotack Neo, Millennium One Step Green Foamable Adhesive or Millennium PG-1 Low Viscosity Insulation Adhesive in ¾" wide ribbons spaced 6" 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.

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

Base Sheet: One layer Colvent Flam 180 TG*, Colvent TG or Colvent 180 TG, torch-applied.
*Requires torch-applied ply or cap 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 180 SP 3.5, Colphene 180 SP 3.5, Sopralene Flam 250*, Sopralene 250 SP, torch-applied. Or Colphene Sanded, Elastophene Sanded 2.2, Elastophene Sanded 3.0, Elastophene HS, Elastophene PS*, Elastophene PS 3.0*, Colphene 180 Sanded, Sopralene 180 Sanded 2.2, Soprabase, Colphene 180 PS*, Sopralene 180 PS 2.2*, Sopralene 180 Sanded, Sopralene 180 PS* or Sopralene 250 Sanded adhered in hot asphalt at 25 lbs./sq. or applied in COLPLY EF Adhesive, COLPLY Adhesive at a rate of 1.5 gal./sq. to sand surfaced base membrane. *Requires torch-applied cap membrane.
Membrane:	Elastophene Flam FR GR, Elastophene Flam LS FR GR, Elastophene Flam FR+ GR, Sopralene Flam 180 GR, Colphene Flam 180 GR, Sopralene Flam 180 FR GR, Colphene Flam 180 FR GR, Sopralene Flam 180 FR GR 3.5, Sopralene Flam 180 FR+ GR, Sopralene Flam 250 FR GR, Colphene Flam 250 FR GR, Sopralene Flam 250 FR+ GR, Sopralast 50 TV Alu, Sopralene Flam Antirock, torch-applied. Or Elastophene FR GR, Elastophene LS FR GR, Elastophene FR+ GR, Sopralene 180 FR GR, Colphene 180 FR GR, Sopralene 180 FR+ GR, Sopralene 250 FR GR, Colphene 250 FR GR, Sopralene 250 FR+ GR, Sopralast 50 TV Alu Sanded adhered in hot asphalt at 25 lbs./sq. or applied in COLPLY EF Adhesive, COLPLY Adhesiveat a rate of 1.5 gal./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 7I: Recover, Insulated

Deck Description: Concrete

System Type A(2): One or more layers of insulation adhered with approved adhesive or asphalt.

All General and System Limitations apply.

One or more layers of any of the following insulations.

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

Top Insulation Layer	**Insulation Fasteners (Table 3)**	**Fastener Density/ft^2**
DensDeck		
Minimum ¼" thick	**N/A**	**N/A**

Note: Existing roof surface shall be primed with ASTM D 41 asphalt primer and allowed to dry prior to application of insulation. All insulation shall be adhered to primed deck in full mopping of approved hot asphalt within the EVT range and at a rate of 20-40 lbs./100 ft^2 or Insta-Stik Quik Set Insulation Adhesive applied in continuous ¾" to 1" wide ribbons at a maximum spacing of 12" o.c. Please refer to Roofing Application Standard RAS 117 for insulation attachment. Insulations listed as base layer only shall be used only as base layers with a second layer of approved top layer insulation installed as the final membrane substrate. Composite insulation panels may be used as a top layer placed with the polyisocyanurate side facing down.

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

Ply Sheet: One or more plies of Elastophene Flam*, Elastophene Flam 2.2*, Elastophene SP 2.2, Colphene SP 2.2, Elastophene SP 3.0, Colphene SP 3.0, Sopralene Flam 180*, Colphene Flam 180*, Sopralene Flam 250*, Sopralene 180 SP 3.0, Sopralene 180 SP 3.5, Colphene 180 SP 3.5, Sopralene 250 SP, torch-applied.

Or

One or more plies of 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*, Soprabase, Sopralene 180 PS*, Sopralene 180 Sanded, Sopralene 250 Sanded adhered in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs./sq.
*Requires torch-applied cap membrane.

Membrane:	Elastophene Flam FR GR, Elastophene Flam FR+ GR, Elastophene Flam LS FR GR, Sopralene Flam 180 GR, Colphene Flam 180 GR, Sopralene Flam 180 FR GR, Colphene Flam 180 FR GR, Sopralene Flam 180 FR GR 3.5, Sopralene Flam 250 FR GR, Colphene Flam 250 FR GR, Sopralene Flam 180 FR+ GR, Sopralene Flam 250 FR+ GR or Sopralast 50 TV Alu, Sopralene Flam Antirock, torch-applied. Or Elastophene FR GR, Elastophene FR+ GR, Elastophene LS FR GR, Sopralene 180 FR GR, Colphene 180 FR GR, Sopralene 180 FR+ GR, Sopralene 250 FR GR, Colphene 250 FR GR, Sopralene 250 FR+ GR, adhered in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs./sq. to sand surfaced base or ply membrane.
Surfacing:	Surfacing is Optional on granular surfaced field cap membranes. Surfacing is Required for smooth or sanded surfaced field cap membranes. Refer to Underwriters Laboratories or Intertek Testing Services listings for applicable fire classifications. Apply any coating listed in Table 4 above, or any Miami-Dade approved coating system.
Maximum Design Pressure:	-90 psf.; (See General Limitation #9.)

Membrane Type: SBS

Deck Type 7I: Recover, Insulated

Deck Description: Concrete

System Type A(3): One or more layers of insulation adhered with approved asphalt.

All General and System Limitations apply.

One or more layers of any of the following insulations.

Base Insulation Layer	**Insulation Fasteners (Table 3)**	**Fastener Density/ft^2**
ACFoam-II, ACFoam-III, Sopra-ISO s, Sopra-ISO+ s, ENRGY 3, H-Shield, M-Shield, Sopra-ISO r (flat or tapered)		
Minimum 1.5" thick	**N/A**	**N/A**

Note: Existing roof surface shall be primed with ASTM D 41 asphalt primer and allowed to dry prior to application of insulation. Base insulation layer shall be adhered to the primed deck in full moppings of approved hot asphalt within the EVT range and at a rate of 20-40 lbs./100 ft^2 or OlyBond Insulation Adhesive applied at a rate of 1 gal./100 ft^2. Please refer to Roofing Application Standard RAS 117 for insulation attachment.

Top Insulation Layer	**Insulation Fasteners (Table 3)**	**Fastener Density/ft^2**
DensDeck		
Minimum ¼" thick	**N/A**	**N/A**
Structodek High Density Fiberboard Roof Insulation		
Minimum ½" thick	**N/A**	**N/A**
Sopraboard (*only hot asphalt applied*)		
Minimum 1/8" thick	**N/A**	**N/A**

Note: Apply top layer of insulation in a full mopping of any approved mopping hot asphalt within the EVT range and at a rate of 20-40 lbs./100 ft^2 or OlyBond Insulation Adhesive applied at a rate of 1 gal./100 ft^2. 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 the final membrane substrate. Composite insulation panels may be used as a top layer placed with the polyisocyanurate side facing down.

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

Ply Sheet: (Optional)	**(Required if no base sheet used)** One or more plies of Elastophene Flam*, Elastophene Flam 2.2*, Elastophene SP 2.2, Colphene SP 2.2, Elastophene SP 3.0, Colphene SP 3.0, Sopralene Flam 180*, Colphene Flam 180*, Sopralene Flam 250*, Sopralene 180 SP 3.0, Sopralene 180 SP 3.5, Colphene 180 SP 3.5, Sopralene 250 SP, torch-applied. Or One or more plies of Colphene Sanded, Elastophene Sanded 2.2, Elastophene Sanded 3.0, Elastophene HS, Colphene 180 Sanded, Sopralene 180 Sanded 2.2, Soprabase, Elastophene PS*, Elastophene PS 3.0*, Colphene 180 PS*, Sopralene 180 PS 2.2*, Sopralene 180 PS*, Sopralene 180 Sanded, Sopralene 250 Sanded or 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. *Requires torch-applied cap membrane.
Membrane:	Elastophene Flam FR GR, Elastophene Flam FR+ GR, Elastophene Flam LS FR GR, Sopralene Flam 180 GR, Colphene Flam 180 GR, Sopralene Flam 180 FR GR, Colphene Flam 180 FR GR, Sopralene Flam 180 FR GR 3.5, Sopralene Flam 250 FR GR, Colphene Flam 250 FR GR, Sopralene Flam 180 FR+ GR, Sopralene Flam 250 FR+ GR, Sopralast 50 TV Alu, Sopralene Flam Antirock, torch-applied. Or Elastophene FR GR, Elastophene FR+ GR, Elastophene LS FR GR, Sopralene 180 FR GR, Colphene 180 FR GR, Sopralene 180 FR+ GR, Sopralene 250 FR GR, Colphene 250 FR GR, Sopralene 250 FR+ GR, Sopralast 50 TV Alu Sanded adhered in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs./sq. to sand surfaced base or ply membrane.
Surfacing:	Surfacing is Optional on granular surfaced field cap membranes. Surfacing is Required for smooth or sanded surfaced field cap membranes. Refer to Underwriters Laboratories or Intertek Testing Services listings for applicable fire classifications. Apply any coating listed in Table 4 above, or any Miami-Dade approved coating system.
Maximum Design Pressure:	-105 psf.; (using Structodek or Sopraboard) (See General Limitation #9.) -127.5 psf.; (using DensDeck) (See General Limitation #9.)

Membrane Type: SBS

Deck Type 7I: Recover, Insulated

Deck Description: Concrete

System Type A(4): One or more layers of insulation adhered with approved adhesive or asphalt.

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

Base Insulation Layer	**Insulation Fasteners (Table 3)**	**Fastener Density/ft^2**
ACFoam-II, ACFoam-III, Sopra-ISO s, Sopra-ISO+ s, ENRGY 3, H-Shield, M-Shield, Sopra-ISO r (flat or tapered)		
Minimum 1.5" thick	**N/A**	**N/A**

Top Insulation Layer	**Insulation Fasteners (Table 3)**	**Fastener Density/ft^2**
DensDeck		
Minimum ¼" thick	**N/A**	**N/A**
Structodek High Density Fiberboard Roof Insulation		
Minimum ½" thick	**N/A**	**N/A**
Sopraboard		
Minimum 1/8" thick	**N/A**	**N/A**

Note: Existing roof surface shall be primed with ASTM D 41 asphalt primer and allowed to dry prior to application of insulation. All insulation shall be adhered to the primed deck in full moppings of approved hot asphalt within the EVT range and at a rate of 20-40 lbs./100 ft^2 or Duotack, Duotack Neo, Millennium One Step Foamable Adhesive, Millennium One Step Green Foamable Adhesive or Millennium PG-1 Low Viscosity Insulation Adhesive applied in continuous ¾" to 1" wide ribbons at a maximum spacing of 12" o.c. Please refer to Roofing Application Standard RAS 117 for insulation attachment. Insulations listed as base layer only shall be used only as base layers with a second layer of approved top layer insulation installed as the final membrane substrate. Composite insulation panels may be used as a top layer placed with the polyisocyanurate side facing down.

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

Ply Sheet: One or more plies of Elastophene Flam*, Elastophene Flam 2.2*, Elastophene SP 2.2, Colphene SP 2.2, Elastophene SP 3.0, Colphene SP 3.0, Sopralene Flam 180*, Colphene Flam 180*, Sopralene Flam 250*, Sopralene 180 SP 3.0, Sopralene 180 SP 3.5, Colphene 180 SP 3.5, Sopralene 250 SP, torch-applied.

Or

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

Membrane:	Elastophene Flam FR GR, Elastophene Flam FR+ GR, Elastophene Flam LS FR GR, Sopralene Flam 180 GR, Colphene Flam 180 GR, Sopralene Flam 180 FR GR, Colphene Flam 180 FR GR, Sopralene Flam 180 FR GR 3.5, Sopralene Flam 250 FR GR, Colphene Flam 250 FR GR, Sopralene Flam 180 FR+ GR, Sopralene Flam 250 FR+ GR, Sopralast 50 TV Alu, Sopralene Flam Antirock, torch-applied. Or Elastophene FR GR, Elastophene FR+ GR, Elastophene LS FR GR, Sopralene 180 FR GR, Colphene 180 FR GR, Sopralene 180 FR+ GR, Sopralene 250 FR GR, Colphene 250 FR GR, Sopralene 250 FR+ GR, Sopralast 50 TV Alu Sanded adhered in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs./sq. to sand surfaced base or ply membrane.
Surfacing:	Surfacing is Optional on granular surfaced field cap membranes. Surfacing is Required for smooth or sanded surfaced field cap membranes. Refer to Underwriters Laboratories or Intertek Testing Services listings for applicable fire classifications. Apply any coating listed in Table 4 above, or any Miami-Dade approved coating system.
Maximum Design Pressure:	-105 psf.; (for High Density Wood Fiberboard or Sopraboard) (See General Limitation #9.) -127.5 psf.; (for DensDeck) (See General Limitation #9.)

Membrane Type: SBS

Deck Type 7I: Recover, Insulated

Deck Description: Concrete

System Type A(5): One or more layers of insulation adhered with approved adhesive onto vapor barrier adhered onto primed concrete deck.

All General and System Limitations apply.

Primer: Concrete deck primed with ASTM D41 primer.

Vapor Barrier: (Optional) One or more plies of Modified Sopra G, Sopra IV, Sopra VI, Soprabase, Soprabase S adhered in COLPLY Adhesive at 1.5 – 2.0 gallons/square.

One or more layers of any of the following insulations.

Insulation Layer	**Insulation Fasteners (Table 3)**	**Fastener Density/ft^2**
ACFoam-II, Sopra-ISO s, H-Shield, Sopra-ISO r, M-Shield Minimum 1.4" thick	**N/A**	**N/A**

Note: All insulation shall be adhered to the deck with full mopping of approved hot asphalt within the EVT range and at a rate of 20-40 lbs./100 ft^2 or Duotack, Duotack Neo, Millennium One Step Foamable Adhesive, Millennium One Step Green Foamable Adhesive or Millennium PG-1 Low Viscosity Insulation adhesive applied in continuous ¾" wide ribbons at a maximum spacing of 12" o.c. Please refer to Roofing Application Standard RAS 117 for insulation attachment. Insulations listed as base layer only shall be used only as base layers with a second layer of approved top layer insulation installed as the final membrane substrate.

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

Base Sheet: One layer of Sopralene Flam Stick or Elastophene Flam Stick, self-adhered.

Ply Sheet: One or more layers of Elastophene Flam, Elastophene Flam 2.2, Elastophene Flam HS, Elastophene SP 2.2, Colphene SP 2.2, Elastophene SP 3.0, Colphene SP 3.0, Sopralene Flam 180, Colphene Flam 180, Sopralene 180 SP 3.0, Sopralene 180 SP 3.5, Colphene 180 SP 3.5, Soprafix Base 622, Sopralene Flam 250, Sopralene 250 SP, Colvent Flam 180 TG, 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 3.5, Sopralene Flam 180 FR+ GR, Sopralene Flam 250 FR GR, Colphene Flam 250 FR GR, Sopralene Flam 250 FR+ GR, Sopralast 50 TV Alu, Sopralene Flam Antirock, torch-applied.

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

Maximum Design Pressure: -187.5 psf. With vapor barrier (See General Limitation #9.)
-225 psf. Without vapor barrier (See General Limitation #9.)

Membrane Type: SBS

Deck Type 7I: Recover, Insulated

Deck Description: Concrete

System Type A(6): One or more layers of insulation adhered with approved adhesive to existing Granule Surface Modified Bitumen or BUR.

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

Base Insulation Layer (Optional)	**Insulation Fasteners (Table 3)**	**Fastener Density/ft^2**
H-Shield, M-Shield, Sopra-ISO r, ACFoam-II, Sopra-ISO s, Multi-Max FA-3, Sopra-ISO x, ENRGY 3		
Minimum 1.5" thick	**N/A**	**N/A**

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

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

Base Sheet: One or more plies of Colphene Sanded, Elastophene Sanded 2.2, Elastophene Sanded 3.0, Elastophene PS*, Elastophene PS 3.0*, Elastophene HS, Colphene 180 Sanded, Sopralene 180 Sanded 2.2, Soprabase, Colphene 180 PS*, Sopralene 180 PS 2.2*, Sopralene 180 Sanded, Sopralene 180 PS*, Sopralene 250 Sanded adhered in COLPLY Adhesive COLPLY EF Adhesive at a rate of 1.5 gal./sq. or adhered in hot asphalt at 25 lbs./sq.

Or

Elastophene Flam*, Elastophene Flam 2.2*, Elastophene SP 2.2, Colphene SP 2.2, Elastophene SP 3.0, Colphene SP 3.0, Elastophene Flam HS, Sopralene 180 SP 3.0, Sopralene 180 SP 3.5, Colphene 180 SP 3.5, Sopralene Flam 180*, Colphene Flam 180*, Sopralene Flam 250*, Sopralene 250 SP, Colvent TG, Colvent 180 TG, Colvent Flam 180 TG*, torch-applied.
*Requires torch-applied cap membrane.

Membrane: Elastophene FR GR, Elastophene LS FR GR, Sopralene 180 FR GR, Colphene 180 FR GR, Sopralene 180 FR+ GR, Sopralene 250 FR GR, Colphene 250 FR GR, Sopralene 250 FR+ GR, Sopralast 50 TV Alu Sanded adhered in COLPLY Adhesive, COLPLY EF Adhesive at a rate of 1.5 gal./sq. or adhered in hot asphalt at 25 lbs./sq.

Or

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

Surfacing:	Surfacing is Optional on granular surfaced field cap membranes. Surfacing is Required for smooth or sanded surfaced field cap membranes. Refer to Underwriters Laboratories or Intertek Testing Services listings for applicable fire classifications. Apply any coating listed in Table 4 above, or any Miami-Dade approved coating system.
Maximum Design Pressure:	-195 psf. (See General Limitation #9.)

Membrane Type: SBS

Deck Type 7I: Recover, Insulated

Deck Description: Concrete

System Type A(7): One or more layers of insulation adhered with approved asphalt.

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

Base Insulation Layer	**Insulation Fasteners (Table 3)**	**Fastener Density/ft^2**
ACFoam-II, ACFoam-III, Sopra-ISO s, Sopra-ISO+ s, ENRGY 3, ENRGY 3 25 PSI, H-Shield, M-Shield, Sopra-ISO r (flat or tapered)		
Minimum 1.5" thick	**N/A**	**N/A**

Top Insulation Layer	**Insulation Fasteners (Table 3)**	**Fastener Density/ft^2**
Fesco Board		
Minimum ¾" thick	**N/A**	**N/A**

Note: Existing roof surface shall be primed with ASTM D 41 asphalt primer and allowed to dry prior to application of insulation. All insulation shall be adhered to the deck in full mopping of approved hot asphalt within the EVT range and at a rate of 20-40 lbs./100 ft^2. Please refer to Roofing Application Standard PA 117 for insulation attachment. Insulations listed as base layer only shall be used only as base layers with a second layer of approved top layer insulation installed as the final membrane substrate. Composite insulation panels used as a top layer shall be placed with the polyisocyanurate side facing down.

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

Ply Sheet: (Optional) (*Required if no base sheet used*) One or more plies of Elastophene Flam*, Elastophene Flam 2.2*, Elastophene SP 2.2, Colphene SP 2.2, Elastophene SP 3.0, Colphene SP 3.0, Sopralene Flam 180*, Colphene Flam 180*, Sopralene Flam 250*, Sopralene 180 SP 3.0, Sopralene 180 SP 3.5, Colphene 180 SP 3.5, Sopralene 250 SP, torch-applied.
Or
One or more plies of Colphene Sanded, Elastophene Sanded 2.2, Elastophene Sanded 3.0, Elastophene HS, Colphene 180 Sanded, Sopralene 180 Sanded 2.2, Soprabase, Elastophene PS*, Elastophene PS 3.0*, Colphene 180 PS*, Sopralene 180 PS 2.2*, Sopralene 180 PS*, Sopralene 180 Sanded, Sopralene 250 Sanded or 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.
*Requires torch-applied cap membrane.

Membrane:	Elastophene Flam FR GR, Elastophene Flam FR+ GR, Elastophene Flam LS FR GR, Sopralene Flam 180 GR, Colphene Flam 180 GR, Sopralene Flam 180 FR GR, Colphene Flam 180 FR GR, Sopralene Flam 180 FR GR 3.5, Sopralene Flam 250 FR GR, Colphene Flam 250 FR GR, Sopralene Flam 180 FR+ GR, Sopralene Flam 250 FR+ GR, Sopralast 50 TV Alu, Sopralene Flam Antirock, torch-applied. Or Elastophene FR GR, Elastophene FR+ GR, Elastophene LS FR GR, Sopralene 180 FR GR, Colphene 180 FR GR, Sopralene 180 FR+ GR, Sopralene 250 FR GR, Colphene 250 FR GR, Sopralene 250 FR+ GR, Sopralast 50 TV Alu Sanded adhered in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs./sq. to sand surfaced base or ply membrane.
Surfacing:	Surfacing is Optional on granular surfaced field cap membranes. Surfacing is Required for smooth or sanded surfaced field cap membranes. Refer to Underwriters Laboratories or Intertek Testing Services listings for applicable fire classifications. Apply any coating listed in Table 4 above, or any Miami-Dade approved coating system.
Maximum Design Pressure:	-420 psf.; (See General Limitation #9.)

Membrane Type: SBS

Deck Type 7I: Recover, Insulated

Deck Description: Structural Concrete

System Type B: Base layer of insulation mechanically fastened, optional top layer adhered with approved asphalt.

All General and System Limitations apply.

Thermal Barrier: Min. ¼" thick DensDeck or DensDeck Prime, loose-laid.

(Optional)

One or more layers of any of the following insulations.

Base Insulation Layer	**Insulation Fasteners (Table 3)**	**Fastener Density/ft²**
H-Shield, M-Shield, Sopra-ISO r, ACFoam-II, Sopra-ISO s		
Minimum 2.0" thick (flat or tapered)	**30 (#14 MP or #15 HD), 20 or 21**	**1:1.6 ft²**

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

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

Note: Top layer of insulation shall be adhered with Duotack or Duotack Neo applied in ½" to ¾" wide ribbons spaced 12" o.c. Refer to Roofing Application Standard RAS 117 for insulation attachment. Insulations listed as the base layer shall only be used as the base layer with a second layer of approved top layer insulation installed as the final membrane substrate. Composite insulation boards used as a top layer shall be installed with the polyisocyanurate face down.

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

Or

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

Or

Base Sheet: (Continued)	One layer of Elastophene Stick, Sopralene Stick, Colphene Stick, Elastophene Flam Stick* or Sopralene Flam Stick*, self-adhered to substrate primed with Elastocol Stick or Elastocol Stick Zero. *Requires torch-applied ply or cap membrane
Ply Sheet: (Optional)	One layer of Modified Sopra G, Soprabase, Colphene Sanded, Elastophene Sanded 2.2, Elastophene Sanded 3.0, Elastophene HS, Elastophene PS*, Elastophene PS 3.0*, Colphene 180 Sanded, Sopralene 180 Sanded 2.2, Soprabase, Colphene 180 PS*, Sopralene 180 PS 2.2*, Sopralene 180 Sanded, Sopralene 180 PS* or Sopralene 250 Sanded adhered in hot asphalt at 25 lbs./sq. or applied in COLPLY EF Adhesive, COLPLY Adhesive, applied at a rate of 1.5 – 2 gal./sq. Or One layer of Elastophene Flam*, Elastophene Flam 2.2*, Elastophene SP 2.2, Colphene SP 2.2, Elastophene SP 3.0, Colphene SP 3.0, Sopralene 180 SP 3.0, Sopralene 180 SP 3.5, Colphene 180 SP 3.5, Sopralene Flam 180*, Colphene Flam 180*, Sopralene Flam 250*, Colvent TG, Colvent 180 TG, Colvent Flam 180 TG*, torch-applied. Or One layer of Elastophene Stick, Sopralene Stick, Colphene Stick, Elastophene Flam Stick* or Sopralene Flam Stick*, self-adhered. *Requires torch-applied ply or cap membrane
Membrane:	Elastophene Flam FR GR, Elastophene Flam LS FR GR, Elastophene Flam FR+ GR, Sopralene Flam 180 GR, Colphene Flam 180 GR, Sopralene Flam 180 FR GR, Colphene Flam 180 FR GR, Sopralene Flam 180 FR GR 3.5, Sopralene Flam 180 FR+ GR, Sopralene Flam 250 FR GR, Colphene Flam 250 FR GR, Sopralene Flam 250 FR+ GR, Sopralast 50 TV Alu, Sopralene Flam Antirock, torch-applied. Or Elastophene FR GR, Elastophene LS FR GR, Elastophene FR+ GR, Sopralene 180 FR GR, Colphene 180 FR GR, Sopralene 180 FR+ GR, Sopralene 250 FR GR, Colphene 250 FR GR, Sopralene 250 FR+ GR, Sopralast 50 TV Alu Sanded adhered in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs./sq. or in COLPLY Adhesive, COLPLY EF Adhesive at 1.5-2.5 gal./sq. to sand surfaced membrane.
Surfacing:	Surfacing is Optional on granular surfaced field cap membranes. Surfacing is Required for smooth or sanded surfaced field cap membranes. Refer to Underwriters Laboratories or Intertek Testing Services listings for applicable fire classifications. Apply any coating listed in Table 4 above, or any Miami-Dade approved coating system.
Maximum Design Pressure:	-82.5 psf. (See General Limitation #7)

Membrane Type: SBS

Deck Type 7I: Recover, Insulated

Deck Description: 18-22 ga., Grade 33 steel deck with supports spaced maximum 6 ft. o.c. *The deck shall record a Minimum Characteristic Resistance Force (MCRF) of 240 lbf when tested with fasteners, listed in this assembly, installed through to the deck in accordance with TAS 105.
This Tested Assembly has been analyzed for allowable deck stress. See Evidence Submitted Table.

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

All General and System Limitations apply.

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

Base Insulation Layer	**Insulation Fasteners (Table 3)**	**Fastener Density/ft^2**
Any approved polyisocyanurate or polystyrene listed in Table 2		
Minimum 1" thick	**N/A**	**N/A**
Top Insulation Layer	**Insulation Fasteners (Table 3)**	**Fastener Density/ft^2**
Sopraboard		
Minimum 1/8" thick	**2, 3, 12, 20 with approved plates**	**1:2 ft^2**

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

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

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

Or

Elastophene Flam*, Elastophene Flam 2.2*, Elastophene Flam HS*, Elastophene SP 2.2, Colphene SP 2.2, Elastophene SP 3.0, Colphene SP 3.0, Sopralene Flam 180*, Colphene Flam 180*, Sopralene 180 SP 3.5, Colphene 180 SP 3.5, Sopralene Flam 250*, Sopralene 250 SP, Colvent TG, Colvent 180 TG, Colvent Flam 180 TG*, torch-applied.
*Requires torch-applied ply or cap membrane.

Ply Sheet: (Optional)	One or more plies of Sopra-IV, Sopra-VI, Colphene Sanded, Elastophene Sanded 2.2, Elastophene Sanded 3.0, Elastophene HS, Elastophene PS*, Elastophene PS 3.0*, Colphene 180 Sanded, Colphene 180 PS*, Sopralene 180 PS 2.2*, Sopralene 180 Sanded, Sopralene 180 Sanded 2.2, Sopralene 180 PS* or Sopralene 250 Sanded adhered in hot asphalt at 25 lbs./sq. to sand surfaced base membrane. Or Elastophene Flam*, Elastophene Flam 2.2*, Elastophene Flam HS*, Elastophene SP 2.2, Colphene SP 2.2, Elastophene SP 3.0, Colphene SP 3.0, Sopralene Flam 180*, Colphene Flam 180*, Sopralene 180 SP 3.5, Colphene 180 SP 3.5, Sopralene Flam 250*, Sopralene 250 SP, torch-applied. *Requires torch-applied cap membrane.
Membrane:	Elastophene Flam FR GR, Elastophene Flam LS FR GR, Elastophene Flam FR+ GR, Sopralene Flam 180 GR, Colphene Flam 180 GR, Sopralene Flam 180 FR GR, Colphene Flam 180 FR GR, Sopralene Flam 180 FR GR 3.5, Sopralene Flam 180 FR+ GR, Sopralene Flam 250 FR GR, Colphene Flam 250 FR GR, Sopralene Flam 250 FR+ GR or Sopralast 50 TV Alu, Sopralene Flam Antirock, torch-applied. Or Elastophene FR GR, Elastophene LS FR GR, Elastophene FR+ GR, Sopralene 180 FR GR, Colphene 180 FR GR, Sopralene 180 FR+ GR, Sopralene 250 FR GR, Colphene 250 FR GR, Sopralene 250 FR+ GR, Sopralast 50 TV Alu Sanded, adhered in hot asphalt at 25 lbs./sq. to sand surfaced base or ply membrane.
Surfacing:	Surfacing is Optional on granular surfaced field cap membranes. Surfacing is Required for smooth or sanded surfaced field cap membranes. Refer to Underwriters Laboratories or Intertek Testing Services listings for applicable fire classifications. Apply any coating listed in Table 4 above, or any Miami-Dade approved coating system.
Maximum Design Pressure:	-60 psf. (See General Limitation #7.)

Membrane Type: SBS

Deck Type 7I: Recover, Insulated

Deck Description: 18-22 ga., Grade 33 steel deck with supports spaced maximum 6 ft. o.c. *The deck shall record a Minimum Characteristic Resistance Force (MCRF) of 270 lbf when tested with fasteners, listed in this assembly, installed through to the deck in accordance with TAS 105.
This Tested Assembly has been analyzed for allowable deck stress. See Evidence Submitted Table.

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

All General and System Limitations apply.

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

Base Insulation Layer	**Insulation Fasteners (Table 3)**	**Fastener Density/ft^2**
Any approved polyisocyanurate or polystyrene listed in Table 2		
Minimum 1" thick	**N/A**	**N/A**
Top Insulation Layer	**Insulation Fasteners (Table 3)**	**Fastener Density/ft^2**
Sopraboard		
Minimum 1/8" thick	**2, 3, 12, 20 with approved plates**	**1:2 ft^2**

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

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

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

Or

Sopralene Flam 180*, Colphene Flam 180*, Sopralene 180 SP 3.0, Sopralene 180 SP 3.5, Colphene 180 SP 3.5, Sopralene Flam 250*, Sopralene 250 SP, Colvent 180 TG, Colvent Flam 180 TG*, torch-applied.
*Requires torch-applied ply or cap membrane.

Ply Sheet: (Optional)	Sopralene 180 Sanded, Colphene 180 Sanded, Sopralene 180 Sanded 2.2, Soprabase, Sopralene 180 PS 2.2*, Sopralene 180 PS* or Sopralene 250 Sanded adhered in hot asphalt at 25 lbs./sq. to sand surfaced base membrane. Or Sopralene Flam 180*, Colphene Flam 180*, Sopralene 180 SP 3.0, Sopralene 180 SP 3.5, Colphene 180 SP 3.5, Sopralene Flam 250*, Sopralene 250 SP, torch-applied. *Requires torch-applied cap membrane.
Membrane:	Sopralene Flam 180 GR, Colphene Flam 180 GR, Sopralene Flam 180 FR GR, Colphene Flam 180 FR GR, Sopralene Flam 180 FR GR 3.5, Sopralene Flam 180 FR+ GR, Sopralene Flam 250 FR GR, Colphene Flam 250 FR GR, Sopralene Flam 250 FR+ GR, Sopralast 50 TV Alu, Sopralene Flam Antirock, torch-applied. Or 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, adhered in hot asphalt at 25 lbs./sq. to sand surfaced base or ply membrane.
Surfacing:	Surfacing is Optional on granular surfaced field cap membranes. Surfacing is Required for smooth or sanded surfaced field cap membranes. Refer to Underwriters Laboratories or Intertek Testing Services listings for applicable fire classifications. Apply any coating listed in Table 4 above, or any Miami-Dade approved coating system.
Maximum Design Pressure:	-67.5 psf. (See General Limitation #7.)

Membrane: SBS

Deck Type 7I: Recover, Insulated

Deck Description: 18-22 ga., A1008 SS Grade 33, Type B steel deck fastened to ¼" thick steel structural supports spaced a maximum of 6' o.c. with Traxx/5 fasteners and ¾" diameter steel washers spaced a maximum 6" o.c. at the supports. Side laps are fastened with Traxx/1 fasteners spaced 24 in. o.c.
This Tested Assembly has been analyzed for allowable deck stress. See Evidence Submitted Table.

System Type D(1): Membrane fastened over preliminarily secured insulation.

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

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

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

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

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

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

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

Ply Sheet: (Optional)	One or more plies of Elastophene Flam, Elastophene Flam 2.2, Elastophene Flam HS, Elastophene SP 2.2, Colphene SP 2.2, Elastophene SP 3.0, Colphene SP 3.0, Sopralene Flam 180, Colphene Flam 180, Sopralene Flam 250, Sopralene 180 SP 3.0, Sopralene 180 SP 3.5, Colphene 180 SP 3.5, Sopralene 250 SP, Soprafix Base 613, Soprafix Base 612, or Soprafix Base 614, torch-applied.
Membrane:	Elastophene Flam LS FR GR, Sopralene Flam 180 GR, Colphene Flam 180 GR, Sopralene Flam 180 FR GR, Colphene Flam 180 FR GR, Sopralene Flam 180 FR GR 3.5, Sopralene Flam 180 FR+ GR, Sopralene Flam 250 FR GR, Colphene Flam 250 FR GR, Sopralene Flam 250 FR+ GR, Sopralast 50 TV Alu, Sopralene Flam Antirock, torch-applied. The 3" wide side laps of the cap sheets are torch-applied.
Surfacing:	Surfacing is Optional on granular surfaced field cap membranes. Surfacing is Required for smooth or sanded surfaced field cap membranes. Refer to Underwriters Laboratories or Intertek Testing Services listings for applicable fire classifications. Apply any coating listed in Table 4 above, or any Miami-Dade approved coating system.
Maximum Design Pressure:	See Fastening Requirements above.

Membrane: SBS

Deck Type 7I: Recover, Insulated

Deck Description: Structural Concrete or Min. 18-22 ga., A1008 SS Grade 33, Type B steel deck fastened to ¼" thick steel structural supports spaced a maximum of 6' o.c. with Traxx/5 fasteners and ¾" diameter steel washers spaced a maximum 6" o.c. at the supports. Side laps are fastened with Traxx/1 fasteners spaced 24 in. o.c.
This Tested Assembly has been analyzed for allowable deck stress. See Evidence Submitted Table.

System Type D(2): Membrane fastened over insulation.

All General and System Limitations apply.

One or more layers of any of the following insulations.

Base Insulation Layer	**Insulation Fasteners (Table 3)**	**Fastener Density/ft²**
Celcore MF Cellular Concrete, Siplast Lightweight Insulating Concrete, E lastizell Lightweight Insulating Concrete, Concrecel Lightweight Insulating Concrete, Mearlcrete Lightweight Insulating Concrete		
Minimum 2.0" thick, Minimum 300 psi.	**N/A**	**N/A**

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

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

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

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

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

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

Fastening #2:	Attach base sheet using Trufast #15 EHD Fasteners with Trufast 2.4" Scoop Seam Plates or Soprema #15 HD Fasteners with Soprema 2.4" Seam Plates with row spacing at a maximum 35.5" o.c. The fasteners are spaced 12" o.c. in a 4" wide torch-applied base sheet side laps. ***(Meets Maximum Design Pressure of –75 psf.; See General Limitation #7.)***
Ply Sheet: (Optional)	One or more plies of Elastophene Flam, Elastophene Flam 2.2, Elastophene Flam HS, Elastophene SP 2.2, Colphene SP 2.2, Elastophene SP 3.0, Colphene SP 3.0, Sopralene Flam 180, Colphene Flam 180, Sopralene Flam 250, Sopralene 180 SP 3.0, Sopralene 180 SP 3.5, Colphene 180 SP 3.5, Sopralene 250 SP, Soprafix Base 613, Soprafix Base 612, or Soprafix Base 614, torch-applied.
Membrane:	Elastophene Flam LS FR GR, Sopralene Flam 180 GR, Colphene Flam 180 GR, Sopralene Flam 180 FR GR, Colphene Flam 180 FR GR, Sopralene Flam 180 FR GR 3.5, Sopralene Flam 180 FR+ GR, Sopralene Flam 250 FR GR, Colphene Flam 250 FR GR, Sopralene Flam 250 FR+ GR, Sopralast 50 TV Alu, Sopralene Flam Antirock, torch-applied. The 3" wide side laps of the cap sheets are torch-applied.
Surfacing:	Surfacing is Optional on granular surfaced field cap membranes. Surfacing is Required for smooth or sanded surfaced field cap membranes. Refer to Underwriters Laboratories or Intertek Testing Services listings for applicable fire classifications. Apply any coating listed in Table 4 above, or any Miami-Dade approved coating system.
Maximum Design Pressure:	See Fastening Requirements above.

Membrane: SBS

Deck Type 7I: Recover, Insulated

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

System Type D(3): Membrane fastened over preliminarily secured insulation.

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

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

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

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

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

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

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

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

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

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

Maximum Design Pressure: See Fastening Requirements above.

Membrane: SBS

Deck Type 7I: Recover, Insulated

Deck Description: Structural Concrete or Min. 18-22 ga., A1008 SS Grade 33, Type B steel deck fastened to ¼" thick steel structural supports spaced a maximum of 6' o.c. with Traxx/5 fasteners and ¾" diameter steel washers spaced a maximum 6" o.c. at the supports. Side laps are fastened with Traxx/1 fasteners spaced 24 in. o.c.
This Tested Assembly has been analyzed for allowable deck stress. See Evidence Submitted Table.

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

All General and System Limitations apply.

One or more layers of any of the following insulations.

Base Insulation Layer	**Insulation Fasteners (Table 3)**	**Fastener Density/ft²**
Celcore MF Cellular Concrete, Siplast Lightweight Insulating Concrete, Elastizell Lightweight Insulating Concrete, Concrecel Lightweight Insulating Concrete or Mearlcrete Lightweight Insulating Concrete		
Minimum 2.0" thick, Minimum 300 psi.	**N/A**	**N/A**

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

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

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

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

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

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

Fastening #2:	Attach base sheet using Trufast #15 EHD Fasteners with Trufast 2.4" Scoop Seam Plates or Soprema #15 HD Fasteners with Soprema 2.4" Seam Plates with row spacing at a maximum 35.5" o.c. The fasteners are spaced 12" o.c. and centered inside the 4" wide, torch-applied base sheet side laps. ***(Meets Maximum Design Pressure of -75 psf.; See General Limitation #7.)***
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 fully adhered to the base sheet with COLPLY EF Adhesive, COLPLY Adhesive, at 1.5 – 2.0 gallons/square. The 3" wide side laps are adhered with the same adhesive or torch-applied.
Surfacing:	Surfacing is Optional on granular surfaced field cap membranes. Surfacing is Required for smooth or sanded surfaced field cap membranes. Refer to Underwriters Laboratories or Intertek Testing Services listings for applicable fire classifications. Apply any coating listed in Table 4 above, or any Miami-Dade approved coating system.
Maximum Design Pressure:	See Fastening Requirements above.

Membrane: SBS

Deck Type 7I: Recover, Insulated

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

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

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

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

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

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

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

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

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

Fastening #3: Attach base sheet using Trufast #15 EHD Fasteners with Trufast 2" Barbed Metal Seam Plates or Soprema #15 HD Fasteners with Soprema 2" Seam Plates with row spacing at a maximum 35.5" o.c. The fasteners are spaced 6" o.c. in a 4" wide torch-applied base sheet side laps.
(Meets Maximum Design Pressure of -120 psf.; See General Limitation #7.)

Fastening #4:	Attach base sheet using Trufast #15 EHD Fasteners with Trufast 2.4" Scoop Seam Plates or Soprema #15 HD Fasteners with Soprema 2.4" Seam Plates with row spacing at a maximum 35.5" o.c. The fasteners are spaced 6" o.c. in a 4" wide torch-applied base sheet side laps. ***(Meets Maximum Design Pressure of -142.5 psf.; See General Limitation #7.)***
Ply Sheet: (Optional)	One or more plies of Elastophene Flam, Elastophene Flam 2.2, Elastophene Flam HS, Elastophene SP 2.2, Colphene SP 2.2, Elastophene SP 3.0, Colphene SP 3.0, Sopralene Flam 180, Colphene Flam 180, Sopralene Flam 250, Sopralene 180 SP 3.0, Sopralene 180 SP 3.5, Colphene 180 SP 3.5, Sopralene 250 SP, Soprafix Base 613, Soprafix Base 612, or Soprafix Base 614, torch-applied.
Membrane:	Elastophene Flam LS FR GR, Sopralene Flam 180 GR, Colphene Flam 180 GR, Sopralene Flam 180 FR GR, Colphene Flam 180 FR GR, Sopralene Flam 180 FR GR 3.5, Sopralene Flam 180 FR+ GR, Sopralene Flam 250 FR GR, Colphene Flam 250 FR GR, Sopralene Flam 250 FR+ GR, Sopralast 50 TV Alu, Sopralene Flam Antirock, torch-applied. The 3" wide side laps of the cap sheets are torch-applied.
Surfacing:	Surfacing is Optional on granular surfaced field cap membranes. Surfacing is Required for smooth or sanded surfaced field cap membranes. Refer to Underwriters Laboratories or Intertek Testing Services listings for applicable fire classifications. Apply any coating listed in Table 4 above, or any Miami-Dade approved coating system.
Maximum Design Pressure:	See Fastening Requirements above.

Membrane: SBS

Deck Type 7I: Recover, Insulated

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

System Type D(6): Membrane fastened over insulation.

All General and System Limitations apply.

One or more layers of any of the following insulations.

Base Insulation Layer	**Insulation Fasteners (Table 3)**	**Fastener Density/ft²**
Celcore MF Cellular Concrete, Siplast Lightweight Insulating Concrete, Elastizell Lightweight Insulating Concrete, Concrecel Lightweight Insulating Concrete, Mearlcrete Lightweight Insulating Concrete Minimum 2.0" thick, Minimum 300 psi.	**N/A**	**N/A**

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

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

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

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

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

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

Fastening #2:	Attach base sheet using Trufast #14 HD Fasteners with Trufast 2.4" Scoop Seam Plates or Soprema #14 MP Fasteners with Soprema 2.4" Seam Plates with row spacing at a maximum 35.5" o.c. The fasteners are spaced 12" o.c. and centered inside the 4" wide torch-applied base sheet side laps. ***(Meets Maximum Design Pressure of -75 psf.; See General Limitation #7.)***
Fastening #3:	Attach base sheet using Trufast #15 EHD Fasteners with Trufast 2" Barbed Metal Seam Plates or Soprema #15 HD Fasteners with Soprema 2" Seam Plates with row spacing at a maximum 35.5" o.c. The fasteners are spaced 6" o.c. in a 4" wide torch-applied base sheet side laps. ***(Meets Maximum Design Pressure of -120 psf.; See General Limitation #7.)***
Fastening #4:	Attach base sheet using Trufast #15 EHD Fasteners with Trufast 2.4" Scoop Seam Plates or Soprema #15 HD Fasteners with Soprema 2.4" Seam Plates with row spacing at a maximum 35.5" o.c. The fasteners are spaced 6" o.c. in a 4" wide torch-applied base sheet side laps. ***(Meets Maximum Design Pressure of -142.5 psf.; See General Limitation #7.)***
Ply Sheet: (Optional)	One or more plies of Elastophene Flam, Elastophene Flam 2.2, Elastophene Flam HS, Elastophene SP 2.2, Colphene SP 2.2, Elastophene SP 3.0, Colphene SP 3.0, Sopralene Flam 180, Colphene Flam 180, Sopralene Flam 250, Sopralene 180 SP 3.0, Sopralene 180 SP 3.5, Colphene 180 SP 3.5, Sopralene 250 SP, Soprafix Base 613, Soprafix Base 612, or Soprafix Base 614, torch-applied.
Membrane:	Elastophene Flam LS FR GR, Sopralene Flam 180 GR, Colphene Flam 180 GR, Sopralene Flam 180 FR GR, Colphene Flam 180 FR GR, Sopralene Flam 180 FR GR 3.5, Sopralene Flam 180 FR+ GR, Sopralene Flam 250 FR GR, Colphene Flam 250 FR GR, Sopralene Flam 250 FR+ GR, Sopralast 50 TV Alu, Sopralene Flam Antirock, torch-applied. The 3" wide side laps of the cap sheets are torch-applied.
Surfacing:	Surfacing is Optional on granular surfaced field cap membranes. Surfacing is Required for smooth or sanded surfaced field cap membranes. Refer to Underwriters Laboratories or Intertek Testing Services listings for applicable fire classifications. Apply any coating listed in Table 4 above, or any Miami-Dade approved coating system.
Maximum Design Pressure:	See Fastening Requirements above.

Membrane: SBS

Deck Type 7I: Recover, Insulated

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

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

All General and System Limitations apply.

One or more layers of any of the following insulations.

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

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

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

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

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

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

Fastening #3	Attach base sheet using Trufast #15 EHD Fasteners with Trufast 2.4" Scoop Seam Plates or Soprema #15 HD Fasteners with Soprema 2.4" Seam Plates with row spacing at a maximum 35.5" o.c. The fasteners are spaced 12" o.c. and centered inside the 4" wide torch-applied base sheet side laps. ***(Meets Maximum Design Pressure of -97.5 psf.; See General Limitation #7.)***
Fastening #4:	Attach base sheet using Trufast #14 HD or Trufast #15 EHD Fasteners with Trufast 2" Barbed Metal Seam Plates or Trufast 2.4" Scoop Seam Plates or Soprema #14 MP or Soprema #15 HD Fasteners with Soprema 2" Seam Plates or Soprema 2.4" Seam Plates with row spacing at a maximum 35.5" o.c. The fasteners are spaced 6" o.c. and centered inside the 4" wide torch-applied base sheet side laps. ***(Meets Maximum Design Pressure of -120 psf.; See General Limitation #7.)***
Membrane:	Elastophene FR GR, Elastophene LS FR GR, Sopralene 180 FR GR, Colphene 180 FR GR, Sopralene 180 FR+ GR, Sopralene 250 FR GR, Colphene 250 FR GR, Sopralene 250 FR+ GR, Sopralast 50 TV Alu Sanded fully adhered to the base sheet with COLPLY EF Adhesive, COLPLY Adhesive, at 1.5 – 2.0 gallons/square. The 3" wide side laps are adhered with the same adhesive or torch-applied.
Surfacing:	Surfacing is Optional on granular surfaced field cap membranes. Surfacing is Required for smooth or sanded surfaced field cap membranes. Refer to Underwriters Laboratories or Intertek Testing Services listings for applicable fire classifications. Apply any coating listed in Table 4 above, or any Miami-Dade approved coating system.
Maximum Design Pressure:	See Fastening Requirements above.

Membrane: SBS

Deck Type 7I: Recover, Insulated

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

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

All General and System Limitations apply.

One or more layers of any of the following insulations.

Base Insulation Layer	**Insulation Fasteners (Table 3)**	**Fastener Density/ft²**
Celcore MF Cellular Concrete, Siplast Lightweight Insulating Concrete, Elastizell Lightweight Insulating Concrete, Concrecel Lightweight Insulating Concrete, Mearlcrete Lightweight Insulating Concrete		
Minimum 2.0" thick, Minimum 300 psi.	**N/A**	**N/A**

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

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

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

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

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

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

Fastening #2:	Attach base sheet using Trufast #14 HD Fasteners with Trufast 2.4" Scoop Seam Plates or Soprema #14 MP Fasteners with Soprema 2.4" Seam Plates with row spacing at a maximum 35.5" o.c. The fasteners are spaced 12" o.c. and centered inside the 4" wide torch-applied base sheet side laps. ***(Meets Maximum Design Pressure of -75 psf.; See General Limitation #7.)***
Fastening #3	Attach base sheet using Trufast #15 EHD Fasteners with Trufast 2.4" Scoop Seam Plates or Soprema #15 HD Fasteners with Soprema 2.4" Seam Plates with row spacing at a maximum 35.5" o.c. The fasteners are spaced 12" o.c. and centered inside the 4" wide torch-applied base sheet side laps. ***(Meets Maximum Design Pressure of -97.5 psf.; See General Limitation #7.)***
Fastening #4:	Attach base sheet using Trufast #14 HD or Trufast #15 EHD Fasteners with Trufast 2" Barbed Metal Seam Plates or Trufast 2.4" Scoop Seam Plates or Soprema #14 MP or Soprema #15 HD Fasteners with Soprema 2" Seam Plates or Soprema 2.4" Seam Plates with row spacing at a maximum 35.5" o.c. The fasteners are spaced 6" o.c. and centered inside the 4" wide torch-applied base sheet side laps. ***(Meets Maximum Design Pressure of -120 psf.; See General Limitation #7.)***
Membrane:	Elastophene FR GR, Elastophene LS FR GR, Sopralene 180 FR GR, Colphene 180 FR GR, Sopralene 180 FR+ GR, Sopralene 250 FR GR, Colphene 250 FR GR, Sopralene 250 FR+ GR, Sopralast 50 TV Alu Sanded fully adhered to the base sheet with COLPLY EF Adhesive, COLPLY Adhesive, at 1.5 – 2.0 gallons/square. The 3" wide side laps are adhered with the same adhesive or torch-applied.
Surfacing:	Surfacing is Optional on granular surfaced field cap membranes. Surfacing is Required for smooth or sanded surfaced field cap membranes. Refer to Underwriters Laboratories or Intertek Testing Services listings for applicable fire classifications. Apply any coating listed in Table 4 above, or any Miami-Dade approved coating system.
Maximum Design Pressure:	See Fastening Requirements above.

Membrane Type: SBS

Deck Type 7I: Recover, Insulated

Deck Description: Structural Concrete.

System Type D(9): Membrane attached over preliminary fastened insulation.

All General and System Limitations apply.

One or more layers of any of the following insulations.

Base Insulation Layer	**Insulation Fasteners (Table 3)**	**Fastener Density/ft^2**
Any approved insulations and/or coverboard listed in Table 2.	**N/A**	**N/A**
Top Insulation Layer (*Optional*)	**Insulation Fasteners (Table 3)**	**Fastener Density/ft^2**
Structodek High Density Fiberboard Roof Insulation Minimum ½" thick	**N/A**	**N/A**
DensDeck Minimum ¼" thick	**N/A**	**N/A**

Note: Membrane fasteners shall be tested for withdrawal resistance in compliance with Testing Application Standard TAS 105 to confirm compliance with the wind load requirements. Insulation shall be limited to maximum 1" thickness.

Base Sheet (Optional): Sopra IV or Sopra VI pre-secured to the deck with approved fasteners and plates spaced 24" o.c. in the minimum 3" wide lap.

Membrane: One ply of UNILAY membrane fastened through the insulation to the deck using Dekfast DF-#15-PH3 Fasteners spaced 12" o.c. in a 5" wide lap. The side lap fastener row is encapsulated in the torch-applied 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. (See General Limitation #7.)

Membrane Type: SBS

Deck Type 7I: Recover, Insulated

Deck Description: Cementitious Wood Fiber over steel structural supports spaced 36" o.c. and secured with three, equally spaced, Dekfast #14 fasteners with 2" plates spaced 16" o.c. *The deck shall record a Minimum Characteristic Resistance Force (MCRF) of 61 lbf when tested with fasteners, listed in this assembly, installed through to the deck in accordance with TAS 105.

System Type D(10): Membrane fastened over preliminary fastened insulation.

All General and System Limitations apply.

One or more layers of any of the following insulations.

Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft^2
Any approved insulations and/or coverboards listed in Table 2.	**6**	**See Note Below**

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

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

Base Sheet: One layer Soprafix Base 622, Soprafix Base 612, Soprafix Base 613, , Soprafix Base 614, Sopralene Flam 180, Colphene Flam 180 or Sopralene Flam 250* mechanically attached with Trufast Twin Loc-Nail Assembled Fasteners or SOPREMA Twin Loc-Nails spaced 6" o.c. through OMG Polymer Batten Strip, Trufast Twin Loc-Nail Batten Fastener, placed in the lap and in one row centered in the field. Center fastener row is covered with an 8" wide strip of Sopralene Flam Stick, Sopralene Stick or Colphene Stick, self-adhered.

Ply Sheet: (Optional) One or more layers of Sopralene Flam 180, Colphene Flam 180, Sopralene Flam 250, torch-applied.

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

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

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

Membrane Type: SBS

Deck Type 7I: Recover, Insulated

Deck Description: Min. 22 ga., Grade 80, Type B steel deck with ¼" purlins spaced 6' o.c. *The deck shall record a Minimum Characteristic Resistance Force (MCRF) of 558 lbf when tested with fasteners, listed in this assembly, installed through to the deck in accordance with TAS 105.
This Tested Assembly has been analyzed for allowable deck stress. See Evidence Submitted Table.

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

All General and System Limitations apply.

One or more layers of any of the following insulations.

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

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

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

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

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

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

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

Membrane: SBS

Deck Type 7I: Recover, Insulated

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

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

All General and System Limitations apply.

One or more layers of any of the following insulations.

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

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

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

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

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

Fastening #2: **(*Min. 20 ga. steel deck*)** Attach base sheet using Trufast #15 EHD Fasteners and Soprema #15 HD Fasteners with Trufast 2.4" Scoop Seam Plates and Soprema 2.4" Seam Plates with row spacing at a maximum 35.5" o.c. The fasteners are spaced 6" o.c. and centered inside the 4" wide torch-applied base sheet side laps. ***(Meets Maximum Design Pressure of -172.5 psf.; See General Limitation #7.)***

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

Membrane:	Elastophene Flam LS FR GR, Sopralene Flam 180 GR, Colphene Flam 180 GR, Sopralene Flam 180 FR GR, Colphene Flam 180 FR GR, Sopralene Flam 180 FR GR 3.5, Sopralene Flam 180 FR+ GR, Sopralene Flam 250 FR GR, Colphene Flam 250 FR GR, Sopralene Flam 250 FR+ GR, Sopralast 50 TV Alu, Sopralene Flam Antirock, torch-applied. The 3" wide side laps of the cap sheets are torch-applied.
Surfacing:	Surfacing is Optional on granular surfaced field cap membranes. Surfacing is Required for smooth or sanded surfaced field cap membranes. Refer to Underwriters Laboratories or Intertek Testing Services listings for applicable fire classifications. Apply any coating listed in Table 4 above, or any Miami-Dade approved coating system.
Maximum Design Pressure:	See Fastening Requirements above.

Membrane: SBS

Deck Type 7I: Recover, Insulated

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

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

All General and System Limitations apply.

One or more layers of any of the following insulations.

Base Insulation Layer	**Insulation Fasteners (Table 3)**	**Fastener Density/ft²**
Celcore MF Cellular Concrete, Siplast Lightweight Insulating Concrete, Elastizell Lightweight Insulating Concrete, Concrecel Lightweight Insulating Concrete, Mearlcrete Lightweight Insulating Concrete Minimum 2.0" thick, Minimum 300 psi.	**N/A**	**N/A**

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

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

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

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

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

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

Fastening #2:	**(*Min. 20 ga. steel deck*)** Attach base sheet using Trufast #15 EHD Fasteners and Soprema #15 HD Fasteners with Trufast 2.4" Scoop Seam Plates and Soprema 2.4" Seam Plates with row spacing at a maximum 35.5" o.c. The fasteners are spaced 6" o.c. and centered inside the 4" wide torch-applied base sheet side laps. ***(Meets Maximum Design Pressure of -172.5 psf.; See General Limitation #7.)***
Ply Sheet: (Optional)	One or more plies of Elastophene Flam, Elastophene Flam 2.2, Elastophene Flam HS, Elastophene SP 2.2, Colphene SP 2.2, Elastophene SP 3.0, Colphene SP 3.0, Sopralene Flam 180, Colphene Flam 180, Sopralene Flam 250, Sopralene 180 SP 3.0, Sopralene 180 SP 3.5, Colphene 180 SP 3.5, Sopralene 250 SP, Soprafix Base 613, Soprafix Base 612, Soprafix Base 614, torch-applied.
Membrane:	Elastophene Flam LS FR GR, Sopralene Flam 180 GR, Colphene Flam 180 GR, Sopralene Flam 180 FR GR, Colphene Flam 180 FR GR, Sopralene Flam 180 FR GR 3.5, Sopralene Flam 180 FR+ GR, Sopralene Flam 250 FR GR, Colphene Flam 250 FR GR, Sopralene Flam 250 FR+ GR, Sopralast 50 TV Alu, Sopralene Flam Antirock, torch-applied. The 3" wide side laps of the cap sheets are torch-applied.
Surfacing:	Surfacing is Optional on granular surfaced field cap membranes. Surfacing is Required for smooth or sanded surfaced field cap membranes. Refer to Underwriters Laboratories or Intertek Testing Services listings for applicable fire classifications. Apply any coating listed in Table 4 above, or any Miami-Dade approved coating system.
Maximum Design Pressure:	See Fastening Requirements above.

Membrane Type: SBS

Deck Type 7I: Recover, Insulated

Deck Description: Min. 22 ga., Grade 80, Type B steel deck with ¼" purlins spaced 6' o.c. *The deck shall record a Minimum Characteristic Resistance Force (MCRF) of 619 lbf when tested with fasteners, listed in this assembly, installed through to the deck in accordance with TAS 105.
This Tested Assembly has been analyzed for allowable deck stress. See Evidence Submitted Table.

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

All General and System Limitations apply.

One or more layers of any of the following insulations.

Insulation Layer	**Insulation Fasteners (Table 3)**	**Fastener Density/ft^2**
ACFoam-II, Sopra-ISO s, ISO 95+ GL, Ultra-Max, H-Shield, M-Shield, Sopra-ISO r, TopRock DD, TopRock DD Plus, SopraRock DD, SopraRock DD Plus (flat or tapered) Minimum 1.5" thick	**Approved Fastener for Deck**	**See Note Below**

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

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

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

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

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

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

Membrane: SBS

Deck Type 7I: Recover, Insulated

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

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

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

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

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

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

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

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

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

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

Membrane:	Elastophene Flam LS FR GR, Sopralene Flam 180 GR, Colphene Flam 180 GR, Sopralene Flam 180 FR GR, Colphene Flam 180 FR GR, Sopralene Flam 180 FR GR 3.5, Sopralene Flam 180 FR+ GR, Sopralene Flam 250 FR GR, Colphene Flam 250 FR GR, Sopralene Flam 250 FR+ GR, Sopralast 50 TV Alu, Sopralene Flam Antirock, torch-applied. The 3" wide side laps of the cap sheets are torch-applied.
Surfacing:	Surfacing is Optional on granular surfaced field cap membranes. Surfacing is Required for smooth or sanded surfaced field cap membranes. Refer to Underwriters Laboratories or Intertek Testing Services listings for applicable fire classifications. Apply any coating listed in Table 4 above, or any Miami-Dade approved coating system.
Maximum Design Pressure:	-112.5 psf.; (See General Limitation #7.)

Membrane: SBS

Deck Type 7I: Recover, Insulated

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

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

All General and System Limitations apply.

One or more layers of any of the following insulations.

Base Insulation Layer	**Insulation Fasteners (Table 3)**	**Fastener Density/ft²**
Celcore MF Cellular Concrete, Siplast Lightweight Insulating Concrete, Elastizell Lightweight Insulating Concrete, Concrecel Lightweight Insulating Concrete, Mearlcrete Lightweight Insulating Concrete Minimum 2.0" thick, Minimum 300 psi.	**N/A**	**N/A**

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

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

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

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

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

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

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

Ply Sheet: (Optional)	One or more plies of Elastophene Flam, Elastophene Flam 2.2, Elastophene Flam HS, Elastophene SP 2.2, Colphene SP 2.2, Elastophene SP 3.0, Colphene SP 3.0, Sopralene Flam 180, Colphene Flam 180, Sopralene Flam 250, Sopralene 180 SP 3.0, Sopralene 180 SP 3.5, Colphene 180 SP 3.5, Sopralene 250 SP, Soprafix Base 613, Soprafix Base 612, Soprafix Base 614, torch-applied.
Membrane:	Elastophene Flam LS FR GR, Sopralene Flam 180 GR, Colphene Flam 180 GR, Sopralene Flam 180 FR GR, Colphene Flam 180 FR GR, Sopralene Flam 180 FR GR 3.5, Sopralene Flam 180 FR+ GR, Sopralene Flam 250 FR GR, Colphene Flam 250 FR GR, Sopralene Flam 250 FR+ GR, Sopralast 50 TV Alu, Sopralene Flam Antirock, torch-applied. The 3" wide side laps of the cap sheets are torch-applied.
Surfacing:	Surfacing is Optional on granular surfaced field cap membranes. Surfacing is Required for smooth or sanded surfaced field cap membranes. Refer to Underwriters Laboratories or Intertek Testing Services listings for applicable fire classifications. Apply any coating listed in Table 4 above, or any Miami-Dade approved coating system.
Maximum Design Pressure:	-112.5 psf.; (See General Limitation #7.)

Membrane: SBS

Deck Type 7I: Recover, Insulated

Deck Description:

1. Structural Concrete Deck.
2. Minimum 22 ga., Grade 80, Type B steel deck attached to supports having a maximum span of 72" o.c.
3. Minimum 22 ga., Grade 33, Type B steel deck attached to supports having a maximum span of 62" o.c.
4. Minimum 20 ga., Grade 33, Type B steel deck attached to supports having a maximum span of 69" o.c.
5. Minimum 18 ga., Grade 33, Type B steel deck attached to supports having a maximum span of 72" o.c

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

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

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

System Type D(17): Membrane fastened over insulation.

All General and System Limitations apply.

One or more layers of any of the following insulations.

Base Insulation Layer	**Insulation Fasteners (Table 3)**	**Fastener Density/ft^2**
Celcore MF Cellular Concrete, Siplast Lightweight Insulating Concrete, Elastizell Lightweight Insulating Concrete, Concrecel Lightweight Insulating Concrete, Mearlcrete Lightweight Insulating Concrete		
Minimum 2.0" thick, Minimum 300 psi.	**N/A**	**N/A**

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

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

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

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

Base Sheet:	One layer of Soprafix Base 622, Colphene 180 Sanded, Sopralene 180 Sanded 2.2, Sopralene 180 Sanded, Sopralene 180 SP 3.0, Sopralene 180 SP 3.5, Colphene 180 SP 3.5, Sopralene 250 Sanded or Sopralene 250 SP fastened to the deck as described below:
Fastening:	Attach base sheet using Trufast #15 EHD Fasteners with Trufast 2" Barbed Metal Seam Plates or Trufast 2.4" Scoop Seam Plates or Soprema #15 HD Fasteners with Soprema 2" Seam Plates or Soprema 2.4" Seam Plates with row spacing at a maximum 35.5" o.c. The fasteners are spaced 6" o.c. and centered inside the 4" wide torch-applied base sheet side laps.
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 fully adhered to the base sheet with COLPLY EF Adhesive, COLPLY Adhesive, at 1.5 – 2.0 gallons/square. The 3" wide side laps are adhered with the same adhesive or torch-applied.
Surfacing:	Surfacing is Optional on granular surfaced field cap membranes. Surfacing is Required for smooth or sanded surfaced field cap membranes. Refer to Underwriters Laboratories or Intertek Testing Services listings for applicable fire classifications. Apply any coating listed in Table 4 above, or any Miami-Dade approved coating system.
Maximum Design Pressure:	-112.5 psf.; (See General Limitation #7.)

Membrane Type: SBS

Deck Type 7I: Recover, Insulated

Deck Description: 18 ga., Grade 80, Type B steel deck with ¼" purlins spaced 6' o.c. *The deck shall record a Minimum Characteristic Resistance Force (MCRF) of 354 lbf when tested with fasteners, listed in this assembly, installed through to the deck in accordance with TAS 105.
This Tested Assembly has been analyzed for allowable deck stress. See Evidence Submitted Table.

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

All General and System Limitations apply.

One or more layers of any of the following insulations.

Insulation Layer	**Insulation Fasteners (Table 3)**	**Fastener Density/ft^2**
ACFoam-II, Sopra-ISO s, ISO 95+ GL, Ultra-Max, H-Shield, M-Shield, Sopra-ISO r, TopRock DD, TopRock DD Plus, SopraRock DD, SopraRock DD Plus (flat or tapered) Minimum 1.5" thick	**Approved Fastener for Deck**	**See Note Below**

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

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

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

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

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

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

Membrane: SBS

Deck Type 7I: Recover, Insulated

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

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

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

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

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

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

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

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

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

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

Membrane:	Elastophene Flam LS FR GR, Sopralene Flam 180 GR, Colphene Flam 180 GR, Sopralene Flam 180 FR GR, Colphene Flam 180 FR GR, Sopralene Flam 180 FR GR 3.5, Sopralene Flam 180 FR+ GR, Sopralene Flam 250 FR GR, Colphene Flam 250 FR GR, Sopralene Flam 250 FR+ GR, Sopralast 50 TV Alu, Sopralene Flam Antirock, torch-applied. The 3" wide side laps of the cap sheets are torch-applied.
Surfacing:	Surfacing is Optional on granular surfaced field cap membranes. Surfacing is Required for smooth or sanded surfaced field cap membranes. Refer to Underwriters Laboratories or Intertek Testing Services listings for applicable fire classifications. Apply any coating listed in Table 4 above, or any Miami-Dade approved coating system.
Maximum Design Pressure:	See Fastening Requirements above.

Membrane: SBS

Deck Type 7I: Recover, Insulated

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

System Type D(20): Membrane fastened over insulation.

All General and System Limitations apply.

One or more layers of any of the following insulations.

Base Insulation Layer	**Insulation Fasteners (Table 3)**	**Fastener Density/ft^2**
Celcore MF Cellular Concrete, Siplast Lightweight Insulating Concrete, Elastizell Lightweight Insulating Concrete, Concrecel Lightweight Insulating Concrete, Mearlcrete Lightweight Insulating Concrete Minimum 2.0" thick, Minimum 300 psi.	**N/A**	**N/A**

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

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

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

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

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

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

Fastening #2:	Attach base sheet using Trufast #14 HD Fasteners with Trufast 2.4" Scoop Seam Plates or Soprema #14 MP Fasteners with Soprema 2.4" Seam Plates with row spacing at a maximum 35.5" o.c. The fasteners are spaced 6" o.c. and centered inside the 4" wide torch-applied base sheet side laps. ***(Meets Maximum Design Pressure of -135 psf.; See General Limitation #7.)***
Ply Sheet: (Optional)	One or more plies of Elastophene Flam, Elastophene Flam 2.2, Elastophene Flam HS, Elastophene SP 2.2, Colphene SP 2.2, Elastophene SP 3.0, Colphene SP 3.0, Sopralene Flam 180, Colphene Flam 180, Sopralene Flam 250, Sopralene 180 SP 3.0, Sopralene 180 SP 3.5, Colphene 180 SP 3.5, Sopralene 250 SP, Soprafix Base 613, Soprafix Base 612, Soprafix Base 614, torch-applied.
Membrane:	Elastophene Flam LS FR GR, Sopralene Flam 180 GR, Colphene Flam 180 GR, Sopralene Flam 180 FR GR, Colphene Flam 180 FR GR, Sopralene Flam 180 FR GR 3.5, Sopralene Flam 180 FR+ GR, Sopralene Flam 250 FR GR, Colphene Flam 250 FR GR, Sopralene Flam 250 FR+ GR, Sopralast 50 TV Alu, Sopralene Flam Antirock, torch-applied. The 3" wide side laps of the cap sheets are torch-applied.
Surfacing:	Surfacing is Optional on granular surfaced field cap membranes. Surfacing is Required for smooth or sanded surfaced field cap membranes. Refer to Underwriters Laboratories or Intertek Testing Services listings for applicable fire classifications. Apply any coating listed in Table 4 above, or any Miami-Dade approved coating system.
Maximum Design Pressure:	See Fastening Requirements above.

Membrane Type:	SBS
Deck Type 7:	Recover, Non-Insulated
Deck Description:	Cementitious Wood Fiber over steel structural supports spaced 36” o.c. and secured with three, equally spaced, Dekfast #14 fasteners with 2” plates spaced 16” o.c. *The deck shall record a Minimum Characteristic Resistance Force (MCRF) of 40 lbf when tested with fasteners, listed in this assembly, installed through to the deck in accordance with TAS 105.
System Type E(1):	Base sheet mechanically fastened to substrate.

All General and System Limitations apply.

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 Layer:	One layer Soprafix Base 612, Soprafix Base 613, Soprafix Base 614 or Soprafix Base 641, mechanically attached with Trufast Twin Loc-Nail Assembled Fasteners or SOPREMA Twin Loc-Nails spaced 6” o.c. through OMG Polymer Batten Strip, Trufast Twin Loc-Nail Batten Fastener, placed in the lap and in one row centered in the field. Center row is covered with an 8” wide strip of Sopralene Stick or Colphene Stick, self-adhered.
Ply Sheet: (Optional)	Elastophene Flam, Elastophene Flam 2.2, Elastophene Flam HS, Sopralene Flam 180, Colphene Flam 180, Sopralene Flam 250, torch-applied.
Membrane:	Elastophene Flam FR GR, Elastophene Flam LS FR GR, 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.
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 7: Recover, Non-Insulated

Deck Description: Lightweight Concrete, min. 300 psi., over 18-22 ga., Type B, Grade 33 steel deck with supports spaced maximum 5' o.c. * The deck shall record a Minimum Characteristic Resistance Force (MCRF) of 88 lbf when tested with fasteners, listed in this assembly, installed through to the deck in accordance with TAS 105.

System Type E(2): Base sheet mechanically fastened to substrate.
This Tested Assembly has been analyzed for allowable deck stress. See Evidence Submitted Table.

All General and System Limitations apply.

Base Sheet: One ply of Sopra 4897, Soprabase, Soprabase S or Soprabase TG* fastened to the deck as described below:
*Requires torch-applied ply or cap membrane.

Fastening: Attach base sheet using Trufast Twin Loc-Nail Assembled Fasteners 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.

Ply Sheet: (Optional) One or more plies of Elastophene Flam*, Elastophene Flam 2.2*, Elastophene SP 2.2, Colphene SP 2.2, Elastophene SP 3.0, Colphene SP 3.0, Sopralene Flam 180*, Colphene Flam 180*, Sopralene Flam 250*, Sopralene 180 SP 3.0, Sopralene 180 SP 3.5, Colphene 180 SP 3.5, Sopralene 250 SP, torch-applied.

Or

One or more plies of Colphene Sanded, Elastophene Sanded 2.2, Elastophene Sanded 3.0, Elastophene HS, Colphene 180 Sanded, Sopralene 180 Sanded 2.2, Soprabase, Elastophene PS*, Elastophene PS 3.0*, Colphene 180 PS*, Sopralene 180 PS 2.2*, Sopralene 180 PS*, Sopralene 180 Sanded, Sopralene 250 Sanded or 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. to sand surfaced base membrane.
*Requires torch-applied cap membrane.

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

Or

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

Surfacing:	Surfacing is Optional on granular surfaced field cap membranes. Surfacing is Required for smooth or sanded surfaced field cap membranes. Refer to Underwriters Laboratories or Intertek Testing Services listings for applicable fire classifications. Apply any coating listed in Table 4 above, or any Miami-Dade approved coating system.
Maximum Design Pressure:	-60 psf. (See General Limitation #7)

Membrane Type: SBS

Deck Type 7: Recover, Non-Insulated

Deck Description: Lightweight Concrete, min. 360 psi, over 18-22 ga. Type B, Grade 33 steel deck with supports spaced maximum 5 ft. o.c. *The deck shall record a Minimum Characteristic Resistance Force (MCRF) of 110 lbf when tested with fasteners, listed in this assembly, installed through to the deck in accordance with TAS 105. **This Tested Assembly has been analyzed for allowable deck stress. See Evidence Submitted Table.**

System Type E(3): Base sheet mechanically fastened to substrate.

All General and System Limitations apply.

Base Sheet: One ply of Soprabase, Soprabase S fastened to the deck as described below:

Fastening: Attach base sheet using Trufast Twin Loc-Nail Assembled Fasteners 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.

Ply Sheet: One or more plies of Colphene Sanded, Elastophene Sanded 2.2, Elastophene Sanded 3.0, Elastophene HS, Colphene 180 Sanded, Soprabase, Sopralene 180 Sanded 2.2, Sopralene 180 Sanded, Sopralene 250 Sanded or 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. to sand surfaced base membrane.

Membrane: Elastophene FR GR, Elastophene FR+ GR, Elastophene LS FR GR, Sopralene 180 FR GR, Colphene 180 FR GR, Sopralene 180 FR+ GR, Sopralene 250 FR GR, Colphene 250 FR GR, Sopralene 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: -75 psf. (See General Limitation #7)

Membrane Type:	SBS
Deck Type 7:	Recover, 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(4):	Base sheet mechanically fastened to substrate.

All General and System Limitations apply.

Structural Deck:	Structural concrete deck or 18-22 ga., Type B, 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. **This Tested Assembly has been analyzed for allowable deck stress. See Evidence Submitted Table.**
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 622.
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 7:	Recover, Non-insulated
Deck Description:	Concrete
System Type F:	Base sheet adhered to primed substrate.

All General and System Limitations apply.

Primer:	Elastocol Stick or Elastocol Stick Zero applied to deck at a rate of 1 gal./sq.
Base Sheet:	One layer of Sopralene Stick, Colphene Stick, Sopralene Flam Stick* or Elastophene Flam Stick*, self-adhered. *Requires torch-applied ply or cap sheet.
Ply Sheet:	None
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. Or Elastophene FR GR, Elastophene LS FR GR, Elastophene FR+ GR, Sopralene 180 FR GR, Colphene 180 FR GR, Sopralene 180 FR+ GR, Sopralene 250 FR GR, Colphene 250 FR GR, Sopralene 250 FR+ GR, Sopralast 50 TV Alu Sanded, adhered in hot asphalt at 25 lbs./sq. or applied in COLPLY Adhesive,
Surfacing:	Surfacing is Optional on granular surfaced field cap membranes. Surfacing is Required for smooth or sanded surfaced field cap membranes. Refer to Underwriters Laboratories or Intertek Testing Services listings for applicable fire classifications Apply any coating listed in Table 4 above, or any Miami-Dade approved coating system.
Maximum Design Pressure:	-67.5 psf.; (See General Limitation #9.)

RECOVER SYSTEM LIMITATIONS:

1. All System Limitations and General Limitations shall apply. See specific deck type Notice of Acceptance for deck type System Limitations.
2. All assemblies listed herein shall be installed in compliance with the applicable sections of FBC 1521. Uplift performance of assemblies bonded to existing roofing system shall be verified per 1521.10. Uplift performance of assemblies mechanically attached through existing roofing system shall be verified per 1521.11.

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