



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

NOTICE OF ACCEPTANCE (NOA)

MIAMI-DADE COUNTY
PRODUCT CONTROL SECTION

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www.miamidade.gov/economy

Firestone Building Products Company, LLC
250 W. 96th Street
Indianapolis, IN 46260

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: Firestone Modified Bitumen Roof Systems over Wood 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 NOA No. 15-0224.07 and consists of pages 1 through 42.
The submitted documentation was reviewed by Alex Tigera.



NOA No.: 16-0202.07
Expiration Date: 03/08/21
Approval Date: 03/31/16
Page 1 of 42

ROOFING SYSTEM APPROVAL

Category:	Roofing
Sub-Category:	Modified Bitumen
Material:	APP/SBS
Deck Type:	Wood
Maximum Design Pressure:	-97.5 psf

TRADE NAMES OF PRODUCTS MANUFACTURED OR LABELED BY APPLICANT:

TABLE 1

<u>Product</u>	<u>Dimensions</u>	<u>Test Specification</u>	<u>Product Description</u>
APP 80 Glass Base	39.4" x 65'4"	ASTM D6509	Fiberglass reinforced modified bitumen, smooth surfaced base sheet.
SBS Glass Torch Base	39.4" x 33'10"	ASTM D6163	Modified bitumen base sheet with a burn-off film and reinforced with non-woven fiberglass mat.
SBS Base	39.4" x 50'	ASTM D6163	Fiberglass reinforced SBS base sheet. Applied in hot asphalt or mechanically attached.
SBS Premium Base	39.6" x 50'	ASTM D6163	Fiberglass reinforced SBS base sheet. Applied in hot asphalt or Multi-Purpose MB Cold Adhesive.
SBS PolyBase	39.6" x 50'	ASTM D6164	A smooth surfaced, non-woven polyester reinforced, modified bitumen base sheet.
SBS Poly Torch Base	45" x 39"	ASTM D6164	Fiberglass reinforced modified bitumen membrane, SBS rubber modified asphalt reinforced with a non-woven polyester mat.
Ply IV	33" x 180"	ASTM D2178	Fiberglass reinforced, asphalt impregnated, roofing ply. Applied in hot asphalt.
Ply VI	33" x 180"	ASTM D2178	Fiberglass reinforced, asphalt impregnated, roofing ply. Applied in hot asphalt.
MB Base	36" x 108'	ASTM D4601	Fiberglass reinforced base sheet, asphalt coated on both sides. Applied in hot asphalt or mechanically attached.
SBS Smooth	39.4" x 33'10"	ASTM D6164	Smooth surfaced, modified bitumen membrane reinforced with non-woven polyester mat. Applied in hot asphalt.
APP 160-P	39.4" x 32'9"	ASTM D6222	Polyester reinforced modified bitumen, smooth surfaced membrane. Torch applied for use as a base or ply sheet only.
APP 170 Cool	39.6" x 33'6"	ASTM D6222	Polyester reinforced modified bitumen, smooth surfaced membrane.
APP 180	39.4" x 32'10"	ASTM D6222	Polyester reinforced modified bitumen, granule surfaced membrane. Torch applied.



APP 180-P	39.4" x 32'9"	ASTM D6222	Polyester reinforced modified bitumen, granule surfaced membrane. Torch applied.
APP 180 UltraWhite	39.4" x 32'10"	ASTM D6222	Polyester reinforced modified bitumen, UltraWhite granule surfaced membrane. Torch applied.
APP 180 FR	39.4" x 32'10"	ASTM D6222	Polyester reinforced, fire retardant modified bitumen, granule surfaced membrane. Torch applied.
APP 180 FR UltraWhite	39.4" x 32'10"	ASTM D6222	Polyester reinforced, fire retardant modified bitumen, UltraWhite granule surfaced membrane. Torch applied.
APP 180 Cool	39.4" x 32'10"	ASTM D6222	Polyester reinforced modified bitumen, granule surfaced membrane.
APP 180 FR Cool	39.4" x 32'10"	ASTM D6222	Polyester reinforced, fire retardant modified bitumen, granule surfaced membrane. Torch applied.
SBS Glass	39.4" x 33'10"	ASTM D6163	Fiberglass reinforced, granule surfaced, modified bitumen membrane. Applied in hot asphalt.
SBS Glass FR	39.4" x 33'10"	ASTM D6163	Fiberglass reinforced, fire rated, granule surfaced, modified bitumen membrane. Applied in hot asphalt.
SBS Glass FR UltraWhite	39.4" x 33'10"	ASTM D6163	UltraWhite fiberglass reinforced, granule surfaced, modified bitumen membrane. Applied in hot asphalt.
SBS Torch	48" x 39"	ASTM D6164	Granule surfaced, SBS cap reinforced with a non-woven polyester mat, with burn off film and fiberglass enhanced.
SBS Torch UltraWhite	48" x 39"	ASTM D6164	UltraWhite granule surfaced, SBS cap reinforced with a non-woven polyester mat, with burn off film and fiberglass enhanced.
SBS FR Torch	48" x 39"	ASTM D6164	Granule surfaced, fire rated, SBS cap reinforced with a non-woven polyester mat, with burn off film and fiberglass enhanced.
SBS FR Torch UltraWhite	48" x 39"	ASTM D6164	UltraWhite granule surfaced, fire rated, SBS cap reinforced with a non-woven polyester mat, with burn off film and fiberglass enhanced.
SBS Glass FR Torch	39.4" x 33'10"	ASTM D6163	Fiberglass reinforced, fire rated, granule surfaced, modified bitumen membrane. with burn off film and fiberglass enhanced.
SBS Glass FR Torch UltraWhite	39.4" x 33'10"	ASTM D6163	UltraWhite fiberglass reinforced, fire rated, granule surfaced, modified bitumen membrane. with burn off film and fiberglass enhanced.



SBS Cap	39.4" x 33'10"	ASTM D6164	Granule surfaced, modified bitumen membrane reinforced with non-woven polyester mat.
SBS Cap UltraWhite	39.4" x 33'10"	ASTM D6164	UltraWhite granule surfaced, modified bitumen membrane reinforced with non-woven polyester mat.
SBS FR Cap	39.4" x 33'10"	ASTM D6164	Granule surfaced, modified bitumen membrane reinforced with non-woven polyester mat.
SBS FR Cap UltraWhite	39.4" x 33'10"	ASTM D6164	UltraWhite granule surfaced, modified bitumen membrane reinforced with non-woven polyester mat.
SBS Premium FR	39.4" x 33'10"	ASTM D6164	Granule surfaced, fire rated, modified bitumen membrane reinforced with non-woven polyester mat.
SBS Premium FR UltraWhite	39.4" x 33'10"	ASTM D6164	UltraWhite granule surfaced, fire rated, modified bitumen membrane reinforced with non-woven polyester mat.
SBS Premium	39.4" x 33'10"	ASTM D6164	Granule surfaced, modified bitumen membrane reinforced with polyester mat. Applied in hot asphalt.
SBS Premium Torch	39.4" x 33'10"	ASTM D6164	Granule surfaced, modified bitumen membrane with a burn-off film and reinforced with non-woven polyester mat.
SBS Premium Torch UltraWhite	39.4" x 33'10"	ASTM D6164	UltraWhite granule surfaced, modified bitumen membrane with a burn-off film and reinforced with non-woven polyester mat.
SBS Premium FR Torch	39.4" x 33'10"	ASTM D6164	Granule surfaced, fire rated, modified bitumen membrane with a burn-off film and reinforced with non-woven polyester mat.
SBS Premium FR Torch UltraWhite	39.4" x 33'10"	ASTM D6164	UltraWhite granule surfaced, fire rated, modified bitumen membrane with a burn-off film and reinforced with non-woven polyester mat.
I.S.O. Twin Pack Insulation Adhesive	Dual 750 ml cartridges	Proprietary	A two-component polyurethane insulation adhesive.
I.S.O. FIX II	30 lb.	Proprietary	A single component polyurethane insulation adhesive.
I.S.O. Stick	5 gal.	Proprietary	A two-component polyurethane insulation adhesive.
Multi-Purpose MB Cold Adhesive	55 gal.	Proprietary	An asphalt based adhesive.
LiquiGard Membrane Adhesive	6 gal.	Proprietary	A two-component, solvent-free, asphalt-based urethane adhesive.



APPROVED INSULATIONS:

TABLE 2

<u>Product Name</u>	<u>Product Description</u>	<u>Manufacturer (With Current NOA)</u>
ACFoam-II ISO 95+ GL, RESISTA	Isocyanurate Insulation Isocyanurate Insulation	Atlas Roofing Corp. Firestone Building Products Company, LLC
DensDeck, DensDeck Prime, ENRGY 3, ENRGY 3 25 PSI	Silicon treated gypsum Isocyanurate Insulation	Georgia-Pacific Gypsum LLC Johns Manville Corp.
High Density Wood Fiberboard	High Density Wood Fiber insulation board.	Generic
Perlite Insulation Board	Perlite Insulation	Generic
Ultra-Max, Multi-Max FA-3	Isocyanurate Insulation	Rmax Operating, LLC

APPROVED FASTENERS:

TABLE 3

<u>Fastener Number</u>	<u>Product Name</u>	<u>Product Description</u>	<u>Dimensions</u>	<u>Manufacturer (With Current NOA)</u>
1.	Firestone All-Purpose	Insulation and membrane fastener	Various	Firestone Building Products Company, LLC
2.	Firestone Heavy-Duty	Insulation and membrane fastener	Various	Firestone Building Products Company, LLC
3.	2” Metal Plate	Membrane attachment plate.	2" dia	Firestone Building Products Company, LLC
4.	#14 Roofgrip	Insulation and membrane fastener	Various	OMG, Inc.
5.	3 in. Round Metal Plates	3" round Galvalume stress plate	3" round	OMG, Inc.
6.	OMG Plastic Plate	Plastic plates for fasteners.	3" round	OMG, Inc.
7.	Insulation Fastening Plate	Insulation plate for use with Firestone Fasteners	3” round	Firestone Building Products Company, LLC



EVIDENCE SUBMITTED:

<u>Test Agency</u>	<u>Test Identifier</u>	<u>Description</u>	<u>Date</u>
FM Approvals	1D5A8.AM	FM 4470	09/09/98
	3003597	FM 4470	07/14/99
	3004786	FM 4470	05/16/00
	3005030	FM 4470	08/08/00
	3007328	FM 4470	07/12/02
	3023288	FM 4470	12/24/09
	3015815	FM 4470	12/24/09
	3041534	FM 4470	03/09/11
	3038191	FM 4470	08/04/11
Trinity ERD	4810.01.96-1	PA 114(C) & PA 114(D)	01/31/96
	4810.10.96-1-R1	TAS 114-J	03/09/09
	F10370.05.08	ASTM C 1289	05/08/08
	F10500.10.08-1R2	ASTM D6163	03/22/13
	F31960.05.10-1	ASTM D4977	05/19/10
	F31960.05.10-2	ASTM D4977	05/19/10
	F31960.08.10-1	ASTM D4977	08/25/10
	F354005.11	ASTM Physical Properties	05/31/11
	F31960.08.10-2-R1	ASTM D4977	03/25/13
	F41070.08.12	ASTM D6222	08/24/12
	U41790.05.12-2-R2	ASTM D6222	02/11/13
U41790.05.12-1-R1	ASTM D6222	01/21/13	
Underwriters Laboratories	R9516	UL 790	01/25/13
Atlantic & Caribbean Roof Consulting, LLC.	ACRC 03-001	TAS 114	03/06/03
	ACRC 03-007	TAS 114	05/01/03
PRI Construction Materials Technologies LLC	FBP-018-02-01	ASTM D 6163	09/07/04
	FBP-011-02-01	ASTM D 6164	09/02/04
	FBP-008-02-01	ASTM D 6222	09/10/04
	FBP-009-02-01	ASTM D 6222	08/31/04
	FBP-010-02-01	ASTM D 6164	09/04/04
	FBP-014-02-01	ASTM D 6164	09/02/04
	FBP-015-02-01	ASTM D 6509	09/02/04
	FBP-016-02-01	ASTM D 6509	09/02/04
	FBP-017-02-01	ASTM D 6163	09/13/04
	FBP-019-02-01	ASTM D 4601	09/14/04
	FBP-023-02-01	ASTM D 6223	09/01/04
	FBP-007-02-01	ASTM D 6222	09/14/04
	FBP-020-02-01	ASTM D 2178	09/14/04
	FBP-038-02-03	ASTM D 6164	01/12/11
	FBP-038-02-04	ASTM D 6164	01/12/11
	FBP-038-02-02	ASTM D 6164	01/12/11
	FBP-038-02-01	ASTM D 6164	12/27/10
	FBP-043-02-03	ASTM D 6164	07/26/11
	FBP-043-02-02	ASTM D 6164	08/02/11



PRI Construction Materials
Technologies LLC

FBP-043-02-04	ASTM D 6164	07/26/11
FBP-043-02-01	ASTM D 6164	08/02/11
FBP-042-02-01	ASTM D 6164	07/26/11
FBP-042-02-02	ASTM D 6164	07/27/11
FBP-058-02-01	ASTM D 4601	12/12/08
FBP-057-02-01	ASTM D 2178	12/12/08
FBP-056-02-01	ASTM D 2178	12/12/08
FBP-059-02-01	ASTM D 1876	07/20/12
FBP-087-02-01	ASTM D 4798	03/22/13
FBP-088-02-01	ASTM D 4798	03/22/13
FBP-101-02-01	TAS 114-J	04/25/12



APPROVED ASSEMBLIES

- Membrane Type:** APP
- Deck Type II:** Wood, Insulated
- Deck Description:** 19/32" or greater plywood or wood plank.
- System Type A(1):** Anchor sheet mechanically fastened; all layers of insulation adhered with approved asphalt.

All General and System Limitations apply.

- Anchor Sheet:** One ply of Firestone MB Base, MB Base M mechanically fastened to the wood deck as described below:
- Fastening:** Anchor sheet shall be lapped 4" and fastened with approved roofing nails and tin caps 9" o.c. at the lap and two rows staggered in the center of the sheet 18" o.c.:

One or more layers of any of the following insulations:

<u>Insulation Layer</u>	<u>Insulation Fasteners (Table 3)</u>	<u>Fastener Density/ft²</u>
ACFoam-II Minimum 1.3" thick	N/A	N/A
ISO 95+ GL, ENRGY 3, ENRGY 3 25 PSI or RESISTA Minimum 1.4" thick	N/A	N/A
Ultra-Max Minimum 1.5" thick	N/A	N/A
Approved Perlite Minimum 3/4" thick	N/A	N/A

Note: All insulation shall be adhered to the anchor sheet in full mopping of approved hot asphalt within the EVT range and at a rate of 20-40 lbs/100 ft². Please refer to Roofing Application Standard RAS 117 for insulation attachment. 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:** One ply of Firestone MB Base or Firestone Ply IV, Ply IV (4) M, Ply VI or Ply VI (6) M ply sheet adhered to the insulation in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs./sq.



- Ply Sheet:** (Optional) One or more plies of Firestone MB Base, Ply IV, Ply IV (4) M, Ply VI or Ply VI (6) M ply sheet or other listed base sheet applied in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs./sq.; or one ply Firestone APP 160-P torch applied.
- Or
- One or more plies of Firestone SBS Glass Torch Base or SBS PolyTorch Base torch adhered.
- Membrane:** One ply of APP 180-P, APP 180 UltraWhite, APP 180 FR, APP 180 FR UltraWhite torch applied parallel to the base ply, with overlaps staggered 12"..
- Surfacing:** (Optional) Any coating, listed below, used as a surfacing, must be listed within a current NOA. Install one of the following:
1. Gravel or slag at 400 lb. and 300 lb., respectively, set in a flood coat of type III or IV asphalt at 60 lb./sq..
 2. Karnak No. 97, No. 97 AF or No. 169 at an application rate of 1½-3 gal./sq..
- Maximum Design Pressure:** -45 psf (See General Limitation #9)



Membrane Type: SBS
Deck Type II: Wood, Insulated
Deck Description: 1⁹/₃₂" or greater plywood or wood plank.
System Type A(2): Anchor sheet mechanically fastened; all layers of insulation adhered with approved asphalt.

All General and System Limitations apply.

Anchor Sheet: One ply of Firestone MB Base or Firestone SBS Base with a 4" side lap mechanically fastened to the deck as described below:

Fastening: Anchor sheet shall be lapped 4" and fastened with approved roofing nails and tin caps 9" o.c. at the lap and two rows staggered in the center of the sheet 18" o.c.

One or more layers of any of the following insulations:

<u>Insulation Layer</u>	<u>Insulation Fasteners (Table 3)</u>	<u>Fastener Density/ft²</u>
ACFoam-II, Minimum 1.3" thick	N/A	N/A
ISO 95+ GL or RESISTA Minimum 1.4" thick	N/A	N/A
Multi-Max FA-3 Minimum 1.5" thick	N/A	N/A
Approved Perlite Minimum 3/4" thick	N/A	N/A
Approved High Density Wood Fiberboard Minimum 1/2" thick	N/A	N/A

Note: All insulation shall be adhered to the anchor sheet in full mopping of approved hot asphalt within the EVT range and at a rate of 20-40 lbs/100 ft². Please refer to Roofing Application Standard RAS 117 for insulation attachment. 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: One ply of Firestone MB Base, Firestone SBS Base or Firestone Ply IV, Ply IV (4) M, Ply VI or Ply VI (6) M ply sheet adhered to the insulation in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs./sq.

Ply Sheet: (Optional) One or more plies of SBS Smooth, SBS Base or Firestone Ply IV, Ply IV (4) M, Ply VI or Ply VI (6) M ply sheet adhered in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs./sq.
 Or



One or more plies of Firestone SBS Glass Torch Base or SBS Poly Torch Base torch adhered.

Membrane:

One ply of Firestone SBS Cap, SBS Cap UltraWhite, SBS FR Cap, SBS FR Cap UltraWhite, SBS Smooth, SBS Premium, SBS Premium FR, SBS Premium FR UltraWhite or SBS Glass SBS Glass FR, SBS Glass FR UltraWhite, adhered in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs./sq.

Or

One ply of Firestone SBS Cap, SBS Cap UltraWhite, SBS FR Cap, SBS FR Cap UltraWhite, SBS Smooth, SBS Premium, SBS Premium FR, SBS Premium FR UltraWhite or SBS Glass SBS Glass FR, SBS Glass FR UltraWhite, adhered in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs./sq.

Or

(Not with MB Base) One ply of Firestone SBS Smooth, SBS Cap, SBS Cap UltraWhite, SBS FR Cap, SBS FR Cap UltraWhite, SBS Glass, SBS Glass FR, SBS Glass FR UltraWhite, SBS Premium, SBS Premium FR, SBS Premium FR UltraWhite fully adhered with LiquiGard Membrane Adhesive squeegee applied at a rate of 1.5 – 2.0 gal/square. The minimum 3 in. wide side laps are sealed with LiquiGard Membrane Adhesive squeegee applied at a rate of 1.5 – 2.0 gal/square.

Or

One ply of Firestone SBS Torch, SBS Torch UltraWhite, SBS FR Torch, SBS FR Torch UltraWhite, SBS Glass FR Torch, SBS Glass FR Torch UltraWhite, SBS Premium Torch, SBS Premium Torch UltraWhite, SBS Premium FR Torch or SBS Premium FR Torch UltraWhite, torch adhered.

Membrane:

(Not with SBS Base, SBS Smooth) One ply of Firestone SBS Smooth, SBS Cap, SBS Cap UltraWhite, SBS FR Cap, SBS FR Cap UltraWhite, SBS Glass, SBS Glass FR, SBS Glass FR UltraWhite, SBS Premium, SBS Premium FR or SBS Premium FR UltraWhite cap sheet fully adhered to the base sheet with Multi-Purpose MB Cold Adhesive applied at 1½ - 2 gal/sq.

Surfacing:

(Optional) Any coating, listed below, used as a surfacing, must be listed within a current NOA. Install one of the following:

1. Gravel or slag at 400 lb. and 300 lb., respectively, set in a flood coat of type III or IV asphalt at 60 lb./sq..
2. Karnak No. 97, No. 97 AF or No. 169 at an application rate of 1½-3 gal./sq..

Maximum Design Pressure:

-45 psf (See General Limitation #9)



Membrane Type: SBS
Deck Type II: Wood, Insulated
Deck Description: 1⁹/₃₂" or greater plywood or wood plank attached to trusses spaced 24-inch o.c. using 8d ring shank nails spaced 6-inch o.c.
System Type A(3): Anchor sheet mechanically fastened; all layers of insulation adhered with approved asphalt.

All General and System Limitations apply.

One or more layers of any of the following insulations:

<u>Base Insulation Layer</u>	<u>Insulation Fasteners</u> <u>(Table 3)</u>	<u>Fastener</u> <u>Density/ft²</u>
ISO 95+ GL, RESISTA or Approved Polyisocyanurate listed in Table 2 Minimum 1.5" thick	N/A	N/A
<u>Top Insulation Layer</u>	<u>Insulation Fasteners</u> <u>(Table 3)</u>	<u>Fastener</u> <u>Density/ft²</u>
Approved High Density Wood Fiberboard Minimum 1/2" thick	N/A	N/A
Approved Perlite Minimum 3/4" thick	N/A	N/A

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

Anchor Sheet: One ply of Firestone MB Base or MB Base M lapped 4" and fastened with approved corrosion resistant roofing nails and tin caps 9" o.c. at the lap and two rows staggered in the center of the sheet 18" o.c.

Ply Sheet: One or more plies in any combination of the following: Firestone MB Base or Firestone Ply IV, Ply IV (4) M, Ply VI or Ply VI (6) M ply sheet bonded to the insulation in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs/sq. or one ply Firestone APP 160-P torch applied.

Or

One or more plies of Firestone SBS Glass Torch Base or SBS Poly Torch Base torch adhered.

Membrane: One ply of APP 180, APP 180-P, APP 180 UltraWhite, APP 180 FR, APP 180 FR UltraWhite torch applied parallel to the base ply, with overlaps staggered 12"..



Surfacing:

(Optional) Any coating, listed below, used as a surfacing, must be listed within a current NOA. Install one of the following:

1. Gravel or slag at 400 lb. and 300 lb., respectively, set in a flood coat of type III or IV asphalt at 60 lb./sq..
2. Karnak No. 97, No. 97 AF or No. 169 at an application rate of 1½-3 gal./sq..

Maximum Design Pressure:

-52.5 psf (See General Limitation #7)



Membrane Type: SBS
Deck Type II: Wood, Insulated
Deck Description: 19/32" or greater plywood or wood plank attached to trusses spaced 24-inch o.c. using 8d ring shank nails spaced 6-inch o.c.
System Type A(4): Anchor sheet mechanically fastened; all layers of insulation adhered with approved asphalt.

All General and System Limitations apply.

One or more layers of any of the following insulations:

<u>Base Insulation Layer</u>	<u>Insulation Fasteners (Table 3)</u>	<u>Fastener Density/ft²</u>
ISO 95+ GL, RESISTA or Approved Polyisocyanurate listed in Table 2 Minimum 1.5" thick	N/A	N/A
<u>Top Insulation Layer</u>	<u>Insulation Fasteners (Table 3)</u>	<u>Fastener Density/ft²</u>
Approved High Density Wood Fiberboard Minimum 1/2" thick	N/A	N/A
Approved Perlite Minimum 3/4" thick	N/A	N/A

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

Anchor Sheet: One ply of Firestone MB Base or MB Base M lapped 4" and fastened with approved corrosion resistant roofing nails and tin caps 9" o.c. at the lap and two rows staggered in the center of the sheet 18" o.c.

Ply Sheet: One or more plies in any combination of the following: Firestone MB Base, SBS Base or Firestone Ply IV, Ply IV (4) M, Ply VI or Ply VI (6) M ply sheet bonded to the insulation in a full mopping of ASTM D 312, type III or IV asphalt applied within the EVT range and at a rate of 20-40 lbs/sq.
 Or
 (Not with MB Base M) One or more plies of Firestone SBS Glass Torch Base or SBS Poly Torch Base torch adhered.

Membrane: One ply of Firestone SBS Cap, SBS Cap UltraWhite, SBS FR Cap, SBS FR Cap UltraWhite, SBS Smooth, SBS Premium, SBS Premium FR, SBS Premium FR UltraWhite, SBS Glass, SBS Glass FR, SBS Glass FR UltraWhite, adhered in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs./sq.
 Or



(Not with MB Base) One ply of Firestone SBS Cap, SBS Cap UltraWhite, SBS FR Cap, SBS FR Cap UltraWhite, SBS Glass, SBS Premium, SBS Premium FR, SBS Premium FR UltraWhite fully adhered with LiquiGard Membrane Adhesive squeegee applied at a rate of 1.5 – 2.0 gal/square. The minimum 3 in. wide side laps are sealed with LiquiGard Membrane Adhesive squeegee applied at a rate of 1.5 – 2.0 gal/square.

Or

One ply of Firestone SBS Torch, SBS Torch UltraWhite, SBS FR Torch, SBS FR Torch UltraWhite, SBS Glass FR Torch, SBS Glass FR Torch UltraWhite, SBS Premium Torch, SBS Premium Torch UltraWhite, SBS Premium FR Torch or SBS Premium FR Torch UltraWhite, torch adhered.

Or

(Not with SBS Base) One ply of Firestone SBS Smooth, SBS Cap, SBS Cap UltraWhite, SBS FR Cap, SBS FR Cap UltraWhite, SBS Glass, SBS Glass FR, SBS Glass FR UltraWhite, SBS Premium, SBS Premium FR or SBS Premium FR UltraWhite cap sheet fully adhered to the base sheet with Multi-Purpose MB Cold Adhesive applied at 1½ - 2 gal/sq.

Surfacing:

(Optional) Any coating, listed below, used as a surfacing, must be listed within a current NOA. Install one of the following:

1. Gravel or slag at 400 lb. and 300 lb., respectively, set in a flood coat of type III or IV asphalt at 60 lb./sq..
2. Karnak No. 97, No. 97 AF or No. 169 at an application rate of 1½-3 gal./sq..

Maximum Design Pressure:

-52.5 psf (See General Limitation #7)



Membrane Type: APP
Deck Type II: Wood, Insulated
Deck Description: 1⁹/₃₂" or greater plywood or wood plank
System Type B(1): Base layer of insulation mechanically attached, top layer adhered with approved asphalt.

All General and System Limitations apply.

One or more layers of any of the following insulations:

<u>Base Insulation Layer</u>	<u>Insulation Fasteners</u> <u>(Table 3)</u>	<u>Fastener</u> <u>Density/ft²</u>
ACFoam-II, ENRGY 3, ENRGY 3 25 PSI, ISO 95+ GL, RESISTA, Ultra-Max Minimum 1.3" thick	1 or 4	1:2.4 ft ²

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

<u>Top Insulation Layer</u>	<u>Insulation Fasteners</u> <u>(Table 3)</u>	<u>Fastener</u> <u>Density/ft²</u>
Approved Perlite Minimum 3/4" thick	N/A	N/A
Approved High Density Wood Fiberboard Minimum 1/2" thick	N/A	N/A

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

Base Sheet: One ply of Firestone MB Base or Firestone Ply IV, Ply IV (4) M, Ply VI or Ply VI (6) M ply sheet adhered to the insulation in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs./sq.

Ply Sheet: (Optional) One or more plies of Firestone MB Base, Ply IV, Ply IV (4) M, Ply VI or Ply VI (6) M ply sheet or other listed base sheet applied in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs./sq.; or one ply Firestone APP 160-P torch applied.

Or

One or more plies of Firestone SBS Glass Torch Base or SBS Poly Torch Base torch adhered.

Membrane: One ply of APP 180, APP 180-P, APP 180 UltraWhite, APP 180 FR, APP 180 FR UltraWhite torch applied parallel to the base ply, with overlaps staggered 12".



Surfacing:

(Optional) Any coating, listed below, used as a surfacing, must be listed within a current NOA. Install one of the following:

1. Gravel or slag at 400 lb. and 300 lb., respectively, set in a flood coat of type III or IV asphalt at 60 lb./sq..
2. Karnak No. 97, No. 97 AF or No. 169 at an application rate of 1½-3 gal./sq..

Maximum Design Pressure:

-45 psf (See General Limitation #9)



Membrane Type: APP
Deck Type II: Wood, Insulated
Deck Description: 1⁹/₃₂" or greater plywood or wood plank
System Type B(2): Base layer of insulation mechanically attached, top layer adhered with approved asphalt.

All General and System Limitations apply.

One or more layers of any of the following insulations:

<u>Base Insulation Layer</u>	<u>Insulation Fasteners</u> <u>(Table 3)</u>	<u>Fastener</u> <u>Density/ft²</u>
ISO 95+ GI, RESISTA or Approved Polyisocyanurate listed in Table 2 Minimum 1.5" thick	1 or 2	1:2 ft ²

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

<u>Top Insulation Layer</u>	<u>Insulation Fasteners</u> <u>(Table 3)</u>	<u>Fastener</u> <u>Density/ft²</u>
Approved Perlite Minimum 3/4" thick	N/A	N/A
Approved High Density Wood Fiberboard Minimum 1/2" thick	N/A	N/A

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

Base Sheet: One or more plies in any combination of the following: Firestone MB Base or Firestone Ply IV, Ply IV (4) M, Ply VI or Ply VI (6) M ply sheet bonded to the insulation in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs/sq. or one ply Firestone APP 160-P torch applied.

Ply Sheet: (Optional) One or more plies of Firestone MB Base, Ply IV, Ply IV (4) M, Ply VI or Ply VI (6) M ply sheet or other listed base sheet applied in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs./sq.; or one ply Firestone APP 160-P torch applied.

Or

One or more plies of Firestone SBS Glass Torch Base or SBS Poly Torch Base torch adhered.



Membrane: One ply of APP 180, APP 180-P, APP 180 UltraWhite, APP 180 FR, APP 180 FR UltraWhite torch applied parallel to the base ply, with overlaps staggered 12".

Surfacing: (Optional) Any coating, listed below, used as a surfacing, must be listed within a current NOA. Install one of the following:

1. Gravel or slag at 400 lb. and 300 lb., respectively, set in a flood coat of type III or IV asphalt at 60 lb./sq..
2. Karnak No. 97, No. 97 AF or No. 169 at an application rate of 1½-3 gal./sq..

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



Membrane Type: SBS
Deck Type II: Wood, Insulated
Deck Description: 1⁹/₃₂" or greater plywood or wood plank
System Type B(3): Base layer of insulation mechanically attached, top layer adhered with approved asphalt.

All General and System Limitations apply.

One or more layers of any of the following insulations:

<u>Base Insulation Layer</u>	<u>Insulation Fasteners (Table 3)</u>	<u>Fastener Density/ft²</u>
ISO 95+ GL, RESISTA or Approved Polyisocyanurate listed in Table 2 Minimum 1.5" thick	1 or 2	1:2 ft ²

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

<u>Top Insulation Layer</u>	<u>Insulation Fasteners (Table 3)</u>	<u>Fastener Density/ft²</u>
Approved Perlite Minimum 3/4" thick	N/A	N/A
Approved High Density Wood Fiberboard Minimum 1/2" thick	N/A	N/A

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

Base Sheet: One or more plies in any combination of the following: Firestone MB Base, SBS Base or Firestone Ply IV, Ply IV (4) M, Ply VI or Ply VI (6) M ply sheet bonded to the insulation in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs/sq.

Ply Sheet: (Optional) One or more plies of SBS Smooth, SBS Base or Firestone Ply IV, Ply IV (4) M, Ply VI or Ply VI (6) M ply sheet adhered in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs./sq.

Or

(Optional) One or more plies of Firestone SBS Glass Torch Base or SBS Poly Torch Base torch adhered.



Membrane:

One ply of Firestone SBS Cap, SBS Cap UltraWhite, SBS FR Cap, SBS FR Cap UltraWhite, SBS Smooth, SBS Premium, SBS Premium FR, SBS Premium FR UltraWhite, SBS Glass, SBS Glass FR, SBS Glass FR UltraWhite, adhered in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs./sq.

Or

(Not with MB Base) One ply of Firestone SBS Smooth, SBS Cap, SBS Cap UltraWhite, SBS FR Cap, SBS FR Cap UltraWhite, SBS Glass, SBS Glass FR, SBS Glass FR UltraWhite, SBS Premium, SBS Premium FR, SBS Premium FR UltraWhite fully adhered with LiquiGard Membrane Adhesive squeegee applied at a rate of 1.5 – 2.0 gal/square. The minimum 3 in. wide side laps are sealed with LiquiGard Membrane Adhesive squeegee applied at a rate of 1.5 – 2.0 gal/square.

Or

One ply of Firestone SBS Torch, SBS Torch UltraWhite, SBS FR Torch, SBS FR Torch UltraWhite, SBS Glass FR Torch, SBS Glass FR Torch UltraWhite, SBS Premium Torch, SBS Premium Torch UltraWhite, SBS Premium FR Torch or SBS Premium FR Torch UltraWhite, torch adhered.

Or

(Not with SBS Base, SBS Smooth) One ply of Firestone SBS Smooth, SBS Cap, SBS Cap UltraWhite, SBS FR Cap, SBS FR Cap UltraWhite, SBS Glass, SBS Glass FR, SBS Glass FR UltraWhite, SBS Premium, SBS Premium FR or SBS Premium FR UltraWhite cap sheet fully adhered to the base sheet with Multi-Purpose MB Cold Adhesive applied at 1½ - 2 gal/sq.

Surfacing:

(Optional) Any coating, listed below, used as a surfacing, must be listed within a current NOA. Install one of the following:

1. Gravel or slag at 400 lb. and 300 lb., respectively, set in a flood coat of type III or IV asphalt at 60 lb./sq..
2. Karnak No. 97, No. 97 AF or No. 169 at an application rate of 1½-3 gal./sq..

Maximum Design Pressure:

-52.5 psf (See General Limitation #7)



Membrane Type: APP
Deck Type II: Wood, Insulated
Deck Description: 19/32" or greater plywood or wood plank
System Type C(1): All layers of insulation simultaneously attached.

All General and System Limitations apply.

One or more layers of any of the following insulations:

<u>Base Insulation Layer</u>	<u>Insulation Fasteners (Table 3)</u>	<u>Fastener Density/ft²</u>
ACFoam-II Minimum 1.3" thick	N/A	N/A
ENRGY 3, ENRGY 3 25 PSI, ISO 95+ GL or RESISTA Minimum 1.4" thick	N/A	N/A
Ultra-Max Minimum 1.5" thick	N/A	N/A
Approved Perlite Minimum 3/4" thick	N/A	N/A

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

<u>Top Insulation Layer</u>	<u>Insulation Fasteners (Table 3)</u>	<u>Fastener Density/ft²</u>
ACFoam-II, ENRGY 3, ENRGY 3 25 PSI, ISO 95+ GL, RESISTA, Ultra-Max Minimum 1.3" thick	1 or 4	1:2.4 ft ²

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

Base Sheet: One ply of Firestone MB Base or Firestone Ply IV, Ply IV (4) M, Ply VI or Ply VI (6) M ply sheet adhered to the insulation in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs./sq.

Ply Sheet: (Optional) One or more plies of Firestone MB Base, Ply IV, Ply IV (4) M, Ply VI or Ply VI (6) M ply sheet or other listed base sheet applied in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs./sq.; or one ply Firestone APP 160-P torch applied.
 Or
 One or more plies of Firestone SBS Glass Torch Base or SBS Poly Torch Base torch adhered.



Membrane: One ply of APP 180, APP 180-P, APP 180 UltraWhite, APP 180 FR, APP 180 FR UltraWhite torch applied parallel to the base ply, with overlaps staggered 12".

Surfacing: (Optional) Any coating, listed below, used as a surfacing, must be listed within a current NOA. Install one of the following:

1. Gravel or slag at 400 lb. and 300 lb., respectively, set in a flood coat of type III or IV asphalt at 60 lb./sq..
2. Karnak No. 97, No. 97 AF or No. 169 at an application rate of 1½-3 gal./sq..

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



Membrane Type: SBS
Deck Type II: Wood, Insulated
Deck Description: ¹⁹/₃₂" or greater plywood or wood plank
System Type C(2): All layers of insulation simultaneously attached.

All General and System Limitations apply.

One or more layers of any of the following insulations:

<u>Base Insulation Layer</u>	<u>Insulation Fasteners (Table 3)</u>	<u>Fastener Density/ft²</u>
ISO 95+ GL or RESISTA Minimum 1.5" thick	N/A	N/A

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

<u>Top Insulation Layer</u>	<u>Insulation Fasteners (Table 3)</u>	<u>Fastener Density/ft²</u>
DensDeck, DensDeck Prime Minimum 1/2" thick	1 or 2 with 7	1:3.5 ft ²

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

Base Sheet: One ply of Firestone SBS Base adhered to the insulation in a full mopping of approved asphalt applied at a rate of 20-25 lbs./sq.

Membrane: One ply of Firestone SBS Cap, SBS Cap UltraWhite, SBS FR Cap, SBS FR Cap UltraWhite, SBS Premium, SBS Premium FR, SBS Premium FR UltraWhite, adhered in a full mopping of approved asphalt applied at a rate of 20-25 lbs./sq.

Surfacing: (Optional). Install one of the following:
 1. Roof gravel at 400 lb/sq in a flood coat of approved asphalt.

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



Membrane Type: APP
Deck Type II: Wood, Insulated
Deck Description: 1⁹/₃₂" or greater plywood or wood plank
System Type D(1): All layers of insulation and base sheet simultaneously attached.

All General and System Limitations apply.

One or more layers of any of the following insulations:

<u>Insulation Layer</u>	<u>Insulation Fasteners (Table 3)</u>	<u>Fastener Density/ft²</u>
ACFoam-II Minimum 1.3" thick	N/A	N/A
ENRGY 3, ENRGY 3 25 PSI, ISO 95+ GL or RESISTA Minimum 1.4" thick	N/A	N/A
Ultra-Max Minimum 1.5" thick	N/A	N/A
Approved Perlite Minimum 3/4" 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 ply of Firestone MB Base or MB Base M with a 4" side lap mechanically fastened through the insulation to the wood deck as described below:

Fastening: Fasten base sheet with approved Firestone All Purpose or Firestone Heavy Duty fasteners with, Insulation Fastening Plates at the side lap 18" o.c. and two rows staggered in the center of the sheet 36" o.c.

Ply Sheet: (Optional) One or more plies of Firestone MB Base, Ply IV, Ply IV (4) M, Ply VI or Ply VI (6) M ply sheet or other listed base sheet applied in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs./sq.; or one ply Firestone APP 160-P torch applied.
 Or
 (Optional) (Not with MB Base M) One or more plies of Firestone SBS Glass Torch Base or SBS Poly Torch Base torch adhered.

Membrane: One ply of APP 180, APP 180-P, APP 180 UltraWhite, APP 180 FR, APP 180 FR UltraWhite torch applied parallel to the base ply, with overlaps staggered 12".



Surfacing:

(Optional) Any coating, listed below, used as a surfacing, must be listed within a current NOA. Install one of the following:

1. Gravel or slag at 400 lb. and 300 lb., respectively, set in a flood coat of type III or IV asphalt at 60 lb./sq..
2. Karnak No. 97, No. 97 AF or No. 169 at an application rate of 1½-3 gal./sq..

**Maximum Design
Pressure:**

-45 psf (See General Limitation #9)



Membrane Type: SBS
Deck Type II: Wood, Insulated
Deck Description: 1⁹/₃₂" or greater plywood or wood plank
System Type D(2): All layers of insulation and base sheet simultaneously attached.

All General and System Limitations apply.

One or more layers of any of the following insulations:

<u>Insulation Layer</u>	<u>Insulation Fasteners (Table 3)</u>	<u>Fastener Density/ft²</u>
ACFoam-II Minimum 1.3" thick	N/A	N/A
ENRGY 3, ENRGY 3 25 PSI, ISO 95+ GL or RESISTA Minimum 1.4" thick	N/A	N/A
Ultra-Max Minimum 1.5" thick	N/A	N/A
Approved Perlite Minimum 3/4" 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 ply of Firestone MB Base, SBS Base with a 4" side lap mechanically fastened to the deck through the insulation as described below.

Fastening: Fasten base sheet with Firestone All Purpose or Firestone Heavy Duty fasteners with Insulation Fasening Plates or OMG Plastic Plates, at a 4" side lap 18" o.c. and two rows staggered in the center of the sheet 36" o.c.

Ply Sheet: (Optional) One or more plies of SBS Smooth, SBS Base or Firestone Ply IV, Ply IV (4) M, Ply VI or Ply VI (6) M ply sheet adhered in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs./sq.
 Or
 (Optional) One or more plies of Firestone SBS Glass Torch Base or SBS Poly Torch Base torch adhered.

Membrane: One ply of Firestone SBS Cap, SBS Cap UltraWhite, SBS FR Cap, SBS FR Cap UltraWhite, SBS Smooth, SBS Premium, SBS Premium FR, SBS Premium FR UltraWhite, SBS Glass, SBS Glass FR, SBS Glass FR UltraWhite, adhered in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs./sq.
 Or



(Not with MB Base) One ply of Firestone SBS Smooth, SBS Cap, SBS Cap UltraWhite, SBS FR Cap, SBS FR Cap UltraWhite, SBS Glass, SBS Glass FR, SBS Glass FR UltraWhite, SBS Premium, SBS Premium FR, SBS Premium FR UltraWhite fully adhered with LiquiGard Membrane Adhesive squeegee applied at a rate of 1.5 – 2.0 gal/square. The minimum 3 in. wide side laps are sealed with LiquiGard Membrane Adhesive squeegee applied at a rate of 1.5 – 2.0 gal/square.

Or

One ply of Firestone SBS Torch, SBS Torch UltraWhite, SBS FR Torch, SBS FR Torch UltraWhite, SBS Glass FR Torch, SBS Glass FR Torch UltraWhite, SBS Premium Torch, SBS Premium Torch UltraWhite, SBS Premium FR Torch or SBS Premium FR Torch UltraWhite, torch adhered.

Or

(Not with SBS Base, SBS Smooth) One ply of Firestone SBS Smooth, SBS Cap, SBS Cap UltraWhite, SBS FR Cap, SBS FR Cap UltraWhite, SBS Glass, SBS Glass FR, SBS Glass FR UltraWhite, SBS Premium, SBS Premium FR or SBS Premium FR UltraWhite cap sheet fully adhered to the base sheet with Multi-Purpose MB Cold Adhesive applied at 1½ - 2 gal/sq.

Surfacing:

(Optional) Any coating, listed below, used as a surfacing, must be listed within a current NOA. Install one of the following:

1. Gravel or slag at 400 lb. and 300 lb., respectively, set in a flood coat of type III or IV asphalt at 60 lb./sq..
2. Karnak No. 97, No. 97 AF or No. 169 at an application rate of 1½-3 gal./sq..

Maximum Design Pressure:

-45 psf (See General Limitation #9)



Membrane Type: APP
Deck Type II: Wood, Insulated
Deck Description: 1⁹/₃₂" or greater plywood or wood plank
System Type D(3): All layers of insulation and base sheet simultaneously attached.

All General and System Limitations apply.

One or more layers of any of the following insulations:

<u>Insulation Layer</u>	<u>Insulation Fasteners (Table 3)</u>	<u>Fastener Density/ft²</u>
ISO 95+ GL, RESISTA or Approved Polyisocyanurate listed in Table 2 Minimum 1.5" thick	N/A	N/A

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

Base Sheet: One ply of Firestone MB Base or MB Base M with a 4" side lap mechanically fastened through the insulation to the deck as described below:

Fastening: Fasten base sheet with Firestone All-Purpose or Heavy-Duty fasteners and Insulation Fastening Plates at a spacing of 12" o.c. in the 4" side lap and two rows staggered in the center of the sheet 12" o.c.

Ply Sheet: Optional) One or more plies of Firestone MB Base, Ply IV, Ply IV (4) M, Ply VI or Ply VI (6) M ply sheet or other listed base sheet applied in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs./sq.; or one ply Firestone APP 160-P torch applied.
 Or
 (Optional) (Not with MB Base M) One or more plies of Firestone SBS Glass Torch Base or SBS Poly Torch Base torch adhered.

Membrane: One ply of APP 180, APP 180-P, APP 180 UltraWhite, APP 180 FR, APP 180 FR UltraWhite torch applied parallel to the base ply, with overlaps staggered 12".

Surfacing: (Optional) Any coating, listed below, used as a surfacing, must be listed within a current NOA. Install one of the following:
 1. Gravel or slag at 400 lb. and 300 lb., respectively, set in a flood coat of type III or IV asphalt at 60 lb./sq..
 2. Karnak No. 97, No. 97 AF or No. 169 at an application rate of 1½-3 gal./sq..

Maximum Design Pressure: -52.5 psf (See General Limitation #7)



Membrane Type: SBS
Deck Type II: Wood, Insulated
Deck Description: 1⁹/₃₂" or greater plywood or wood plank
System Type D(4): All layers of insulation and base sheet simultaneously attached.

All General and System Limitations apply.

One or more layers of any of the following insulations:

<u>Insulation Layer</u>	<u>Insulation Fasteners (Table 3)</u>	<u>Fastener Density/ft²</u>
ISO 95+ GL, RESISTA or Approved Polyisocyanurate listed in Table 2 Minimum 1.5" thick	N/A	N/A

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

Base Sheet: One ply of Firestone MB Base or MB Base M with a 4" side lap mechanically fastened through the insulation to the deck as described below:

Fastening: Fasten base sheet with Firestone All-Purpose or Heavy-Duty fasteners and Insulation Fastening Plates at a spacing of 12" o.c. in the 4" side lap and two rows staggered in the center of the sheet 12" o.c.

Ply Sheet: (Optional) One or more plies of Firestone MB Base, SBS Base, Ply IV, Ply IV (4) M, Ply VI or Ply VI (6) M ply sheet or other listed base or ply sheet hot mopped in approved asphalt applied within the EVT range and at a rate of 20-40 lbs./sq.
 Or
 (Optional) (Not with MB Base M) One or more plies of Firestone SBS Glass Torch Base or SBS Poly Torch Base torch adhered.

Membrane: One ply of Firestone SBS Cap, SBS Cap UltraWhite, SBS FR Cap, SBS FR Cap UltraWhite, SBS Smooth, SBS Premium, SBS Premium FR, SBS Premium FR UltraWhite, SBS Glass, SBS Glass FR, SBS Glass FR UltraWhite, adhered in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs./sq.
 Or
 (Not with MB Base) One ply of Firestone SBS Smooth, SBS Cap, SBS Cap UltraWhite, SBS FR Cap, SBS FR Cap UltraWhite, SBS Glass, SBS Glass FR, SBS Glass FR UltraWhite, SBS Premium, SBS Premium FR, SBS Premium FR UltraWhite fully adhered with LiquiGard Membrane Adhesive squeegee applied at a rate of 1.5 – 2.0 gal/square. The minimum 3 in. wide side laps are sealed with LiquiGard Membrane Adhesive squeegee applied at a rate of 1.5 – 2.0 gal/square.
 Or



One ply of Firestone SBS Torch, SBS Torch UltraWhite, SBS Smooth, SBS FR Torch, SBS FR Torch UltraWhite, SBS Glass FR Torch, SBS Glass FR Torch UltraWhite, SBS Premium Torch, SBS Premium Torch UltraWhite, SBS Premium FR Torch or SBS Premium FR Torch UltraWhite, torch adhered.

Or

(Not with SBS Base) One ply of Firestone SBS Cap, SBS Cap UltraWhite, SBS FR Cap, SBS FR Cap UltraWhite, SBS Glass, SBS Glass FR, SBS Glass FR UltraWhite, SBS Premium, SBS Premium FR or SBS Premium FR UltraWhite cap sheet fully adhered to the base sheet with Multi-Purpose MB Cold Adhesive applied at 1½ - 2 gal/sq.

Surfacing:

(Optional) Any coating, listed below, used as a surfacing, must be listed within a current NOA. Install one of the following:

1. Gravel or slag at 400 lb. and 300 lb., respectively, set in a flood coat of type III or IV asphalt at 60 lb./sq..
2. Karnak No. 97, No. 97 AF or No. 169 at an application rate of 1½-3 gal./sq..

Maximum Design

Pressure:

-52.5 psf (See General Limitation #7)



Membrane Type: APP
Deck Type 1: Wood, Non-insulated
Deck Description: 19/32" or greater plywood or wood plank
System Type E(1): Base sheet mechanically fastened.

All General and System Limitations apply.

One or more layers of any of the following insulations:

Base Sheet: One ply of Firestone MB Base or, MB Base M mechanically fastened to the wood deck as described below:

Fastening: Anchor sheet shall be lapped 4" and fastened with approved roofing nails and tin caps 9" o.c. at the lap and two rows staggered in the center of the sheet 18" o.c.

Ply Sheet: None.

Membrane: One ply of APP 180, APP 180-P, APP 180 UltraWhite, APP 180 FR, APP 180 FR UltraWhite torch applied parallel to the base ply, with overlaps staggered 12".

Surfacing: (Optional) Any coating, listed below, used as a surfacing, must be listed within a current NOA. Install one of the following:

1. Gravel or slag at 400 lb. and 300 lb., respectively, set in a flood coat of type III or IV asphalt at 60 lb./sq..
2. Karnak No. 97, No. 97 AF or No. 169 at an application rate of 1½-3 gal./sq..

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



Membrane Type: SBS
Deck Type 1: Wood, Non-insulated
Deck Description: 1⁹/₃₂" or greater plywood or wood plank
System Type E(2): Base sheet mechanically fastened.

All General and System Limitations apply.

One or more layers of any of the following insulations:

Base Sheet: One ply of Firestone MB Base, SBS Base with a 4" side lap mechanically fastened to the deck as described below.

Fastening: Base sheet shall be lapped 4" and fastened with approved roofing nails and tin caps 9" o.c. in the lap and two rows staggered in the center of the sheet 18" o.c.

Ply Sheet: (Optional) One or more plies of SBS Smooth, SBS Base Sheet or Firestone Ply IV, Ply IV (4) M, Ply VI or Ply VI (6) M ply sheet adhered in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs./sq.
Or
(Optional) One or more plies of Firestone SBS Glass Torch Base or SBS Poly Torch Base torch adhered.

Membrane: One ply of Firestone SBS Cap, SBS Cap UltraWhite, SBS FR Cap, SBS FR Cap UltraWhite, SBS Smooth, SBS Premium, SBS Premium FR, SBS Premium FR UltraWhite, SBS Glass, SBS Glass FR, SBS Glass FR UltraWhite, adhered in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs./sq.
Or
(Not with MB Base) One ply of Firestone SBS Smooth, SBS Cap, SBS Cap UltraWhite, SBS FR Cap, SBS FR Cap UltraWhite, SBS Glass, SBS Glass FR, SBS Glass FR UltraWhite, SBS Premium, SBS Premium FR, SBS Premium FR UltraWhite fully adhered with LiquiGard Membrane Adhesive squeegee applied at a rate of 1.5 – 2.0 gal/square. The minimum 3 in. wide side laps are sealed with LiquiGard Membrane Adhesive squeegee applied at a rate of 1.5 – 2.0 gal/square.
Or
One ply of Firestone SBS Torch, SBS Torch UltraWhite, SBS FR Torch, SBS FR Torch UltraWhite, SBS Glass FR Torch, SBS Glass FR Torch UltraWhite, SBS Premium Torch, SBS Premium Torch UltraWhite, SBS Premium FR Torch or SBS Premium FR Torch UltraWhite, torch adhered.
Or
(Not with SBS Base, SBS Smooth) One ply of Firestone SBS Smooth, SBS Cap, SBS Cap UltraWhite, SBS FR Cap, SBS FR Cap UltraWhite, SBS Glass, SBS Glass FR, SBS Glass FR UltraWhite, SBS Premium, SBS Premium FR or SBS Premium FR UltraWhite cap sheet fully adhered to the base sheet with Multi-Purpose MB Cold Adhesive applied at 1½ - 2 gal/sq.



Surfacing:

(Optional) Any coating, listed below, used as a surfacing, must be listed within a current NOA. Install one of the following:

1. Gravel or slag at 400 lb. and 300 lb., respectively, set in a flood coat of type III or IV asphalt at 60 lb./sq..
2. Karnak No. 97, No. 97 AF or No. 169 at an application rate of 1½-3 gal./sq..

Maximum Design

Pressure:

-45 psf (See General Limitation #9)



Membrane Type: APP
Deck Type 1: Wood, Non-insulated
Deck Description: ¹⁹/₃₂" or greater plywood or wood plank mechanically fastened to wood supports spaced 24-inch o.c. with 1-5/8" #6 wood screws spaced 6-inch o.c.
System Type E(3): Base sheet mechanically fastened.

All General and System Limitations apply.

Base Sheet: One ply of Firestone MB Base or MB Base M mechanically fastened to the wood deck as described below.

Fastening #1: Base sheet shall be lapped 4" and fastened with Firestone All-Purpose fasteners with 3" Round Metal Plates 12" o.c. in the lap and two rows staggered in the center of the sheet 12" o.c.

Fastening #2: Base sheet shall be lapped 4" and fastened with approved roofing nails and tin caps 6" o.c. at the lap and two rows staggered in the center of the sheet 6" o.c.

Ply Sheet: (Optional) One or more plies of Firestone MB Base, Ply IV, Ply IV (4) M, Ply VI or Ply VI (6) M ply sheet or other listed base sheet applied in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs./sq.; or one ply Firestone APP 160-P torch applied.
Or
(Optional) One or more plies of Firestone SBS Glass Torch Base or SBS Poly Torch Base torch adhered

Membrane: One ply of APP 180, APP 180-P, APP 180 UltraWhite, APP 180 FR, APP 180 FR UltraWhite torch applied parallel to the base ply, with overlaps staggered 12".

Surfacing: (Optional) Any coating, listed below, used as a surfacing, must be listed within a current NOA. Install one of the following:
1. Gravel or slag at 400 lb. and 300 lb., respectively, set in a flood coat of type III or IV asphalt at 60 lb./sq..
2. Karnak No. 97, No. 97 AF or No. 169 at an application rate of 1½-3 gal./sq..

Maximum Design Pressure: -52.5 psf (See General Limitation #7)



Membrane Type: SBS
Deck Type 1: Wood, Non-insulated
Deck Description: 1⁹/₃₂" or greater plywood or wood plank mechanically fastened to wood supports spaced 24-inch o.c. with 1-5/8" #6 wood screws spaced 6-inch o.c.
System Type E(4): Base sheet mechanically fastened.

All General and System Limitations apply.

Base Sheet: One ply of Firestone MB Base or MB Base M mechanically fastened to the wood deck as described below

Fastening #1: Base sheet shall be lapped 4" and fastened with Firestone All-Purpose fasteners with 3" Round Metal Plates 12" o.c. in the lap and two rows staggered in the center of the sheet 12" o.c.

Fastening #2: Base sheet shall be lapped 4" and fastened with approved roofing nails and tin caps 6" o.c. at the lap and two rows staggered in the center of the sheet 6" o.c.

Ply Sheet: One or more plies of SBS Smooth, SBS Base Sheet or Firestone Ply IV, Ply IV (4) M, Ply VI or Ply VI (6) M ply sheet adhered in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs./sq.
Or
(Not with MB Base M) One or more plies of Firestone SBS Glass Torch Base or SBS Poly Torch Base torch adhered.

Membrane: One ply of Firestone SBS Cap, SBS Cap UltraWhite, SBS FR Cap, SBS FR Cap UltraWhite, SBS Premium, SBS Premium FR, SBS Premium FR UltraWhite, SBS Glass, SBS Glass FR, SBS Glass FR UltraWhite, adhered in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs./sq.
Or
(Not with MB Base) One ply of Firestone SBS Smooth, SBS Cap, SBS Cap UltraWhite, SBS FR Cap, SBS FR Cap UltraWhite, SBS Glass, SBS Glass FR, SBS Glass FR UltraWhite, SBS Premium, SBS Premium FR, SBS Premium FR UltraWhite fully adhered with LiquiGard Membrane Adhesive squeegee applied at a rate of 1.5 – 2.0 gal/square. The minimum 3 in. wide side laps are sealed with LiquiGard Membrane Adhesive squeegee applied at a rate of 1.5 – 2.0 gal/square.
Or
One ply of Firestone SBS Torch, SBS Torch UltraWhite, SBS FR Torch, SBS FR Torch UltraWhite, SBS Glass FR Torch, SBS Glass FR Torch UltraWhite, SBS Premium Torch, SBS Premium Torch UltraWhite, SBS Premium FR Torch or SBS Premium FR Torch UltraWhite, torch adhered.
Or



(Not with SBS Base, SBS Smooth) One ply of Firestone SBS Smooth, SBS Cap, SBS Cap UltraWhite, SBS FR Cap, SBS FR Cap UltraWhite, SBS Glass, SBS Glass FR, SBS Glass FR UltraWhite, SBS Premium, SBS Premium FR or SBS Premium FR UltraWhite cap sheet fully adhered to the base sheet with Multi-Purpose MB Cold Adhesive applied at 1½ - 2 gal/sq.

Surfacing:

(Optional) Any coating, listed below, used as a surfacing, must be listed within a current NOA. Install one of the following:

1. Gravel or slag at 400 lb. and 300 lb., respectively, set in a flood coat of type III or IV asphalt at 60 lb./sq..
2. Karnak No. 97, No. 97 AF or No. 169 at an application rate of 1½-3 gal./sq..

Maximum Design

Pressure:

-52.5 psf (See General Limitation #7)



Membrane Type: SBS
Deck Type 1: Wood, Non-insulated
Deck Description: 1⁹/₃₂" or greater plywood or wood plank; APA Span-Rated over wood supports at 24-inch o.c., 0.113-inch x 2-3/8-inch ring shank nails fastened 6-inch o.c. at the perimeter and 6-inch o.c. in the field
System Type E(5): Base sheet mechanically fastened.

All General and System Limitations apply.

Base Sheet: One ply of Firestone SBS Base mechanically fastened to the wood deck as described below.
Fastening: Base sheet shall be lapped 3" and fastened with approved roofing nails and tin caps 6" o.c. at the lap and three rows staggered in the center of the sheet 6" o.c.
Ply Sheet: One or more plies of SBS Base, Ply VI, MB Base, SBS Smooth or SBS Premium Base fully adhered with LiquiGard Membrane Adhesive squeegee applied at a rate of 1.5 – 2.0 gal/square.
Or
One or more plies of Firestone SBS Base, Ply IV, SBS PolyBase, MB Base, SBS Smooth, SBS Premium Base fully adhered to the base sheet with Multi-Purpose MB Cold Adhesive applied at 1.5 – 2.0 gal/sq
Or
One or more plies of Firestone SBS Base, Ply IV, SBS PolyBase, SBS Smooth or SBS Premium Base in a full mopping of approved asphalt applied within the EVT range and at a rate of 25-30 lbs./sq.
Or
One or more plies of Firestone SBS Glass Torch Base or SBS Poly Torch Base torch adhered.

Membrane: One or more plies of Firestone SBS Glass, SBS Glass FR, SBS Glass FR UltraWhite, SBS FR Cap, SBS FR Cap UltraWhite, SBS Cap, SBS Cap UltraWhite, SBS Premium, SBS Premium FR, SBS Premium FR UltraWhite or SBS Smooth fully adhered with LiquiGard Membrane Adhesive squeegee applied at a rate of 1.5 – 2.0 gal/square.
Or
One or more plies of Firestone SBS Glass, SBS Glass FR, SBS Glass FR, SBS Glass FR UltraWhite, SBS FR Cap, SBS FR Cap UltraWhite, SBS Cap, SBS Cap UltraWhite, SBS Premium, SBS Premium FR, SBS Premium FR UltraWhite or SBS Smooth fully adhered to the base sheet with Multi-Purpose MB Cold Adhesive applied at 1.5 – 2.0 gal/sq.
Or
One or more plies of Firestone SBS Glass, SBS Glass FR, SBS Glass FR UltraWhite, SBS FR Cap, SBS FR Cap UltraWhite, SBS Cap, SBS Cap UltraWhite, SBS Premium, SBS Premium FR, SBS Premium FR UltraWhite or SBS Smooth in a full mopping of approved asphalt applied within the EVT range and at a rate of 25-30 lbs./sq.
Or



One or more plies of Firestone SBS Glass FR Torch, SBS Glass FR Torch UltraWhite, SBS Torch, SBS Premium Torch, SBS FR Torch, SBS Premium FR Torch or SBS Premium FR Torch UltraWhite torch adhered .

**Maximum Design
Pressure:**

-97.5 psf (See General Limitation #7)



Membrane Type: SBS
Deck Type 1: Wood, Non-insulated
Deck Description: ¹⁹/₃₂" or greater plywood or wood plank; APA Span-Rated over wood supports at 24-inch o.c., 0.113-inch x 2-3/8-inch ring shank nails fastened 6-inch o.c. at the perimeter and 6-inch o.c. in the field
System Type E(6): Base sheet mechanically fastened.

All General and System Limitations apply.

Base Sheet: One ply of Firestone MB Base mechanically fastened to the wood deck as described below.

Fastening : Base sheet shall be lapped 3.5" and fastened with Firestone All Purpose fastener & Insulation Fastening Plate 12" o.c. at the lap and two rows staggered in the center of the sheet 12" o.c.

Ply Sheet (Optional): One or more plies of Firestone SBS Base, Ply VI, SBS PolyBase, MB Base, SBS Smooth or SBS Premium Base fully adhered with LiquiGard Membrane Adhesive squeegee applied at a rate of 1.5 – 2.0 gal/square

Or

One or more plies of Firestone SBS Base, Ply IV, SBS PolyBase, MB Base, SBS Smooth, SBS Premium Base fully adhered to the base sheet with Multi-Purpose MB Cold Adhesive applied at 1.5 – 2.0 gal/sq

Or

One or more plies of Firestone SBS Base, Ply IV, SBS PolyBase, SBS Smooth or SBS Premium Base in a full mopping of approved asphalt applied within the EVT range and at a rate of 25-30 lbs./sq

Or

One or more plies of Firestone SBS Glass Torch Base or SBS Poly Torch Base torch adhered

Membrane: One or more plies of Firestone SBS Glass, SBS Glass FR, SBS Glass FR UltraWhite, SBS FR Cap, SBS FR Cap UltraWhite, SBS Cap, SBS Cap UltraWhite, SBS Premium, SBS Premium FR, SBS Premium FR UltraWhite or SBS Smooth fully adhered with LiquiGard Membrane Adhesive squeegee applied at a rate of 1.5 – 2.0 gal/square

Or

One or more plies of Firestone SBS Glass, SBS Glass FR, SBS Glass FR UltraWhite, SBS FR Cap, SBS FR Cap UltraWhite, SBS Cap, SBS Cap UltraWhite, SBS Premium, SBS Premium FR, SBS Premium FR UltraWhite or SBS Smooth fully adhered to the base sheet with Multi-Purpose MB Cold Adhesive applied at 1.5 – 2.0 gal/sq

Or



One or more plies of Firestone SBS Glass, SBS Glass FR, SBS Glass FR UltraWhite, SBS FR Cap, SBS FR Cap UltraWhite, SBS Cap, SBS Cap UltraWhite, SBS Premium, SBS Premium FR, SBS Premium FR UltraWhite or SBS Smooth in a full mopping of approved asphalt applied within the EVT range and at a rate of 25-30 lbs./sq

Or

One or more plies of Firestone SBS Glass FR Torch, SBS Glass FR Torch UltraWhite, SBS Torch, SBS Premium Torch, SBS FR Torch, SBS Premium FR Torch or SBS Premium FR Torch UltraWhite torch adhered.

**Maximum Design
Pressure:**

-60 psf (See General Limitation #7)



WOOD DECK SYSTEM LIMITATIONS:

1. A slip sheet is required with Ply 4 and Ply 6 when used as a mechanically fastened base or anchor sheet.

GENERAL LIMITATIONS:

1. Fire classification is not part of this acceptance, refer to a current Approved Roofing Materials Directory for fire ratings of this product.
2. Insulation may be installed in multiple layers. The first layer shall be attached in compliance with Product Control Approval guidelines. All other layers shall be adhered in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs./sq., or mechanically attached using the fastening pattern of the top layer
3. All standard panel sizes are acceptable for mechanical attachment. When applied in approved asphalt, panel size shall be 4' x 4' maximum.
4. An overlay and/or recovery board insulation panel is required on all applications over closed cell foam insulations when the base sheet is fully mopped. If no recovery board is used the base sheet shall be applied using spot mopping with approved asphalt, 12" diameter circles, 24" o.c.; or strip mopped 8" ribbons in three rows, one at each sidelap and one down the center of the sheet allowing a continuous area of ventilation. Encircling of the strips is not acceptable. A 6" break shall be placed every 12' in each ribbon to allow cross ventilation. Asphalt application of either system shall be at a minimum rate of 12 lbs./sq.

Note: Spot attached systems shall be limited to a maximum design pressure of -45 psf.

5. Fastener spacing for insulation attachment is based on a Minimum Characteristic Force (F') value of 275 lbf., as tested in compliance with Testing Application Standard TAS 105. If the fastener value, as field-tested, are below 275 lbf. insulation attachment shall not be acceptable.
6. Fastener spacing for mechanical attachment of anchor/base sheet or membrane attachment is based on a minimum fastener resistance value in conjunction with the maximum design value listed within a specific system. Should the fastener resistance be less than that required, as determined by the Building Official, a revised fastener spacing, prepared, signed and sealed by a Florida Registered Engineer, Architect, or Registered Roof Consultant may be submitted. Said revised fastener spacing shall utilize the withdrawal resistance value taken from Testing Application Standards TAS 105 and calculations in compliance with Roofing Application Standard RAS 117.
7. Perimeter and corner areas shall comply with the enhanced uplift pressure requirements of these areas. Fastener densities shall be increased for both insulation and base sheet as calculated in compliance with Roofing Application Standard RAS 117. Calculations prepared, signed and sealed by a Florida registered Professional Engineer, Registered Architect, or Registered Roof Consultant. **(When this limitation is specifically referred within this NOA, General Limitation #9 will not be applicable.)**
8. All attachment and sizing of perimeter nailers, metal profile, and/or flashing termination designs shall conform with Roofing Application Standard RAS 111 and applicable wind load requirements.
9. The maximum designed pressure limitation listed shall be applicable to all roof pressure zones (i.e. field, perimeters, and corners). Neither rational analysis, nor extrapolation shall be permitted for enhanced fastening at enhanced pressure zones (i.e. perimeters, extended corners and corners). **(When this limitation is specifically referred within this NOA, General Limitation #7 will not be applicable.)**
10. All products listed herein shall have a quality assurance audit in accordance with the Florida Building Code and Rule 61G20-3 of the Florida Administrative Code.

END OF THIS ACCEPTANCE

