



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

NOTICE OF ACCEPTANCE (NOA)

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

Firestone Building Products Company, LLC
200 4th Ave. South
Nashville, TN 37201

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 BASEGARD SA Modified Bitumen Roof Systems for 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. 13-1212.07 and consists of pages 1 through 70.
The submitted documentation was reviewed by Jorge L. Acebo.



NOA No.: 17-0825.09
Expiration Date: 02/14/23
Approval Date: 02/08/18
Page 1 of 70

ROOFING SYSTEM APPROVAL

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

TRADE NAMES OF PRODUCTS MANUFACTURED OR LABELED BY APPLICANT:

TABLE 1

Product	Dimensions	Test Specification	Product Description
BASEGARD SA	39.4" x 65' 3"	ASTM D6163	Fiberglass reinforced SBS modified bitumen, self-adhering base sheet with a smooth sanded surface.
APP 80 Glass Base	39.4" x 65'4"	ASTM D6509	Fiberglass reinforced, APP modified bitumen, smooth surfaced base sheet and burn off film.
APP 160	39." x 32'10"	ASTM D6222	Polyester reinforced APP modified bitumen, smooth surfaced membrane with burn-off film.
APP 160 Cool	39." x 32'10"	ASTM D6222	Polyester reinforced APP modified bitumen, smooth surfaced membrane.
APP 160-P	39." x 32'10"	ASTM D6222	Polyester reinforced APP modified bitumen, smooth surfaced membrane with burn-off film.
APP 170	39." x 32'10"	ASTM D6222	Polyester reinforced APP modified bitumen, smooth surfaced membrane.
APP 170 Cool	39.4" x 33'10"	ASTM D6222	Polyester reinforced APP modified bitumen, smooth surfaced membrane.
APP 180	39.4" x 32'10"	ASTM D6222	Polyester reinforced APP modified bitumen, granule surfaced membrane with burn off film.
APP 180 UltraWhite	39.4" x 32'10"	ASTM D6222	Polyester reinforced APP modified bitumen, UltraWhite, granule surfaced membrane with burn off film.
APP 180 FR	39.4" x 32'10"	ASTM D6222	Polyester reinforced, fire resistant APP modified bitumen, granule surfaced membrane with burn off film.
APP 180 FR Cool	39.4" x 32'10"	ASTM D6222	Polyester reinforced, fire resistant APP modified bitumen, granule surfaced membrane with burn off film.
APP Premium FR	39.4" x 32'10"	ASTM D6223	Combination fiberglass scrim and polyester mat reinforced, fire retardant APP modified bitumen, granule surfaced membrane.
APP 180 FR UltraWhite	39.4" x 32'10"	ASTM D6222	Polyester reinforced, fire resistant APP modified bitumen, UltraWhite granule surfaced membrane with burn off film.



TRADE NAMES OF PRODUCTS MANUFACTURED OR LABELED BY APPLICANT:

TABLE 1

Product	Dimensions	Test Specification	Product Description
APP 180 Cool	39.4" x 32'10"	ASTM D6222	Polyester reinforced APP modified bitumen, granule surfaced membrane.
APP Premium Base	39.4" x 65.4"	ASTM D6509	Fiberglass reinforced APP modified bitumen, smooth surfaced base sheet.
SBS Glass	39.4" x 33'6"	ASTM D6163	Fiberglass reinforced, SBS modified bitumen, granule surfaced membrane with sanded bottom surface.
SBS Glass Torch Base	39.4" x 33'6"	ASTM D6163	Fiberglass reinforced, SBS modified bitumen ply with sanded top surface and burn off film.
SBS Glass Torch Base 1.5	39.4" x 65'3"	ASTM D6163	Fiberglass reinforced, SBS modified bitumen ply with sanded top surface and burn off film.
SBS Poly Torch Base	39.4" x 33'6"	ASTM D6164	Polyester reinforced, SBS modified bitumen ply with sanded top surface with burn off film.
SBS Premium Poly Base	39.4" x 50"	ASTM D6164	Polyester reinforced, SBS modified bitumen membrane with sanded surfaces.
SBS Torch	39.4" x 33'6"	ASTM D6164	Polyester reinforced, SBS modified bitumen membrane, granule surfaced with burn off film.
SBS Glass FR Torch	39.4" x 33'6"	ASTM D6163	Fiberglass reinforced, fire resistant, SBS modified bitumen membrane, granule surfaced with burn off film.
SBS Glass FR Torch UltraWhite	39.4" x 33'6"	ASTM D6163	Fiberglass reinforced, fire resistant, SBS modified bitumen membrane, UltraWhite granule surfaced with burn off film.
SBS Torch UltraWhite	39.4" x 33'6"	ASTM D6164	Polyester reinforced, SBS modified bitumen membrane, UltraWhite granule surfaced with burn off film.
SBS FR Torch	39.4" x 33'6"	ASTM D6164	Polyester reinforced, fire resistant, SBS modified bitumen, granule surfaced with burn off film.
SBS FR Torch UltraWhite	39.4" x 33'6"	ASTM D6164	Polyester reinforced, fire resistant, SBS modified bitumen membrane, UltraWhite granule surfaced with burn off film.
SBS Cap	39.4" x 33'6"	ASTM D6164	Polyester reinforced, SBS modified bitumen membrane, granule surfaced with sanded bottom surface.
SBS Cap UltraWhite	39.4" x 33'6"	ASTM D6164	Polyester reinforced, SBS modified bitumen membrane, UltraWhite granule surfaced with sanded bottom surface.
SBS FR Cap	39.4" x 33'6"	ASTM D6164	Polyester reinforced, fire resistant, SBS modified bitumen membrane, UltraWhite granule surfaced with sanded bottom surface.



TRADE NAMES OF PRODUCTS MANUFACTURED OR LABELED BY APPLICANT:

TABLE 1

Product	Dimensions	Test Specification	Product Description
SBS FR Cap UltraWhite	39.4" x 33'6"	ASTM D6164	Polyester reinforced, fire resistant, SBS modified bitumen membrane, UltraWhite granule surfaced with sanded bottom surface.
SBS Premium FR	39.4" x 33'6"	ASTM D6164	Polyester reinforced, fire resistant, SBS modified bitumen membrane, granule surfaced with sanded bottom surface.
SBS Premium FR UltraWhite	39.4" x 33'6"	ASTM D6164	Polyester reinforced, fire resistant, SBS modified bitumen membrane, UltraWhite granule surfaced with sanded bottom surface.
SBS Premium	39.4" x 33'6"	ASTM D6164	Polyester reinforced, SBS modified bitumen membrane, granule surfaced with sanded bottom surface.
SBS Premium Torch	39.4" x 33'6"	ASTM D6164	Polyester reinforced, SBS modified bitumen membrane, granule surfaced with burn off film.
SBS Premium Torch UltraWhite	39.4" x 33'6"	ASTM D6164	Polyester reinforced, SBS modified bitumen membrane, UltraWhite granule surfaced with burn off film.
SBS Premium FR Torch	39.4" x 33'6"	ASTM D6164	Polyester reinforced, fire resistant, SBS modified bitumen membrane, granule surfaced with burn off film.
SBS Premium FR Torch UltraWhite	39.4" x 33'6"	ASTM D6164	Polyester reinforced, fire resistant, SBS modified bitumen membrane, UltraWhite granule surfaced with burn off film.
SBS Base	39.4" x 50'	ASTM D6163	Fiberglass reinforced, SBS modified bitumen ply with sanded surfaces.
SBS Premium Base	39.4" x 50'	ASTM D6164	Fiberglass reinforced, SBS modified bitumen ply with sanded surfaces.
SBS Poly Base	39.4" x 50'	ASTM D6164	Polyester reinforced, SBS modified bitumen membrane with sanded surfaces.
SBS Smooth	39.4" x 33'6"	ASTM D6164	Polyester reinforced, SBS modified bitumen membrane with sanded surfaces.
SBS Glass FR	39.4" x 33'6"	ASTM D6163	Fiberglass reinforced, fire resistant, SBS modified bitumen membrane, granule surfaced with sanded bottom surface.
SBS Glass FR UltraWhite	39.4" x 33'6"	ASTM D6163	Fiberglass reinforced, fire resistant, SBS modified bitumen membrane, UltraWhite granule surfaced with sanded bottom surface.
Ply VI	39.4" x 160'6"	ASTM D2178	Asphalt impregnated, glass fiber mat reinforced, roofing ply.



TRADE NAMES OF PRODUCTS MANUFACTURED OR LABELED BY APPLICANT:

TABLE 1

Product	Dimensions	Test Specification	Product Description
Ply IV	39.4” x 160’6”	ASTM D2178	Asphalt impregnated, glass fiber mat reinforced, roofing ply.
MB Base	36" x 108'	ASTM D4601	Fiberglass reinforced base sheet, asphalt coated on both sides. Applied in hot asphalt or mechanically attached.
I.S.O. Twin Pack Insulation Adhesive	750 ml cartridges	Proprietary	A two-component polyurethane insulation adhesive.
I.S.O. Fix II	30 lbs.	Proprietary	A single component polyurethane insulation adhesive.
I.S.O. Stick	5 gal.	Proprietary	A two-component polyurethane insulation adhesive.

APPROVED INSULATIONS:

TABLE 2

Product Name	Product Description	Manufacturer (With Current NOA)
ISO 95+ GL and tapered	Polyisocyanurate insulation board.	Firestone Building Products
ISOGARD HD Composite	Polyisocyanurate foam core laminated to ISOGARD HD board.	Firestone Building Products
ISOGARD HD	High density polyisocyanurate roof board with a coated fiberglass facer.	Firestone Building Products
RESISTA and tapered	Polyisocyanurate insulation board with fiberglass facer.	Firestone Building Products
DensDeck, DensDeck Prime	Silicon treated gypsum.	Georgia Pacific Gypsum LLC
SECUROCK Gypsum-Fiber Roof Board	Gypsum roof board with fiber reinforcement.	United States Gypsum Corp.

APPROVED FASTENERS:

TABLE 3

Fastener Number	Product Name	Product Description	Dimensions	Manufacturer (With Current NOA)
1.	Firestone Heavy-Duty	Insulation and membrane fastener	Various	Firestone Building Products
2.	Concrete Drive Fastener	1/4" diameter concrete deck fastener.	Various	Firestone Building Products
3.	Firestone Insulation Fastening Plate	Insulation plate for use with Firestone Fasteners	3” round	Firestone Building Products
4.	Firestone All-Purpose	Insulation and membrane fastener for the attachment of roofing insulation and base sheets	Various	Firestone Building Products
5.	Coiled Metal Batten Bar	Galvalume batten strip	220’ coil	Firestone Building Products



EVIDENCE SUBMITTED:

<u>Test Agency</u>	<u>Test Identifier</u>	<u>Description</u>	<u>Date</u>
Factory Mutual Research Corp.	3044812	FM 4470	05/04/12
	3014537	FM 4470	11/29/04
	3020395	FM 4470	06/07/10
	3035017	FM 4470	04/15/09
	3035560	FM 4470	01/11/10
	3038197	FM 4470	08/04/11
	3040795	FM 4470	03/24/11
	3042665	FM 4470	05/04/12
	3040109	FM 4470	03/09/11
	3044047	FM 4470	05/17/12
	3047398	FM 4470	08/15/13
Underwriters Laboratories	R9516	UL 790	12/27/17
Trinity ERD	F8800.01.08-R1	ASTM D903/TAS114	01/17/08
	F36650.08.11-1-R2	ASTM D6163	05/08/12
	F36650.09.12	ASTM D4601/ASTM D2178	09/04/12
	F31960.05.10-1	ASTM D4977	05/19/10
	F41070.08.12	ASTM D6222	08/24/12
	F31960.08.10-1	ASTM D4977	08/25/10
PRI Construction Materials Technologies, LLC	FBP-018-02-01	ASTM D6163	09/07/04
	FBP-038-02-02	ASTM D6164	01/12/11
	FBP-038-02-03	ASTM D6164	01/12/11
	FBP-038-02-04	ASTM D6164	01/12/11
	FBP-042-02-02	ASTM D 6164	07/27/11
	FBP-042-02-01	ASTM D6164	07/26/11
	FBP-043-02-01	ASTM D6164	08/02/11
	FBP-043-02-02	ASTM D6164	08/02/11
	FBP-043-02-04	ASTM D6164	07/26/11
	FBP-042-02-02	ASTM D6164	07/26/11
	FBP-043-02-03	ASTM D6164	07/26/11
	FBP-053-02-01	ASTM D6163	03/23/12
	FBP-071-02-01 Rev.1	TAS 114-J	02/07/13
	FBP-059-02-01	ASTM D1876	07/20/12
	FBP-059-02-01 Rev 2	ASTM D903/D1876	09/30/13
		TAS 117/TAS 114	
	FBP-104-02-01 Rev.1	TAS 114	06/19/13
	FBP-106-02-01	TAS 114	04/19/13
	FBP-113-02-01	TAS 114	04/17/13
	FBP-114-02-01	TAS 114	04/19/13
FBP-118-02-01	TAS 114	07/24/13	
FBP-124-02-01	TAS 114	08/02/13	
FBP-133-02-01 Rev 3	TAS 114	08/24/13	
FBP-133-02-02	TAS 114	08/27/13	
FBP-141-02-01	TAS 114	12/18/13	
FBP-142-02-01	TAS 114	08/28/13	



EVIDENCE SUBMITTED: (CONTINUED)

<u>Test Agency</u>	<u>Test Identifier</u>	<u>Description</u>	<u>Date</u>
PRI Construction Materials Technologies, LLC	FBP-142-02-02 Rev 1	TAS 114	10/01/13
	FBP-168-02-03	ASTM D6164	07/14/14
	FBP-176-02-01	ASTM D4601	07/15/14
	FBP-181-02-01B	TAS 114	07/24/14
	FBP-184-02-03	TAS 114	07/31/14
	FBP-189-02-01	TAS 114	07/31/14
	FBP-193-02-01	TAS 114	10/10/14
	FBP-196-02-03	TAS 114	10/10/14

DECK STRESS ANALYSIS CALCULATIONS/REPORTS

<u>Engineer/Agency</u>	<u>Identifier</u>	<u>Assemblies</u>	<u>Date</u>
Zachary R. Priest, P.E.	Signed/Sealed Calculations	B(4), B(5), B(6), C(7), C(8), C(9), C(10),	02/08/16
		C(11), C(13), C(14), C(15), C(17),	02/08/16
		C(18), C(19), C(20), C(21), C(22),	02/08/16
		C(23), C(24), C(25), D(1), D(2)	02/08/16
		C(6), C(16)	10/10/17



APPROVED ASSEMBLIES

- Membrane Type:** APP/SBS
- Deck Type 7I:** Recover, Insulated
- Deck Description:** Concrete
- System Type A(1):** Insulation adhered with approved adhesive; membrane fully adhered.

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
ISO 95+GL Minimum 1½” thick	N/A	N/A

Note: All Insulations shall be adhered using I.S.O. Fix II, applied in ¾” wide ribbons spaced 8” o.c. Please refer to Roofing Application Standard RAS 117 for insulation attachment.

- Base Sheet:** One ply of BASEGARD SA, self-adhered with a 3” lap.
- Ply Sheet:** (Optional) One or more plies of SBS Smooth, SBS Base, SBS Premium Base, SBS Poly Base, SBS Premium Poly Base, Ply IV, Ply VI, or MB Base fully adhered in hot asphalt applied in the EVT range at a rate of 20-40 lbs./sq. with minimum 3” wide side laps.
Or
One or more plies of SBS Glass Torch Base, SBS Poly Base Torch, or SBS Glass Torch Base 1.5 torch adhered with minimum 3” wide side laps.
Or
One or more plies of APP 80 Glass Base, APP Premium Base, APP 160, APP 160 P, APP 160 Cool, APP 170, or APP 170 Cool fully torch adhered with minimum 3” wide side laps.
- Membrane:** (Not for use with APP sheets) One ply of 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, or SBS Glass FR UltraWhite fully adhered with hot asphalt applied in the EVT range at a rate of 20-25 lbs./sq. with minimum 3” wide side laps.
Or
(Not for use with APP sheets) One ply of SBS Glass FR Torch, SBS Glass FR Torch UltraWhite, SBS Torch, SBS Torch UltraWhite, SBS Premium Torch, SBS Premium Torch UltraWhite, SBS FR Torch, SBS FR Torch UltraWhite, SBS Premium FR Torch, SBS Premium FR Torch UltraWhite torch adhered with minimum 3” wide side laps.
Or
(Not for use over SBS sheets) One ply of Firestone APP 160, APP 160 P, APP 160 Cool, APP 170, or APP 170 Cool, APP Premium FR, APP 180, APP 180 UltraWhite, APP 180 Cool, APP 180 FR, APP 180 FR UltraWhite or APP 180 FR Cool torch adhered with minimum 3” wide side laps.

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



Membrane Type: APP/SBS
Deck Type 7I: Recover, Insulated
Deck Description: Concrete
System Type A(2): Insulation adhered with approved adhesive; membrane fully adhered.

All General and System Limitations apply.

One or more layers of any of the following insulations.

Base Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft²
ISO 95+GL Minimum 1½” thick	N/A	N/A
Top Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft²
ISO 95+GL (tapered) Minimum ½” thick with a ¼”: 12” taper	N/A	N/A

Note: All Insulations shall be adhered using I.S.O. Fix II, applied in ¾” wide ribbons spaced 8” o.c. Please refer to Roofing Application Standard RAS 117 for insulation attachment.

Base Sheet: One ply of BASEGARD SA, self-adhered with a 3” lap.

Ply Sheet: (Optional) One or more plies of SBS Smooth, SBS Base, SBS Premium Base, SBS Poly Base, SBS Premium Poly Base, Ply IV, Ply VI, or MB Base fully adhered in hot asphalt applied in the EVT range at a rate of 20-40 lbs./sq. with minimum 3” wide side laps.
 Or
 One or more plies of SBS Glass Torch Base, SBS Poly Base Torch, or SBS Glass Torch Base 1.5 torch adhered with minimum 3” wide side laps.
 Or
 One or more plies of APP 80 Glass Base, APP Premium Base, APP 160, APP 160 P, APP 160 Cool, APP 170, or APP 170 Cool fully torch adhered with minimum 3” wide side laps.

Membrane: (Not for use with APP sheets) One ply of 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, or SBS Glass FR UltraWhite fully adhered with hot asphalt applied in the EVT range at a rate of 20-25 lbs./sq. with minimum 3” wide side laps.
 Or
 (Not for use with APP sheets) One ply of SBS Glass FR Torch, SBS Glass FR Torch UltraWhite, SBS Torch, SBS Torch UltraWhite, SBS Premium Torch, SBS Premium Torch UltraWhite, SBS FR Torch, SBS FR Torch UltraWhite, SBS Premium FR Torch, SBS Premium FR Torch UltraWhite torch adhered with minimum 3” wide side laps.
 Or
 (Not for use over SBS sheets) One ply of Firestone APP 160, APP 160 P, APP 160 Cool, APP 170, or APP 170 Cool, APP Premium FR, APP 180, APP 180 UltraWhite, APP 180 Cool, APP 180 FR, APP 180 FR UltraWhite or APP 180 FR Cool torch adhered with minimum 3” wide side laps.

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



Membrane Type: APP/SBS
Deck Type 7I: Recover, Insulated
Deck Description: Concrete
System Type A(3): Insulation adhered with approved adhesive; membrane fully adhered.

All General and System Limitations apply.

One or more layers of any of the following insulations.

Base Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft²
ISO 95+GL Minimum 1½” thick	N/A	N/A
Top Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft²
Tapered ISO 95+GL Minimum ½” thick with a ¼”: 12” taper	N/A	N/A

Note: All Insulations shall be adhered using I.S.O. Twin Pack Insulation Adhesive applied in continuous ½” to ¾” wide ribbons spaced 12” o.c. Please refer to Roofing Application Standard RAS 117 for insulation attachment.

Base Sheet: One ply of Firestone BASEGARD SA, self-adhered with a 3” lap.

Ply Sheet: (Optional) One or more plies of SBS Smooth, SBS Base, SBS Premium Base, SBS Poly Base, SBS Premium Poly Base, Ply IV, Ply VI, or MB Base fully adhered in hot asphalt applied in the EVT range at a rate of 20-40 lbs./sq. with minimum 3” wide side laps.
 Or
 One or more plies of SBS Glass Torch Base, SBS Poly Base Torch, or SBS Glass Torch Base 1.5 torch adhered with minimum 3” wide side laps.
 Or
 One or more plies of APP 80 Glass Base, APP Premium Base, APP 160, APP 160 P, APP 160 Cool, APP 170, or APP 170 Cool fully torch adhered with minimum 3” wide side laps.

Membrane: (Not for use with APP sheets) One ply of 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, or SBS Glass FR UltraWhite fully adhered with hot asphalt applied in the EVT range at a rate of 20-25 lbs./sq. with minimum 3” wide side laps.
 Or
 (Not for use with APP sheets) One ply of SBS Glass FR Torch, SBS Glass FR Torch UltraWhite, SBS Torch, SBS Torch UltraWhite, SBS Premium Torch, SBS Premium Torch UltraWhite, SBS FR Torch, SBS FR Torch UltraWhite, SBS Premium FR Torch, SBS Premium FR Torch UltraWhite torch adhered with minimum 3” wide side laps.
 Or
 (Not for use over SBS sheets) One ply of Firestone APP 160, APP 160 P, APP 160 Cool, APP 170, or APP 170 Cool, APP Premium FR, APP 180, APP 180 UltraWhite, APP 180 Cool, APP 180 FR, APP 180 FR UltraWhite or APP 180 FR Cool torch adhered with minimum 3” wide side laps.

Maximum Design Pressure: -112.5 psf. (See General Limitation #9)



Membrane Type: APP/SBS
Deck Type 7I: Recover, Insulated
Deck Description: Concrete
System Type B(1): Thermal Barrier mechanically fastened. Insulation adhered with approved adhesive; membrane fully adhered.

All General and System Limitations apply.

Thermal Barrier:	Insulation Fasteners (Table 3)	Fastener Density/ft²
DensDeck, DensDeck Prime, SECUROCK Gypsum-Fiber Roof Board Minimum ½” thick	1 or 2 with 3	1:2 ft²

Note: Thermal Barrier 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.

One or more layers of any of the following insulations.

Base Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft²
ISO 95+GL Minimum 1½” thick	N/A	N/A
(Optional) Middle Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft²
ISO 95+GL Minimum 1½” thick	N/A	N/A
Top Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft²
DensDeck Prime, SECUROCK Gypsum-Fiber Roof Board Minimum ¼” thick	N/A	N/A

Note: All Insulations shall be adhered to the thermal barrier using I.S.O Twin Pack Insulation Adhesive (not with SECUROCK Gypsum-Fiber Roof Board), applied ½” to ¾” wide ribbons spaced 12” o.c. or I.S.O. Fix II or I.S.O. Stick applied in continuous ¾” to 1” wide ribbons spaced 12” o.c. Please refer to Roofing Application Standard RAS 117 for insulation attachment.

Base Sheet: One ply of BASEGARD SA, self-adhered with a 3” lap.



Ply Sheet:

(Optional) One or more plies of SBS Smooth, SBS Base, SBS Premium Base, SBS Poly Base, SBS Premium Poly Base, Ply IV, Ply VI, or MB Base fully adhered in hot asphalt applied in the EVT range at a rate of 20-40 lbs./sq. with minimum 3” wide side laps.

Or

One or more plies of SBS Glass Torch Base, SBS Poly Base Torch, or SBS Glass Torch Base 1.5 torch adhered with minimum 3” wide side laps.

Or

One or more plies of APP 80 Glass Base, APP Premium Base, APP 160, APP 160 P, APP 160 Cool, APP 170, or APP 170 Cool fully torch adhered with minimum 3” wide side laps.

Membrane:

(Not for use with APP sheets) One ply of 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, or SBS Glass FR UltraWhite fully adhered with hot asphalt applied in the EVT range at a rate of 20-25 lbs./sq. with minimum 3” wide side laps.

Or

(Not for use with APP sheets) One ply of SBS Glass FR Torch, SBS Glass FR Torch UltraWhite, SBS Torch, SBS Torch UltraWhite, SBS Premium Torch, SBS Premium Torch UltraWhite, SBS FR Torch, SBS FR Torch UltraWhite, SBS Premium FR Torch, SBS Premium FR Torch UltraWhite torch adhered with minimum 3” wide side laps.

Or

(Not for use over SBS sheets) One ply of Firestone APP 160, APP 160 P, APP 160 Cool, APP 170, or APP 170 Cool, APP Premium FR, APP 180, APP 180 UltraWhite, APP 180 Cool, APP 180 FR, APP 180 FR UltraWhite or APP 180 FR Cool torch adhered with minimum 3” wide side laps.

Maximum Design Pressure:

-45 psf. (See General Limitation #9)



Membrane Type: APP/SBS
Deck Type 7I: Recover, Insulated
Deck Description: Concrete
System Type B(2): Base layer of insulation mechanically attached; membrane fully adhered.

All General and System Limitations apply.

One or more layers of any of the following insulations.

Base Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft²
ISO 95+ GL, RESISTA Minimum 2" thick	1 or 2 with 3	1:1 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
DensDeck Prime, SECUROCK Gypsum-Fiber Roof Board Minimum 1/2" thick	N/A	N/A

Note: Top layer of insulation shall be adhered with I.S.O. Twin Pack Insulation Adhesive (not with SECUROCK Gypsum-Fiber Roof Board) applied in 1/2" to 3/4" wide ribbons spaced 4" o.c. or with I.S.O. Fix II or I.S.O. Stick applied in 3/4" to 1" wide ribbons spaced 4" o.c. 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 BASEGARD SA, self-adhered with a 3 1/2" lap.

Ply Sheet: (Optional) One or more plies of SBS Smooth, SBS Base, SBS Premium Base, SBS Poly Base, SBS Premium Poly Base, Ply IV, Ply VI, or MB Base fully adhered in hot asphalt applied in the EVT range at a rate of 20-40 lbs./sq. with minimum 3" wide side laps.
 Or
 One or more plies of SBS Glass Torch Base, SBS Poly Base Torch, or SBS Glass Torch Base 1.5 torch adhered with minimum 3" wide side laps.
 Or
 One or more plies of APP 80 Glass Base, APP Premium Base, APP 160, APP 160 P, APP 160 Cool, APP 170, or APP 170 Cool fully torch adhered with minimum 3" wide side laps.



Membrane:

(Not for use with APP sheets) One ply of 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, or SBS Glass FR UltraWhite fully adhered with hot asphalt applied in the EVT range at a rate of 20-25 lbs./sq. with minimum 3” wide side laps.

Or

(Not for use with APP sheets) One ply of SBS Glass FR Torch, SBS Glass FR Torch UltraWhite, SBS Torch, SBS Torch UltraWhite, SBS Premium Torch, SBS Premium Torch UltraWhite, SBS FR Torch, SBS FR Torch UltraWhite, SBS Premium FR Torch, SBS Premium FR Torch UltraWhite torch adhered with minimum 3” wide side laps.

Or

(Not for use over SBS sheets) One ply of Firestone APP 160, APP 160 P, APP 160 Cool, APP 170, or APP 170 Cool, APP Premium FR, APP 180, APP 180 UltraWhite, APP 180 Cool, APP 180 FR, APP 180 FR UltraWhite or APP 180 FR Cool torch adhered with minimum 3” wide side laps.

**Maximum Design
Pressure:**

-67.5 psf. (See General Limitation #7)



Membrane Type: APP/SBS
Deck Type 7I: Recover, Insulated
Deck Description: Concrete
System Type B(3): Base layer of insulation mechanically attached, top layer adhered with approved adhesive.

All General and System Limitations apply.

One or more layers of any of the following insulations.

Base Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft²
ISO 95+ GL, RESISTA Minimum 2” thick	1 or 2 with 3	1:1 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
ISOGARD HD Minimum ½” thick	N/A	N/A

Note: Top layer of insulation shall be adhered with I.S.O. Twin Pack Insulation Adhesive applied in ½” to ¾” wide ribbons spaced 4” o.c. or with I.S.O. Fix II or I.S.O. Stick applied in ¾” to 1” wide ribbons spaced 4” o.c. 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 BASEGARD SA, self-adhered with a 3½” lap.

Ply Sheet: (Optional) One or more plies of SBS Smooth, SBS Base, SBS Premium Base, SBS Poly Base, SBS Premium Poly Base, Ply IV, Ply VI, or MB Base fully adhered in hot asphalt applied in the EVT range at a rate of 20-40 lbs./sq. with minimum 3” wide side laps.
 Or
 One or more plies of SBS Glass Torch Base, SBS Poly Base Torch, or SBS Glass Torch Base 1.5 torch adhered with minimum 3” wide side laps.
 Or
 One or more plies of APP 80 Glass Base, APP Premium Base, APP 160, APP 160 P, APP 160 Cool, APP 170, or APP 170 Cool fully torch adhered with minimum 3” wide side laps.



Membrane:

(Not for use with APP sheets) One ply of 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, or SBS Glass FR UltraWhite fully adhered with hot asphalt applied in the EVT range at a rate of 20-25 lbs./sq. with minimum 3” wide side laps.

Or

(Not for use with APP sheets) One ply of SBS Glass FR Torch, SBS Glass FR Torch UltraWhite, SBS Torch, SBS Torch UltraWhite, SBS Premium Torch, SBS Premium Torch UltraWhite, SBS FR Torch, SBS FR Torch UltraWhite, SBS Premium FR Torch, SBS Premium FR Torch UltraWhite torch adhered with minimum 3” wide side laps.

Or

(Not for use over SBS sheets) One ply of Firestone APP 160, APP 160 P, APP 160 Cool, APP 170, or APP 170 Cool, APP Premium FR, APP 180, APP 180 UltraWhite, APP 180 Cool, APP 180 FR, APP 180 FR UltraWhite or APP 180 FR Cool torch adhered with minimum 3” wide side laps.

**Maximum Design
Pressure:**

-105 psf. (See General Limitation #7)



Membrane Type: APP/SBS
Deck Type 7I: Recover, Insulated
Deck Description: Min. 22 ga. Grade 33, Type B, steel deck with supports at a maximum 6 ft. o.c. attached with #12 x 1-1/4" HWH Screws at every flute; Laps stitched 24" o.c. with #1/4 x 7/8" HWH Screws or concrete. *The deck should record a Minimum Characteristic Resistance Force (MCRF) of 168 lbf when tested with Firestone All-Purpose (steel deck only) or Firestone Heavy-Duty or Concrete Drive Fasteners (Concrete deck only) in accordance with TAS 105.

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

System Type B(4): Base layer of insulation mechanically attached, top layer adhered with approved adhesive. Membrane fully adhered.

All General and System Limitations apply.

One or more layers of any of the following insulations.

Base Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft ²
ISO 95+GL, RESISTA Minimum 1½" thick	4 (Steel) with 3 1 or 2 (Concrete) with 3	1:1.6 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.

Top Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft ²
DensDeck Prime, SECUROCK Gypsum-Fiber Roof Board Minimum ½" thick	N/A	N/A

Note: Top layer of insulation shall be adhered with I.S.O. Twin Pack Insulation Adhesive applied in ½" to ¾" wide ribbons spaced 6" o.c. (not with SECUROCK) or with I.S.O. Fix II or I.S.O. Stick applied in ¾" to 1" wide ribbons spaced 6" o.c. 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 BASEGARD SA, self-adhered while maintaining minimum 3" side laps.

Ply Sheet: (Optional) One or more plies of SBS Smooth, SBS Base, SBS Premium Base, SBS Poly Base, SBS Premium Poly Base, Ply IV, Ply VI, or MB Base fully adhered in hot asphalt applied in the EVT range at a rate of 20-40 lbs./sq. with minimum 3" wide side laps.
 Or
 One or more plies of SBS Glass Torch Base, SBS Poly Base Torch, or SBS Glass Torch Base 1.5 torch adhered with minimum 3" wide side laps.
 Or
 One or more plies of APP 80 Glass Base, APP Premium Base, APP 160, APP 160 P, APP 160 Cool, APP 170, or APP 170 Cool fully torch adhered with minimum 3" wide side laps.



Membrane:

(Not for use with APP sheets) One ply of 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, or SBS Glass FR UltraWhite fully adhered with hot asphalt applied in the EVT range at a rate of 20-25 lbs./sq. with minimum 3" wide side laps.

Or

(Not for use with APP sheets) One ply of SBS Glass FR Torch, SBS Glass FR Torch UltraWhite, SBS Torch, SBS Torch UltraWhite, SBS Premium Torch, SBS Premium Torch UltraWhite, SBS FR Torch, SBS FR Torch UltraWhite, SBS Premium FR Torch, SBS Premium FR Torch UltraWhite torch adhered with minimum 3" wide side laps.

Or

(Not for use over SBS sheets) One ply of Firestone APP 160, APP 160 P, APP 160 Cool, APP 170, or APP 170 Cool, APP Premium FR, APP 180, APP 180 UltraWhite, APP 180 Cool, APP 180 FR, APP 180 FR UltraWhite or APP 180 FR Cool torch adhered with minimum 3" wide side laps.

Maximum Design Pressure:

-52.5 psf. (See General Limitation #7)



Membrane Type: APP/SBS

Deck Type 7I: Recover, Insulated

Deck Description: Min. 22 ga. Type B, Grade 33 steel deck with supports at a maximum 6 ft. o.c. with 5/8" puddle welds attached to each flute along intermediate supports. Laps stitched 24" o.c. with # 1/4"-14 x 7/8" HWH self-drilling screws or concrete. *The deck should record a Minimum Characteristic Resistance Force (MCRF) of 240 lbf when tested with Firestone All-Purpose (steel deck only) or Firestone Heavy-Duty or Concrete Drive Fasteners (Concrete deck only) in accordance with TAS 105.

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

System Type B(5): Base layer of insulation mechanically attached, top layer adhered with approved adhesive. Membrane fully adhered.

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

Base Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft²
ISO 95+GL Minimum 2" thick	4 (Steel) with 3 1 or 2 (Concrete) with 3	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.

Middle Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft²
ISO 95+GL Minimum 1/2" thick	N/A	N/A
Top Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft²
SECUROCK Gypsum-Fiber Roof Board Minimum 1/2" thick	N/A	N/A

Note: Top insulation layers shall be adhered with I.S.O. Twin Pack Insulation Adhesive applied in 1/2" to 3/4" wide ribbons spaced 6" o.c. (not with SECUROCK) or with I.S.O. Stick applied in 3/4" to 1" wide ribbons spaced 6" o.c. 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 BASEGARD SA, self-adhered while maintaining minimum 3" side laps.

Ply Sheet: (Optional) One or more plies of SBS Smooth, SBS Base, SBS Premium Base, SBS Poly Base, SBS Premium Poly Base, Ply IV, Ply VI, or MB Base fully adhered in hot asphalt applied in the EVT range at a rate of 20-40 lbs./sq. with minimum 3" wide side laps.
 Or
 One or more plies of SBS Glass Torch Base, SBS Poly Base Torch, or SBS Glass Torch Base 1.5 torch adhered with minimum 3" wide side laps.
 Or
 One or more plies of APP 80 Glass Base, APP Premium Base, APP 160, APP 160 P, APP 160 Cool, APP 170, or APP 170 Cool fully torch adhered with minimum 3" wide side laps.



Membrane:

(Not for use with APP sheets) One ply of 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, or SBS Glass FR UltraWhite fully adhered with hot asphalt applied in the EVT range at a rate of 20-25 lbs./sq. with minimum 3" wide side laps.

Or

(Not for use with APP sheets) One ply of SBS Glass FR Torch, SBS Glass FR Torch UltraWhite, SBS Torch, SBS Torch UltraWhite, SBS Premium Torch, SBS Premium Torch UltraWhite, SBS FR Torch, SBS FR Torch UltraWhite, SBS Premium FR Torch, SBS Premium FR Torch UltraWhite torch adhered with minimum 3" wide side laps.

Or

(Not for use over SBS sheets) One ply of Firestone APP 160, APP 160 P, APP 160 Cool, APP 170, or APP 170 Cool, APP Premium FR, APP 180, APP 180 UltraWhite, APP 180 Cool, APP 180 FR, APP 180 FR UltraWhite or APP 180 FR Cool torch adhered with minimum 3" wide side laps.

Maximum Design Pressure:

-67.5 psf. (See General Limitation #7)



Membrane Type: APP/SBS
Deck Type 2I: Steel, Insulated
Deck Description: Min. 22 ga. Type B, Grade 33 steel deck with supports at a maximum 6 ft. o.c. with 5/8" puddle welds attached at every flute. Laps stitched 24" o.c. with #1/4" x 7/8" HWH screws. or concrete. *The deck should record a Minimum Characteristic Resistance Force (MCRF) of 160 lbf when tested with Firestone All-Purpose (steel deck only) or Firestone Heavy Duty or Concrete Drive Fasteners (Concrete deck only) in accordance with TAS 105.

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

System Type B(6): Base layer of insulation mechanically attached, top layer adhered with approved adhesive. Membrane fully adhered.

All General and System Limitations apply.

One or more layers of any of the following insulations.

Base Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft ²
ISO 95+ GL, RESISTA Minimum 1½" thick	1 or 4 with 3 (steel) 1 or 2 with 3 (concrete)	1:1.78 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.

Top Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft ²
ISOGARD HD Minimum ½" thick	N/A	N/A

Note: Top layer of insulation shall be adhered with I.S.O. Twin Pack Insulation Adhesive applied in ½" to ¾" wide ribbons spaced 4" o.c. or with I.S.O. Fix II or I.S.O. Stick applied in ¾" to 1" wide ribbons spaced 4" o.c. 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 BASEGARD SA, self-adhered with a 3½" lap.

Ply Sheet: (Optional) One or more plies of SBS Smooth, SBS Base, SBS Premium Base, SBS Poly Base, SBS Premium Poly Base, Ply IV, Ply VI, or MB Base fully adhered in hot asphalt applied in the EVT range at a rate of 20-40 lbs./sq. with minimum 3" wide side laps.
 Or
 One or more plies of SBS Glass Torch Base, SBS Poly Base Torch, or SBS Glass Torch Base 1.5 torch adhered with minimum 3" wide side laps.
 Or
 One or more plies of APP 80 Glass Base, APP Premium Base, APP 160, APP 160 P, APP 160 Cool, APP 170, or APP 170 Cool fully torch adhered with minimum 3" wide side laps.



Membrane:

(Not for use with APP sheets) One ply of 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, or SBS Glass FR UltraWhite fully adhered with hot asphalt applied in the EVT range at a rate of 20-25 lbs./sq. with minimum 3” wide side laps.

Or

(Not for use with APP sheets) One ply of SBS Glass FR Torch, SBS Glass FR Torch UltraWhite, SBS Torch, SBS Torch UltraWhite, SBS Premium Torch, SBS Premium Torch UltraWhite, SBS FR Torch, SBS FR Torch UltraWhite, SBS Premium FR Torch, SBS Premium FR Torch UltraWhite torch adhered with minimum 3” wide side laps.

Or

(Not for use over SBS sheets) One ply of Firestone APP 160, APP 160 P, APP 160 Cool, APP 170, or APP 170 Cool, APP Premium FR, APP 180, APP 180 UltraWhite, APP 180 Cool, APP 180 FR, APP 180 FR UltraWhite or APP 180 FR Cool torch adhered with minimum 3” wide side laps.

Maximum Design Pressure:

-45 psf. (See General Limitation #7)



Membrane Type: APP/SBS
Deck Type 7I: Recover, Insulated
Deck Description: Steel
System Type C(1): Membrane fully adhered over mechanically 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/ft²
ISO 95+GL, RESISTA Maximum: 1.5” thick	N/A	N/A
Top Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft²
ISOGARD HD, DensDeck Prime, SECUROCK Gypsum-Fiber Roof Board Maximum: ½” thick	1 or 4 with 3	1:2.7 ft ²

Note: Top 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.

Base Sheet: One ply of BASEGARD SA, self-adhered with a 3” lap.

Ply Sheet: (Optional) One or more plies of SBS Smooth, SBS Base, SBS Premium Base, SBS Poly Base, SBS Premium Poly Base, Ply IV, Ply VI, or MB Base fully adhered in hot asphalt applied in the EVT range at a rate of 20-40 lbs./sq. with minimum 3” wide side laps.
 Or
 One or more plies of SBS Glass Torch Base, SBS Poly Base Torch, or SBS Glass Torch Base 1.5 torch adhered with minimum 3” wide side laps.
 Or
 One or more plies of APP 80 Glass Base, APP Premium Base, APP 160, APP 160 P, APP 160 Cool, APP 170, or APP 170 Cool fully torch adhered with minimum 3” wide side laps.



Membrane:

(Not for use with APP sheets) One ply of 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, or SBS Glass FR UltraWhite fully adhered with hot asphalt applied in the EVT range at a rate of 20-25 lbs./sq. with minimum 3" wide side laps.

Or

(Not for use with APP sheets) One ply of SBS Glass FR Torch, SBS Glass FR Torch UltraWhite, SBS Torch, SBS Torch UltraWhite, SBS Premium Torch, SBS Premium Torch UltraWhite, SBS FR Torch, SBS FR Torch UltraWhite, SBS Premium FR Torch, SBS Premium FR Torch UltraWhite torch adhered with minimum 3" wide side laps.

Or

(Not for use over SBS sheets) One ply of Firestone APP 160, APP 160 P, APP 160 Cool, APP 170, or APP 170 Cool, APP Premium FR, APP 180, APP 180 UltraWhite, APP 180 Cool, APP 180 FR, APP 180 FR UltraWhite or APP 180 FR Cool torch adhered with minimum 3" wide side laps.

Maximum Design Pressure:

-45 psf. (See General Limitation #9)



Membrane Type: APP/SBS
Deck Type 7I: Recover, Insulated
Deck Description: Concrete
System Type C(2): Membrane fully adhered over mechanically fastened insulation.

All General and System Limitations apply.

Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft²
ISO 95+ GL, ISOGARD HD Composite, RESISTA Minimum 1½” thick	1 or 2 with 3	1:2 ft²
DensDeck Prime, SECUROCK Gypsum-Fiber Roof Board Minimum ½” thick	1 or 2 with 3	1:2 ft²

Note: Insulation 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.

Base Sheet: One ply of BASEGARD SA, self-adhered with a 3” lap.

Ply Sheet: (Optional) One or more plies of SBS Smooth, SBS Base, SBS Premium Base, SBS Poly Base, SBS Premium Poly Base, Ply IV, Ply VI, or MB Base fully adhered in hot asphalt applied in the EVT range at a rate of 20-40 lbs./sq. with minimum 3” wide side laps.
 Or
 One or more plies of SBS Glass Torch Base, SBS Poly Base Torch, or SBS Glass Torch Base 1.5 torch adhered with minimum 3” wide side laps.
 Or
 One or more plies of APP 80 Glass Base, APP Premium Base, APP 160, APP 160 P, APP 160 Cool, APP 170, or APP 170 Cool fully torch adhered with minimum 3” wide side laps.

Membrane: (Not for use with APP sheets) One ply of 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, or SBS Glass FR UltraWhite fully adhered with hot asphalt applied in the EVT range at a rate of 20-25 lbs./sq. with minimum 3” wide side laps.
 Or
 (Not for use with APP sheets) One ply of SBS Glass FR Torch, SBS Glass FR Torch UltraWhite, SBS Torch, SBS Torch UltraWhite, SBS Premium Torch, SBS Premium Torch UltraWhite, SBS FR Torch, SBS FR Torch UltraWhite, SBS Premium FR Torch, SBS Premium FR Torch UltraWhite torch adhered with minimum 3” wide side laps.
 Or
 (Not for use over SBS sheets) One ply of Firestone APP 160, APP 160 P, APP 160 Cool, APP 170, or APP 170 Cool, APP Premium FR, APP 180, APP 180 UltraWhite, APP 180 Cool, APP 180 FR, APP 180 FR UltraWhite or APP 180 FR Cool torch adhered with minimum 3” wide side laps.

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



Membrane Type: APP/SBS
Deck Type 7I: Recover, Insulated
Deck Description: Concrete
System Type C(3): Membrane fully adhered over mechanically fastened insulation.

All General and System Limitations apply.

Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft²
ISO 95+ GL, ISOGARD HD Composite, RESISTA Minimum 1½” thick	1 or 2 with 3	1:2.67 ft²
DensDeck Prime, SECUROCK Gypsum-Fiber Roof Board Minimum ½” thick	1 or 2 with 3	1:2.67 ft²

Note: Insulation 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.

Base Sheet: One ply of BASEGARD SA, self-adhered with a 3” lap.

Ply Sheet: (Optional) One or more plies of SBS Smooth, SBS Base, SBS Premium Base, SBS Poly Base, SBS Premium Poly Base, Ply IV, Ply VI, or MB Base fully adhered in hot asphalt applied in the EVT range at a rate of 20-40 lbs./sq. with minimum 3” wide side laps.
 Or
 One or more plies of SBS Glass Torch Base, SBS Poly Base Torch, or SBS Glass Torch Base 1.5 torch adhered with minimum 3” wide side laps.
 Or
 One or more plies of APP 80 Glass Base, APP Premium Base, APP 160, APP 160 P, APP 160 Cool, APP 170, or APP 170 Cool fully torch adhered with minimum 3” wide side laps.

Membrane: (Not for use with APP sheets) One ply of 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, or SBS Glass FR UltraWhite fully adhered with hot asphalt applied in the EVT range at a rate of 20-25 lbs./sq. with minimum 3” wide side laps.
 Or
 (Not for use with APP sheets) One ply of SBS Glass FR Torch, SBS Glass FR Torch UltraWhite, SBS Torch, SBS Torch UltraWhite, SBS Premium Torch, SBS Premium Torch UltraWhite, SBS FR Torch, SBS FR Torch UltraWhite, SBS Premium FR Torch, SBS Premium FR Torch UltraWhite torch adhered with minimum 3” wide side laps.
 Or
 (Not for use over SBS sheets) One ply of Firestone APP 160, APP 160 P, APP 160 Cool, APP 170, or APP 170 Cool, APP Premium FR, APP 180, APP 180 UltraWhite, APP 180 Cool, APP 180 FR, APP 180 FR UltraWhite or APP 180 FR Cool torch adhered with minimum 3” wide side laps.

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



Membrane Type: APP/SBS
Deck Type 7I: Recover, Insulated
Deck Description: Concrete
System Type C(4): Membrane fully adhered over mechanically fastened insulation.

All General and System Limitations apply.

Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft²
ISO 95+ GL Minimum 2" thick	1 or 2 with 3	1:4 ft²
ISOGARD HD Composite Minimum 1½" thick	1 or 2 with 3	1:4 ft²
DensDeck Prime, SECUROCK Gypsum-Fiber Roof Board Minimum ½" thick	1 or 2 with 3	1:4 ft²

Note: Insulation 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.

Base Sheet: One ply of BASEGARD SA, self-adhered with a 3" lap.

Ply Sheet: (Optional) One or more plies of SBS Smooth, SBS Base, SBS Premium Base, SBS Poly Base, SBS Premium Poly Base, Ply IV, Ply VI, or MB Base fully adhered in hot asphalt applied in the EVT range at a rate of 20-40 lbs./sq. with minimum 3" wide side laps.
 Or
 One or more plies of SBS Glass Torch Base, SBS Poly Base Torch, or SBS Glass Torch Base 1.5 torch adhered with minimum 3" wide side laps.
 Or
 One or more plies of APP 80 Glass Base, APP Premium Base, APP 160, APP 160 P, APP 160 Cool, APP 170, or APP 170 Cool fully torch adhered with minimum 3" wide side laps.

Membrane: (Not for use with APP sheets) One ply of 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, or SBS Glass FR UltraWhite fully adhered with hot asphalt applied in the EVT range at a rate of 20-25 lbs./sq. with minimum 3" wide side laps.
 Or
 (Not for use with APP sheets) One ply of SBS Glass FR Torch, SBS Glass FR Torch UltraWhite, SBS Torch, SBS Torch UltraWhite, SBS Premium Torch, SBS Premium Torch UltraWhite, SBS FR Torch, SBS FR Torch UltraWhite, SBS Premium FR Torch, SBS Premium FR Torch UltraWhite torch adhered with minimum 3" wide side laps.
 Or
 (Not for use over SBS sheets) One ply of Firestone APP 160, APP 160 P, APP 160 Cool, APP 170, or APP 170 Cool, APP Premium FR, APP 180, APP 180 UltraWhite, APP 180 Cool, APP 180 FR, APP 180 FR UltraWhite or APP 180 FR Cool torch adhered with minimum 3" wide side laps.

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



Membrane Type: APP/SBS
Deck Type 7I: Recover, Insulated
Deck Description: Concrete
System Type C(5): Membrane fully adhered over mechanically fastened insulation.

All General and System Limitations apply.

Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft²
RESISTA Minimum 1½” thick	1 or 2 with 3	1:2.7 ft²
SECUROCK Gypsum-Fiber Roof Board Minimum ½” thick	1 or 2 with 3	1:2.7 ft²

Note: Insulation 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.

Base Sheet: One ply of BASEGARD SA, self-adhered with a 3” lap.

Ply Sheet: (Optional) One or more plies of SBS Smooth, SBS Base, SBS Premium Base, SBS Poly Base, SBS Premium Poly Base, Ply IV, Ply VI, or MB Base fully adhered in hot asphalt applied in the EVT range at a rate of 20-40 lbs./sq. with minimum 3” wide side laps.
 Or
 One or more plies of SBS Glass Torch Base, SBS Poly Base Torch, or SBS Glass Torch Base 1.5 torch adhered with minimum 3” wide side laps.
 Or
 One or more plies of APP 80 Glass Base, APP Premium Base, APP 160, APP 160 P, APP 160 Cool, APP 170, or APP 170 Cool fully torch adhered with minimum 3” wide side laps.

Membrane: (Not for use with APP sheets) One ply of 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, or SBS Glass FR UltraWhite fully adhered with hot asphalt applied in the EVT range at a rate of 20-25 lbs./sq. with minimum 3” wide side laps.
 Or
 (Not for use with APP sheets) One ply of SBS Glass FR Torch, SBS Glass FR Torch UltraWhite, SBS Torch, SBS Torch UltraWhite, SBS Premium Torch, SBS Premium Torch UltraWhite, SBS FR Torch, SBS FR Torch UltraWhite, SBS Premium FR Torch, SBS Premium FR Torch UltraWhite torch adhered with minimum 3” wide side laps.
 Or
 (Not for use over SBS sheets) One ply of Firestone APP 160, APP 160 P, APP 160 Cool, APP 170, or APP 170 Cool, APP Premium FR, APP 180, APP 180 UltraWhite, APP 180 Cool, APP 180 FR, APP 180 FR UltraWhite or APP 180 FR Cool torch adhered with minimum 3” wide side laps.

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



Membrane Type: APP/SBS
Deck Type 7I: Recover, Insulated
Deck Description: Lightweight Concrete
System Type C(6): Membrane fully adhered over mechanically fastened insulation.

Deck: Minimum 3” of minimum 342 psi cellular lightweight insulating concrete; 1/8” slurry coat with 1” EPS board; 2” top coat applied after over night cure; having a Minimum Characteristic Resistance Force (MCRF) pull out value of 214 lbf. when tested with a Firestone All-Purpose Fastener installed through the LWC to the steel deck (per TAS 105 Withdrawal Testing). LWC is installed over structural concrete deck or 18-22 ga. Grade 33 Type B steel deck with supports at a maximum spacing of 5 ft. o.c.. supports attached with #12-24 x 1-1/4” HWH self-drilling screws with 1/2” washers attached to each flute along intermediate supports. Laps stitched 12” o.c. with #1/4-14 x 7/8” HWH self-drilling screws with 1/2” washer.

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

All General and System Limitations apply.

Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft²
ISO 95+GL, RESISTA Minimum 2” thick	3 with 4	1:1.78 ft²
ISOGARD HD Composite Minimum 1 1/2” thick	3 with 4	1:1.78 ft²
DensDeck Prime, SECUROCK Gypsum-Fiber Roof Board Minimum 1/2” thick	3 with 4	1:1.78 ft²

Note: Insulation 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.

Base Sheet: One ply of BASEGARD SA, self-adhered with a 3” lap.

Ply Sheet: (Optional) One or more plies of SBS Smooth, SBS Base, SBS Premium Base, SBS Poly Base, SBS Premium Poly Base, Ply IV, Ply VI, or MB Base fully adhered in hot asphalt applied in the EVT range at a rate of 20-40 lbs./sq. with minimum 3” wide side laps.
 Or
 One or more plies of SBS Glass Torch Base, SBS Poly Base Torch, or SBS Glass Torch Base 1.5 torch adhered with minimum 3” wide side laps.
 Or
 One or more plies of APP 80 Glass Base, APP Premium Base, APP 160, APP 160 P, APP 160 Cool, APP 170, or APP 170 Cool fully torch adhered with minimum 3” wide side laps.



Membrane:

(Not for use with APP sheets) One ply of 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, or SBS Glass FR UltraWhite fully adhered with hot asphalt applied in the EVT range at a rate of 20-25 lbs./sq. with minimum 3” wide side laps.

Or

(Not for use with APP sheets) One ply of SBS Glass FR Torch, SBS Glass FR Torch UltraWhite, SBS Torch, SBS Torch UltraWhite, SBS Premium Torch, SBS Premium Torch UltraWhite, SBS FR Torch, SBS FR Torch UltraWhite, SBS Premium FR Torch, SBS Premium FR Torch UltraWhite torch adhered with minimum 3” wide side laps.

Or

(Not for use over SBS sheets) One ply of Firestone APP 160, APP 160 P, APP 160 Cool, APP 170, or APP 170 Cool, APP Premium FR, APP 180, APP 180 UltraWhite, APP 180 Cool, APP 180 FR, APP 180 FR UltraWhite or APP 180 FR Cool torch adhered with minimum 3” wide side laps.

Maximum Design Pressure:

-60 psf. (See General Limitation#7)



Membrane Type: APP/SBS
Deck Type 7I: Recover, Insulated
Deck Description: Min. 22 ga. Grade 33, Type B steel deck with supports at a maximum 6 ft. o.c. attached with #12 x 1-1/4" HWH screws with laps stitched 24" o.c. with #1/4 x 7/8" HWH screws or concrete. *The deck should record a Minimum Characteristic Resistance Force (MCRF) of 267 lbf when tested with Firestone All-Purpose (Steel deck only) or Firestone Heavy-Duty or Concrete Drive Fasteners (Concrete deck only) in accordance with TAS 105.
This Tested Assembly has been analyzed for allowable deck stress. See Evidence Submitted Table.

System Type C(7): Membrane fully adhered over mechanically fastened insulation.

All General and System Limitations apply.

Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft²
ISOGARD HD Composite Minimum 1½" thick	4 (Steel) with 3 1 or 2 (Concrete) with 3	1:78 ft²

Note: All Insulation 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.

Base Sheet: One ply of BASEGARD SA, self-adhered while maintaining minimum 3" side laps.

Ply Sheet: (Optional) One or more plies of SBS Smooth, SBS Base, SBS Premium Base, SBS Poly Base, SBS Premium Poly Base, Ply IV, Ply VI, or MB Base fully adhered in hot asphalt applied in the EVT range at a rate of 20-40 lbs./sq. with minimum 3" wide side laps.
 Or
 One or more plies of SBS Glass Torch Base, SBS Poly Base Torch, or SBS Glass Torch Base 1.5 torch adhered with minimum 3" wide side laps.
 Or
 One or more plies of APP 80 Glass Base, APP Premium Base, APP 160, APP 160 P, APP 160 Cool, APP 170, or APP 170 Cool fully torch adhered with minimum 3" wide side laps.

Membrane: (Not for use with APP sheets) One ply of 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, or SBS Glass FR UltraWhite fully adhered with hot asphalt applied in the EVT range at a rate of 20-25 lbs./sq. with minimum 3" wide side laps.
 Or
 (Not for use with APP sheets) One ply of SBS Glass FR Torch, SBS Glass FR Torch UltraWhite, SBS Torch, SBS Torch UltraWhite, SBS Premium Torch, SBS Premium Torch UltraWhite, SBS FR Torch, SBS FR Torch UltraWhite, SBS Premium FR Torch, SBS Premium FR Torch UltraWhite torch adhered with minimum 3" wide side laps.
 Or
 (Not for use over SBS sheets) One ply of Firestone APP 160, APP 160 P, APP 160 Cool, APP 170, or APP 170 Cool, APP Premium FR, APP 180, APP 180 UltraWhite, APP 180 Cool, APP 180 FR, APP 180 FR UltraWhite or APP 180 FR Cool torch adhered with minimum 3" wide side laps.

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



Membrane Type: APP/SBS
Deck Type 7I: Recover, Insulated
Deck Description: Min. 22 ga. Grade 33, Type B steel deck with supports at a maximum 6 ft. o.c. attached with #12 x 1-1/4" HWH screws at every flute. Laps stitched 24" o.c. with #1/4 x 7/8" HWH screws or concrete. *The deck should record a Minimum Characteristic Resistance Force (MCRF) of 216 lbf when tested with Firestone All-Purpose (Steel deck only) or Firestone Heavy-Duty or Concrete Drive Fasteners (Concrete deck only) in accordance with TAS 105.

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

System Type C(8): Membrane fully adhered over mechanically fastened insulation.

All General and System Limitations apply.

One or more layers of any of the following insulations.

Base Insulation Layer (Optional)	Insulation Fasteners (Table 3)	Fastener Density/ft²
ISO 95+GL, RESISTA Minimum 1½" thick	N/A	N/A
Top Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft²
DensDeck Prime, SECUROCK Gypsum-Fiber Roof Board Minimum ½" thick	4 (Steel) with 3 1 or 2 (Concrete) with 3	1:1.6 ft ²
RESISTA Minimum: 1" thick	4 (Steel) with 3 1 or 2 (Concrete) with 3	1:1.6 ft ²

Note: Top 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.

Base Sheet: One ply of BASEGARD SA, self-adhered while maintaining minimum 3" side laps.

Ply Sheet: (Optional) One or more plies of SBS Smooth, SBS Base, SBS Premium Base, SBS Poly Base, SBS Premium Poly Base, Ply IV, Ply VI, or MB Base fully adhered in hot asphalt applied in the EVT range at a rate of 20-40 lbs./sq. with minimum 3" wide side laps.
 Or
 One or more plies of SBS Glass Torch Base, SBS Poly Base Torch, or SBS Glass Torch Base 1.5 torch adhered with minimum 3" wide side laps.
 Or
 One or more plies of APP 80 Glass Base, APP Premium Base, APP 160, APP 160 P, APP 160 Cool, APP 170, or APP 170 Cool fully torch adhered with minimum 3" wide side laps.



Membrane:

(Not for use with APP sheets) One ply of 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, or SBS Glass FR UltraWhite fully adhered with hot asphalt applied in the EVT range at a rate of 20-25 lbs./sq. with minimum 3" wide side laps.

Or

(Not for use with APP sheets) One ply of SBS Glass FR Torch, SBS Glass FR Torch UltraWhite, SBS Torch, SBS Torch UltraWhite, SBS Premium Torch, SBS Premium Torch UltraWhite, SBS FR Torch, SBS FR Torch UltraWhite, SBS Premium FR Torch, SBS Premium FR Torch UltraWhite torch adhered with minimum 3" wide side laps.

Or

(Not for use over SBS sheets) One ply of Firestone APP 160, APP 160 P, APP 160 Cool, APP 170, or APP 170 Cool, APP Premium FR, APP 180, APP 180 UltraWhite, APP 180 Cool, APP 180 FR, APP 180 FR UltraWhite or APP 180 FR Cool torch adhered with minimum 3" wide side laps.

Maximum Design Pressure:

-67.5 psf. (See General Limitation #7)



Membrane Type: APP/SBS
Deck Type 7I: Recover, Insulated
Deck Description: Min. 22 ga. Grade 33 steel deck with supports at a maximum 6 ft. o.c. attached with #12 x 1-1/4" HWH screws at every flute and laps stitched 24" o.c. with #1/4 x 7/8" HWH screws or concrete. Existing roof shall be a minimum 1" in total thickness. *The deck should record a Minimum Characteristic Resistance Force (MCRF) of 267 lbf when tested with Firestone All-Purpose (Steel deck only) or Firestone Heavy-Duty or Concrete Drive Fasteners (Concrete deck only) in accordance with TAS 105.

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

System Type C(9): Membrane fully adhered over mechanically 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/ft²
ISO 95+GL, RESISTA Minimum 1" thick	N/A	N/A
Top Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft²
SECUROCK Gypsum-Fiber Roof Board Minimum 1/2" thick	4 (Steel) with 3 1 or 2 (Concrete) with 3	1:1.78 ft²

Note: Top 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.

Base Sheet: One ply of BASEGARD SA, self-adhered while maintaining minimum 3" side laps.

Ply Sheet: (Optional) One or more plies of SBS Smooth, SBS Base, SBS Premium Base, SBS Poly Base, SBS Premium Poly Base, Ply IV, Ply VI, or MB Base fully adhered in hot asphalt applied in the EVT range at a rate of 20-40 lbs./sq. with minimum 3" wide side laps.
 Or
 One or more plies of SBS Glass Torch Base, SBS Poly Base Torch, or SBS Glass Torch Base 1.5 torch adhered with minimum 3" wide side laps.
 Or
 One or more plies of APP 80 Glass Base, APP Premium Base, APP 160, APP 160 P, APP 160 Cool, APP 170, or APP 170 Cool fully torch adhered with minimum 3" wide side laps.



Membrane:

(Not for use with APP sheets) One ply of 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, or SBS Glass FR UltraWhite fully adhered with hot asphalt applied in the EVT range at a rate of 20-25 lbs./sq. with minimum 3” wide side laps.

Or

(Not for use with APP sheets) One ply of SBS Glass FR Torch, SBS Glass FR Torch UltraWhite, SBS Torch, SBS Torch UltraWhite, SBS Premium Torch, SBS Premium Torch UltraWhite, SBS FR Torch, SBS FR Torch UltraWhite, SBS Premium FR Torch, SBS Premium FR Torch UltraWhite torch adhered with minimum 3” wide side laps.

Or

(Not for use over SBS sheets) One ply of Firestone APP 160, APP 160 P, APP 160 Cool, APP 170, or APP 170 Cool, APP Premium FR, APP 180, APP 180 UltraWhite, APP 180 Cool, APP 180 FR, APP 180 FR UltraWhite or APP 180 FR Cool torch adhered with minimum 3” wide side laps.

Maximum Design Pressure:

-75 psf. (See General Limitation #7)



Membrane Type: APP/SBS
Deck Type 7I: Recover, Insulated
Deck Description: Min. 22 ga. Grade 33 Type B steel deck with supports at a maximum 6 ft. o.c. or concrete. Existing roof shall be a minimum 2” in total thickness. *The deck should record a Minimum Characteristic Resistance Force (MCRF) of 200 lbf when tested with Firestone All-Purpose (Steel deck only) or Firestone Heavy-Duty or Concrete Drive Fasteners (Concrete deck only) in accordance with TAS 105.

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

System Type C(10): Membrane fully adhered over mechanically 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/ft²
ISO 95+GL, RESISTA Minimum 2” thick	N/A	N/A
Top Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft²
Dens Deck Prime, SECUROCK Gypsum-Fiber Roof Board Minimum ½” thick	4 (Steel) with 3 1 or 2 (Concrete) with 3	1:1.33 ft²

Note: All Insulation 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.

Base Sheet: One ply of BASEGARD SA, self-adhered while maintaining minimum 3” side laps.

Ply Sheet: (Optional) One or more plies of SBS Smooth, SBS Base, SBS Premium Base, SBS Poly Base, SBS Premium Poly Base, Ply IV, Ply VI, or MB Base fully adhered in hot asphalt applied in the EVT range at a rate of 20-40 lbs./sq. with minimum 3” wide side laps.
 Or
 One or more plies of SBS Glass Torch Base, SBS Poly Base Torch, or SBS Glass Torch Base 1.5 torch adhered with minimum 3” wide side laps.
 Or
 One or more plies of APP 80 Glass Base, APP Premium Base, APP 160, APP 160 P, APP 160 Cool, APP 170, or APP 170 Cool fully torch adhered with minimum 3” wide side laps.



Membrane:

(Not for use with APP sheets) One ply of 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, or SBS Glass FR UltraWhite fully adhered with hot asphalt applied in the EVT range at a rate of 20-25 lbs./sq. with minimum 3" wide side laps.

Or

(Not for use with APP sheets) One ply of SBS Glass FR Torch, SBS Glass FR Torch UltraWhite, SBS Torch, SBS Torch UltraWhite, SBS Premium Torch, SBS Premium Torch UltraWhite, SBS FR Torch, SBS FR Torch UltraWhite, SBS Premium FR Torch, SBS Premium FR Torch UltraWhite torch adhered with minimum 3" wide side laps.

Or

(Not for use over SBS sheets) One ply of Firestone APP 160, APP 160 P, APP 160 Cool, APP 170, or APP 170 Cool, APP Premium FR, APP 180, APP 180 UltraWhite, APP 180 Cool, APP 180 FR, APP 180 FR UltraWhite or APP 180 FR Cool torch adhered with minimum 3" wide side laps.

Maximum Design Pressure:

-75 psf. (See General Limitation #7)



Membrane Type: APP/SBS
Deck Type 7I: Recover, Insulated
Deck Description: Min. 22 ga. Grade 33 steel deck with supports at a maximum 6 ft. o.c. attached with 5/8” puddle welds at every flute. Laps stitched 24” o.c. with #1/4 x 7/8” HWH screws or concrete. *The deck should record a Minimum Characteristic Resistance Force (MCRF) of 240 lbf when tested with Firestone All-Purpose fasteners in accordance with TAS 105.

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

System Type C(11): Membrane fully adhered over mechanically 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/ft²
ISO 95+GL Minimum: 2” thick	4 (Steel) with 3 1 or 2 (Concrete) with 3	1:2.67 ft²
ISOGARD HD Composite Minimum 1½” thick	4 (Steel) with 3 1 or 2 (Concrete) with 3	1:2.67 ft²
DensDeck Prime, SECUROCK Gypsum-Fiber Roof Board Minimum ½” thick	4 (Steel) with 3 1 or 2 (Concrete) with 3	1:2.67 ft²

Note: Insulation 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.

Base Sheet: One ply of BASEGARD SA, self-adhered while maintaining minimum 3” side laps.

Ply Sheet: (Optional) One or more plies of SBS Smooth, SBS Base, SBS Premium Base, SBS Poly Base, SBS Premium Poly Base, Ply IV, Ply VI, or MB Base fully adhered in hot asphalt applied in the EVT range at a rate of 20-40 lbs./sq. with minimum 3” wide side laps.
 Or
 One or more plies of SBS Glass Torch Base, SBS Poly Base Torch, or SBS Glass Torch Base 1.5 torch adhered with minimum 3” wide side laps.
 Or
 One or more plies of APP 80 Glass Base, APP Premium Base, APP 160, APP 160 P, APP 160 Cool, APP 170, or APP 170 Cool fully torch adhered with minimum 3” wide side laps.



Membrane:

(Not for use with APP sheets) One ply of 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, or SBS Glass FR UltraWhite fully adhered with hot asphalt applied in the EVT range at a rate of 20-25 lbs./sq. with minimum 3" wide side laps.

Or

(Not for use with APP sheets) One ply of SBS Glass FR Torch, SBS Glass FR Torch UltraWhite, SBS Torch, SBS Torch UltraWhite, SBS Premium Torch, SBS Premium Torch UltraWhite, SBS FR Torch, SBS FR Torch UltraWhite, SBS Premium FR Torch, SBS Premium FR Torch UltraWhite torch adhered with minimum 3" wide side laps.

Or

(Not for use over SBS sheets) One ply of Firestone APP 160, APP 160 P, APP 160 Cool, APP 170, or APP 170 Cool, APP Premium FR, APP 180, APP 180 UltraWhite, APP 180 Cool, APP 180 FR, APP 180 FR UltraWhite or APP 180 FR Cool torch adhered with minimum 3" wide side laps.

Maximum Design Pressure:

-45 psf. (See General Limitation #7)



Membrane Type: APP/SBS
Deck Type 7I: Recover, Insulated
Deck Description: 19/32" or greater plywood or wood plank, fastened with 0.113" x 2 3/8" ring shank nails at maximum 6" o.c. to supports at maximum 24" o.c. *The deck should record a Minimum Characteristic Resistance Force (MCRF) of 267 lbf when tested with Firestone All-Purpose fasteners in accordance with TAS 105.
System Type C(12): Membrane fully adhered over mechanically 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
RESISTA Minimum: 1 1/2" thick	4 with 3	1:1.78 ft ²
SECUROCK Gypsum-Fiber Roof Board Minimum 1/2" thick	4 with 3	1:1.78 ft ²

Note: Top 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.

Base Sheet: One ply of BASEGARD SA self-adhered with 3" side laps.
Ply Sheet: (Optional) One or more plies of SBS Smooth, SBS Base, SBS Premium Base, SBS Poly Base, SBS Premium Poly Base, Ply IV, Ply VI, or MB Base fully adhered in hot asphalt applied in the EVT range at a rate of 20-40 lbs./sq. with minimum 3" wide side laps.
 Or
 One or more plies of SBS Glass Torch Base, SBS Poly Base Torch, or SBS Glass Torch Base 1.5 torch adhered with minimum 3" wide side laps.
 Or
 One or more plies of APP 80 Glass Base, APP Premium Base, APP 160, APP 160 P, APP 160 Cool, APP 170, or APP 170 Cool fully torch adhered with minimum 3" wide side laps.

Membrane: (Not for use with APP sheets) One ply of 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, or SBS Glass FR UltraWhite fully adhered with hot asphalt applied in the EVT range at a rate of 20-25 lbs./sq. with minimum 3" wide side laps.
 Or
 (Not for use with APP sheets) One ply of SBS Glass FR Torch, SBS Glass FR Torch UltraWhite, SBS Torch, SBS Torch UltraWhite, SBS Premium Torch, SBS Premium Torch UltraWhite, SBS FR Torch, SBS FR Torch UltraWhite, SBS Premium FR Torch, SBS Premium FR Torch UltraWhite torch adhered with minimum 3" wide side laps.
 Or
 (Not for use over SBS sheets) One ply of Firestone APP 160, APP 160 P, APP 160 Cool, APP 170, or APP 170 Cool, APP Premium FR, APP 180, APP 180 UltraWhite, APP 180 Cool, APP 180 FR, APP 180 FR UltraWhite or APP 180 FR Cool torch adhered with minimum 3" wide side laps.

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



Membrane Type: APP/SBS
Deck Type 7I: Recover, Insulated
Deck Description: Min. 22 ga. Grade 33 steel deck with supports at a maximum 6 ft. o.c. attached with #12 x 1-1/4" HWH screws at each flute; Laps stitched 24" o.c. with #1/4 x 7/8" HWH screws or concrete. *The deck should record a Minimum Characteristic Resistance Force (MCRF) of 320 lbf when tested with Firestone All-Purpose (Steel deck only) or Firestone Heavy-Duty or Concrete Drive Fasteners (Concrete deck only) in accordance with TAS 105.

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

System Type C(13): Membrane fully adhered over mechanically fastened insulation.

All General and System Limitations apply.

Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft²
ISOGARD HD Composite Minimum 1½" thick	4 (Steel) with 3 1 or 2 (Concrete) with 3	1:2.67 ft²

Note: All Insulation 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.

Base Sheet: One ply of BASEGARD SA, self-adhered while maintaining minimum 3" side laps.

Ply Sheet: (Optional) One or more plies of SBS Smooth, SBS Base, SBS Premium Base, SBS Poly Base, SBS Premium Poly Base, Ply IV, Ply VI, or MB Base fully adhered in hot asphalt applied in the EVT range at a rate of 20-40 lbs./sq. with minimum 3" wide side laps.
 Or
 One or more plies of SBS Glass Torch Base, SBS Poly Base Torch, or SBS Glass Torch Base 1.5 torch adhered with minimum 3" wide side laps.
 Or
 One or more plies of APP 80 Glass Base, APP Premium Base, APP 160, APP 160 P, APP 160 Cool, APP 170, or APP 170 Cool fully torch adhered with minimum 3" wide side laps.

Membrane: (Not for use with APP sheets) One ply of 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, or SBS Glass FR UltraWhite fully adhered with hot asphalt applied in the EVT range at a rate of 20-25 lbs./sq. with minimum 3" wide side laps.
 Or
 (Not for use with APP sheets) One ply of SBS Glass FR Torch, SBS Glass FR Torch UltraWhite, SBS Torch, SBS Torch UltraWhite, SBS Premium Torch, SBS Premium Torch UltraWhite, SBS FR Torch, SBS FR Torch UltraWhite, SBS Premium FR Torch, SBS Premium FR Torch UltraWhite torch adhered with minimum 3" wide side laps.
 Or
 (Not for use over SBS sheets) One ply of Firestone APP 160, APP 160 P, APP 160 Cool, APP 170, or APP 170 Cool, APP Premium FR, APP 180, APP 180 UltraWhite, APP 180 Cool, APP 180 FR, APP 180 FR UltraWhite or APP 180 FR Cool torch adhered with minimum 3" wide side laps.

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



Membrane Type: APP/SBS

Deck Type 7I: Recover, Insulated

Deck Description: Min. 22 ga. Grade 33 steel deck with supports at a maximum 6 ft. o.c. attached with #12-24 x 1-1/4" HWH self-drilling screws at each flute; Laps stitched 24" o.c. with #1/4-14 x 7/8" HWH self-drilling screws or concrete. *The deck should record a Minimum Characteristic Resistance Force (MCRF) of 140 lbf when tested with Firestone All-Purpose (Steel deck only) or Firestone Heavy-Duty or Concrete Drive Fasteners (Concrete deck only in accordance with TAS 105.

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

System Type C(14): Membrane fully adhered over mechanically fastened insulation.

All General and System Limitations apply.

Base Insulation Layer (Optional)	Insulation Fasteners (Table 3)	Fastener Density/ft²
ISO 95+ GL, RESISTA Minimum 1" thick	N/A	N/A
Top Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft²
ISOGARD HD Minimum 1/2" thick	4 (Steel) with 3 1 or 2 (Concrete) with 3	1:1.33 ft²
DensDeck Prime, SECUROCK Gypsum-Fiber Roof Board Minimum 1/4" thick	4 (Steel) with 3 1 or 2 (Concrete) with 3	1:1.33 ft²
RESISTA Minimum 1" thick	4 (Steel) with 3 1 or 2 (Concrete) with 3	1:1.33 ft²

Note: All Insulation 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.

Base Sheet: One ply of BASEGARD SA, self-adhered while maintaining minimum 3" side laps.

Ply Sheet: (Optional) One or more plies of SBS Smooth, SBS Base, SBS Premium Base, SBS Poly Base, SBS Premium Poly Base, Ply IV, Ply VI, or MB Base fully adhered in hot asphalt applied in the EVT range at a rate of 20-40 lbs./sq. with minimum 3" wide side laps.
Or
One or more plies of SBS Glass Torch Base, SBS Poly Base Torch, or SBS Glass Torch Base 1.5 torch adhered with minimum 3" wide side laps.
Or
One or more plies of APP 80 Glass Base, APP Premium Base, APP 160, APP 160 P, APP 160 Cool, APP 170, or APP 170 Cool fully torch adhered with minimum 3" wide side laps.



Membrane:

(Not for use with APP sheets) One ply of 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, or SBS Glass FR UltraWhite fully adhered with hot asphalt applied in the EVT range at a rate of 20-25 lbs./sq. with minimum 3" wide side laps.

Or

(Not for use with APP sheets) One ply of SBS Glass FR Torch, SBS Glass FR Torch UltraWhite, SBS Torch, SBS Torch UltraWhite, SBS Premium Torch, SBS Premium Torch UltraWhite, SBS FR Torch, SBS FR Torch UltraWhite, SBS Premium FR Torch, SBS Premium FR Torch UltraWhite torch adhered with minimum 3" wide side laps.

Or

(Not for use over SBS sheets) One ply of Firestone APP 160, APP 160 P, APP 160 Cool, APP 170, or APP 170 Cool, APP Premium FR, APP 180, APP 180 UltraWhite, APP 180 Cool, APP 180 FR, APP 180 FR UltraWhite or APP 180 FR Cool torch adhered with minimum 3" wide side laps.

**Maximum Design
Pressure:**

-52.5 psf. (See General Limitation #7)



Membrane Type: APP/SBS

Deck Type 7I: Recover, Insulated

Deck Description: Min. 22 ga. Grade 33 steel deck with supports at a maximum 6 ft. o.c. attached with #12 x 1-1/4" HWH Screws at each flute; Laps stitched 24" o.c. with #1/4 x 7/8" HWH screws or concrete. The existing roof shall be a minimum 1" in total thickness. *The deck should record a Minimum Characteristic Resistance Force (MCRF) of 240 lbf when tested with Firestone All-Purpose (Steel deck only) or Firestone Heavy-Duty or Concrete Drive Fasteners (Concrete deck only) in accordance with TAS 105.

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

System Type C(15): Membrane fully adhered over mechanically fastened insulation.

All General and System Limitations apply.

Base Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft²
ISO 95+ GL, RESISTA Minimum 1" thick	N/A	N/A
Top Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft²
SECUROCK Gypsum-Fiber Roof Board Minimum 1/4" thick	4 (Steel) with 3 1 or 2 (Concrete) with 3	1:1.78 ft²

Note: All Insulation 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.

Base Sheet: One ply of BASEGARD SA, self-adhered while maintaining minimum 3" side laps.

Ply Sheet: (Optional) One or more plies of SBS Smooth, SBS Base, SBS Premium Base, SBS Poly Base, SBS Premium Poly Base, Ply IV, Ply VI, or MB Base fully adhered in hot asphalt applied in the EVT range at a rate of 20-40 lbs./sq. with minimum 3" wide side laps.
Or
One or more plies of SBS Glass Torch Base, SBS Poly Base Torch, or SBS Glass Torch Base 1.5 torch adhered with minimum 3" wide side laps.
Or
One or more plies of APP 80 Glass Base, APP Premium Base, APP 160, APP 160 P, APP 160 Cool, APP 170, or APP 170 Cool fully torch adhered with minimum 3" wide side laps.



Membrane:

One ply of SBS Glass, SBS Glass FR, SBS Glass FR UltraWhite, SBS FR Cap, SBS FR (Not for use with APP sheets) One ply of 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, or SBS Glass FR UltraWhite fully adhered with hot asphalt applied in the EVT range at a rate of 20-25 lbs./sq. with minimum 3” wide side laps.

Or

(Not for use with APP sheets) One ply of SBS Glass FR Torch, SBS Glass FR Torch UltraWhite, SBS Torch, SBS Torch UltraWhite, SBS Premium Torch, SBS Premium Torch UltraWhite, SBS FR Torch, SBS FR Torch UltraWhite, SBS Premium FR Torch, SBS Premium FR Torch UltraWhite torch adhered with minimum 3” wide side laps.

Or

(Not for use over SBS sheets) One ply of Firestone APP 160, APP 160 P, APP 160 Cool, APP 170, or APP 170 Cool, APP Premium FR, APP 180, APP 180 UltraWhite, APP 180 Cool, APP 180 FR, APP 180 FR UltraWhite or APP 180 FR Cool torch adhered with minimum 3” wide side laps.

Maximum Design Pressure:

-67.5 psf. (See General Limitation #7)



Membrane Type: APP/SBS

Deck Type 2I: Steel, Insulated

Deck Description: Min. 22 ga. Grade 33, Type B steel deck with supports at a maximum 6 ft. o.c. attached with 5/8” puddle welds to supports at every flute. Laps stitched 24” o.c. with #1/4 x 7/8” HWH screws or concrete. *The deck should record a Minimum Characteristic Resistance Force (MCRF) of 213 lbf when tested with Firestone All-Purpose (Steel deck only) or Firestone Heavy-Duty or Concrete Drive Fasteners (Concrete deck only) in accordance with TAS 105.

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

System Type C(16): Membrane fully adhered over mechanically fastened insulation.

All General and System Limitations apply.

Base Insulation Layer (Optional)	Insulation Fasteners (Table 3)	Fastener Density/ft²
ISO 95+ GL Minimum 1/2” thick	N/A	N/A
Top Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft²
ISO 95+ GL, RESISTA, ISOGARD HD Composite Minimum 1 1/2” thick	4 (Steel) with 3 1 or 2 (Concrete) with 3	1:1.78 ft²

Note: All Insulation 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.

Base Sheet: One ply of BASEGARD SA, self-adhered while maintaining minimum 3” side laps.

Ply Sheet: (Optional) One or more plies of SBS Smooth, SBS Base, SBS Premium Base, SBS Poly Base, SBS Premium Poly Base, Ply IV, Ply VI, or MB Base fully adhered in hot asphalt applied in the EVT range at a rate of 20-40 lbs./sq. with minimum 3” wide side laps.
Or
One or more plies of SBS Glass Torch Base, SBS Poly Base Torch, or SBS Glass Torch Base 1.5 torch adhered with minimum 3” wide side laps.
Or
One or more plies of APP 80 Glass Base, APP Premium Base, APP 160, APP 160 P, APP 160 Cool, APP 170, or APP 170 Cool fully torch adhered with minimum 3” wide side laps.



Membrane:

(Not for use with APP sheets) One ply of 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, or SBS Glass FR UltraWhite fully adhered with hot asphalt applied in the EVT range at a rate of 20-25 lbs./sq. with minimum 3” wide side laps.

Or

(Not for use with APP sheets) One ply of SBS Glass FR Torch, SBS Glass FR Torch UltraWhite, SBS Torch, SBS Torch UltraWhite, SBS Premium Torch, SBS Premium Torch UltraWhite, SBS FR Torch, SBS FR Torch UltraWhite, SBS Premium FR Torch, SBS Premium FR Torch UltraWhite torch adhered with minimum 3” wide side laps.

Or

(Not for use over SBS sheets) One ply of Firestone APP 160, APP 160 P, APP 160 Cool, APP 170, or APP 170 Cool, APP Premium FR, APP 180, APP 180 UltraWhite, APP 180 Cool, APP 180 FR, APP 180 FR UltraWhite or APP 180 FR Cool torch adhered with minimum 3” wide side laps.

**Maximum Design
Pressure:**

-60 psf. (See General Limitation #7)



Membrane Type: APP/SBS

Deck Type 2I: Steel, Insulated

Deck Description: Min. 22 ga. Grade 33 steel deck with supports at a maximum 6 ft. o.c. secured with 5/8" puddle welds at every flute; Laps stitched 24" o.c. with #1/4 x 7/8" HWH screws or concrete. The existing roof shall be a minimum 1" thick. *The deck should record a Minimum Characteristic Resistance Force (MCRF) of 256 lbf when tested with Firestone All-Purpose (Steel deck only) or Heavy-Duty or Concrete Drive Fasteners (Concrete deck only) in accordance with TAS 105.

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

System Type C(17): Membrane fully adhered over mechanically 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/ft²
ISO 95+ GL, RESISTA Minimum 1" thick	N/A	N/A
Top Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft²
SECUROCK Gypsum-Fiber Roof Board Minimum 1/2" thick	1 or 4 with 3 (concrete) 1 or 2 with 3 (steel)	1:2.13 ft²

Note: All Insulation 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.

Base Sheet: One ply of BASEGARD SA, self-adhered with a 3" lap.

Ply Sheet: (Optional) One or more plies of SBS Smooth, SBS Base, SBS Premium Base, SBS Poly Base, SBS Premium Poly Base, Ply IV, Ply VI, or MB Base fully adhered in hot asphalt applied in the EVT range at a rate of 20-40 lbs./sq. with minimum 3" wide side laps.
Or
One or more plies of SBS Glass Torch Base, SBS Poly Base Torch, or SBS Glass Torch Base 1.5 torch adhered with minimum 3" wide side laps.
Or
One or more plies of APP 80 Glass Base, APP Premium Base, APP 160, APP 160 P, APP 160 Cool, APP 170, or APP 170 Cool fully torch adhered with minimum 3" wide side laps.



Membrane:

(Not for use with APP sheets) One ply of 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, or SBS Glass FR UltraWhite fully adhered with hot asphalt applied in the EVT range at a rate of 20-25 lbs./sq. with minimum 3” wide side laps.

Or

(Not for use with APP sheets) One ply of SBS Glass FR Torch, SBS Glass FR Torch UltraWhite, SBS Torch, SBS Torch UltraWhite, SBS Premium Torch, SBS Premium Torch UltraWhite, SBS FR Torch, SBS FR Torch UltraWhite, SBS Premium FR Torch, SBS Premium FR Torch UltraWhite torch adhered with minimum 3” wide side laps.

Or

(Not for use over SBS sheets) One ply of Firestone APP 160, APP 160 P, APP 160 Cool, APP 170, or APP 170 Cool, APP Premium FR, APP 180, APP 180 UltraWhite, APP 180 Cool, APP 180 FR, APP 180 FR UltraWhite or APP 180 FR Cool torch adhered with minimum 3” wide side laps.

Maximum Design Pressure:

-60 psf. (See General Limitation #7)



Membrane Type: APP/SBS

Deck Type 2I: Steel, Insulated

Deck Description: Min. 22 ga. Type B Grade 40 steel deck with supports at a maximum 6 ft. o.c. attached with 5/8" puddle welds at every flute. Laps stitched 24" o.c. with #1/4 x 7/8" HWH Screws or concrete. *The deck should record a Minimum Characteristic Resistance Force (MCRF) of 195 lbf when tested with Firestone All-Purpose (Steel deck only) or Heavy-Duty or Concrete Drive Fasteners (Concrete deck only) in accordance with TAS 105.

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

System Type C(18): Membrane fully adhered over mechanically fastened insulation.

All General and System Limitations apply.

Base Insulation Layer (Optional)	Insulation Fasteners (Table 3)	Fastener Density/ft²
ISO 95+ GL, RESISTA Minimum 1/2" thick	N/A	N/A
Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft²
ISO 95 + GL Minimum 2 1/2" thick	1 or 4 with 3 (steel) 1 or 2 with 3 (concrete)	1:1 ft²

Note: All Insulation 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.

Base Sheet: One ply of BASEGARD SA, self-adhered with a 3" lap.

Ply Sheet: (Optional) One or more plies of SBS Smooth, SBS Base, SBS Premium Base, SBS Poly Base, SBS Premium Poly Base, Ply IV, Ply VI, or MB Base fully adhered in hot asphalt applied in the EVT range at a rate of 20-40 lbs./sq. with minimum 3" wide side laps.
Or
One or more plies of SBS Glass Torch Base, SBS Poly Base Torch, or SBS Glass Torch Base 1.5 torch adhered with minimum 3" wide side laps.
Or
One or more plies of APP 80 Glass Base, APP Premium Base, APP 160, APP 160 P, APP 160 Cool, APP 170, or APP 170 Cool fully torch adhered with minimum 3" wide side laps.



Membrane:

(Not for use with APP sheets) One ply of 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, or SBS Glass FR UltraWhite fully adhered with hot asphalt applied in the EVT range at a rate of 20-25 lbs./sq. with minimum 3” wide side laps.

Or

(Not for use with APP sheets) One ply of SBS Glass FR Torch, SBS Glass FR Torch UltraWhite, SBS Torch, SBS Torch UltraWhite, SBS Premium Torch, SBS Premium Torch UltraWhite, SBS FR Torch, SBS FR Torch UltraWhite, SBS Premium FR Torch, SBS Premium FR Torch UltraWhite torch adhered with minimum 3” wide side laps.

Or

(Not for use over SBS sheets) One ply of Firestone APP 160, APP 160 P, APP 160 Cool, APP 170, or APP 170 Cool, APP Premium FR, APP 180, APP 180 UltraWhite, APP 180 Cool, APP 180 FR, APP 180 FR UltraWhite or APP 180 FR Cool torch adhered with minimum 3” wide side laps.

Maximum Design Pressure:

-97.5 psf. (See General Limitation #7)



Membrane Type: APP/SBS

Deck Type 2I: Steel, Insulated

Deck Description: Min. 22 ga. Type B, Grade 33 steel deck with supports at a maximum 6 ft. o.c. attached with 5/8" puddle welds at every flute. Laps stitched 24" o.c. with #1/4 x 7/8" HWH Screws or concrete. *The deck should record a Minimum Characteristic Resistance Force (MCRF) of 224 lbf when tested with Firestone All-Purpose (Steel deck only) or Heavy-Duty or Concrete Drive Fasteners (Concrete deck only) in accordance with TAS 105.

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

System Type C(19): Membrane fully adhered over mechanically fastened insulation.

All General and System Limitations apply.

Base Insulation Layer (Optional)	Insulation Fasteners (Table 3)	Fastener Density/ft²
ISO 95+ GL, RESISTA Minimum 1/2" thick	N/A	N/A
Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft²
ISO 95 + GL Minimum 2 1/2" thick	1 or 4 with 3 (steel) 1 or 2 with 3 (concrete)	1:2.13 ft²

Note: All Insulation 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.

Base Sheet: One ply of BASEGARD SA, self-adhered with a 3" lap.

Ply Sheet: (Optional) One or more plies of SBS Smooth, SBS Base, SBS Premium Base, SBS Poly Base, SBS Premium Poly Base, Ply IV, Ply VI, or MB Base fully adhered in hot asphalt applied in the EVT range at a rate of 20-40 lbs./sq. with minimum 3" wide side laps.
Or
One or more plies of SBS Glass Torch Base, SBS Poly Base Torch, or SBS Glass Torch Base 1.5 torch adhered with minimum 3" wide side laps.
Or
One or more plies of APP 80 Glass Base, APP Premium Base, APP 160, APP 160 P, APP 160 Cool, APP 170, or APP 170 Cool fully torch adhered with minimum 3" wide side laps.



Membrane:

(Not for use with APP sheets) One ply of 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, or SBS Glass FR UltraWhite fully adhered with hot asphalt applied in the EVT range at a rate of 20-25 lbs./sq. with minimum 3” wide side laps.

Or

(Not for use with APP sheets) One ply of SBS Glass FR Torch, SBS Glass FR Torch UltraWhite, SBS Torch, SBS Torch UltraWhite, SBS Premium Torch, SBS Premium Torch UltraWhite, SBS FR Torch, SBS FR Torch UltraWhite, SBS Premium FR Torch, SBS Premium FR Torch UltraWhite torch adhered with minimum 3” wide side laps.

Or

(Not for use over SBS sheets) One ply of Firestone APP 160, APP 160 P, APP 160 Cool, APP 170, or APP 170 Cool, APP Premium FR, APP 180, APP 180 UltraWhite, APP 180 Cool, APP 180 FR, APP 180 FR UltraWhite or APP 180 FR Cool torch adhered with minimum 3” wide side laps.

Maximum Design Pressure:

-52.5 psf. (See General Limitation #7)



Membrane Type: APP/SBS

Deck Type 2I: Steel, Insulated

Deck Description: Min. 22 ga. Type B Grade 33 steel deck with supports at a maximum 6 ft. o.c. attached with 5/8" puddle welds at every flute. Laps stitched 24" o.c. with #1/4 x 7/8" HWH screws or concrete. *The deck should record a Minimum Characteristic Resistance Force (MCRF) of 280 lbf when tested with Firestone All-Purpose (Steel deck only) or Heavy-Duty or Concrete Drive Fasteners (Concrete deck only) in accordance with TAS 105.

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

System Type C(20): Membrane fully adhered over mechanically fastened insulation.

All General and System Limitations apply.

Base Insulation Layer (Optional)	Insulation Fasteners (Table 3)	Fastener Density/ft²
ISO 95+ GL, RESISTA Minimum 1/2" thick	N/A	N/A
Top Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft²
ISOGARD HD Composite Minimum 2" thick	1 or 4 with 3 (steel) 1 or 4 with 3 (concrete)	1:2.67 ft²

Note: All Insulation 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.

Base Sheet: One ply of BASEGARD SA, self-adhered with a 3" lap.

Ply Sheet: (Optional) One or more plies of SBS Smooth, SBS Base, SBS Premium Base, SBS Poly Base, SBS Premium Poly Base, Ply IV, Ply VI, or MB Base fully adhered in hot asphalt applied in the EVT range at a rate of 20-40 lbs./sq. with minimum 3" wide side laps.
Or
One or more plies of SBS Glass Torch Base, SBS Poly Base Torch, or SBS Glass Torch Base 1.5 torch adhered with minimum 3" wide side laps.
Or
One or more plies of APP 80 Glass Base, APP Premium Base, APP 160, APP 160 P, APP 160 Cool, APP 170, or APP 170 Cool fully torch adhered with minimum 3" wide side laps.



Membrane:

(Not for use with APP sheets) One ply of 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, or SBS Glass FR UltraWhite fully adhered with hot asphalt applied in the EVT range at a rate of 20-25 lbs./sq. with minimum 3” wide side laps.

Or

(Not for use with APP sheets) One ply of SBS Glass FR Torch, SBS Glass FR Torch UltraWhite, SBS Torch, SBS Torch UltraWhite, SBS Premium Torch, SBS Premium Torch UltraWhite, SBS FR Torch, SBS FR Torch UltraWhite, SBS Premium FR Torch, SBS Premium FR Torch UltraWhite torch adhered with minimum 3” wide side laps.

Or

(Not for use over SBS sheets) One ply of Firestone APP 160, APP 160 P, APP 160 Cool, APP 170, or APP 170 Cool, APP Premium FR, APP 180, APP 180 UltraWhite, APP 180 Cool, APP 180 FR, APP 180 FR UltraWhite or APP 180 FR Cool torch adhered with minimum 3” wide side laps.

Maximum Design Pressure:

-52.5 psf. (See General Limitation #7)



Membrane Type: APP/SBS

Deck Type 2I: Steel, Insulated

Deck Description: Min. 22 ga. Type B, Grade 33 steel deck with supports at a maximum 6 ft. o.c. attached with 5/8" puddle welds at every flute. Laps stitched 24" o.c. with #1/4 x 7/8" HWH screws or concrete. *The deck should record a Minimum Characteristic Resistance Force (MCRF) of 420 lbf when tested with Firestone All-Purpose (Steel deck only) or Heavy-Duty or Concrete Drive Fasteners (Concrete deck only) in accordance with TAS 105.

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

System Type C(21): Membrane fully adhered over mechanically fastened insulation.

All General and System Limitations apply.

Base Insulation Layer (Optional)	Insulation Fasteners (Table 3)	Fastener Density/ft²
ISO 95+ GL, RESISTA Minimum 1/2" thick	N/A	N/A
Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft²
ISOGARD HD Composite Minimum 2" thick	1 or 4 with 3 (steel) 1 or 2 with 3 (concrete)	1:4 ft²

Note: All Insulation 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.

Base Sheet: One ply of BASEGARD SA, self-adhered with a 3" lap.

Ply Sheet: (Optional) One or more plies of SBS Smooth, SBS Base, SBS Premium Base, SBS Poly Base, SBS Premium Poly Base, Ply IV, Ply VI, or MB Base fully adhered in hot asphalt applied in the EVT range at a rate of 20-40 lbs./sq. with minimum 3" wide side laps.
Or
One or more plies of SBS Glass Torch Base, SBS Poly Base Torch, or SBS Glass Torch Base 1.5 torch adhered with minimum 3" wide side laps.
Or
One or more plies of APP 80 Glass Base, APP Premium Base, APP 160, APP 160 P, APP 160 Cool, APP 170, or APP 170 Cool fully torch adhered with minimum 3" wide side laps.



Membrane:

(Not for use with APP sheets) One ply of 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, or SBS Glass FR UltraWhite fully adhered with hot asphalt applied in the EVT range at a rate of 20-25 lbs./sq. with minimum 3” wide side laps.

Or

(Not for use with APP sheets) One ply of SBS Glass FR Torch, SBS Glass FR Torch UltraWhite, SBS Torch, SBS Torch UltraWhite, SBS Premium Torch, SBS Premium Torch UltraWhite, SBS FR Torch, SBS FR Torch UltraWhite, SBS Premium FR Torch, SBS Premium FR Torch UltraWhite torch adhered with minimum 3” wide side laps.

Or

(Not for use over SBS sheets) One ply of Firestone APP 160, APP 160 P, APP 160 Cool, APP 170, or APP 170 Cool, APP Premium FR, APP 180, APP 180 UltraWhite, APP 180 Cool, APP 180 FR, APP 180 FR UltraWhite or APP 180 FR Cool torch adhered with minimum 3” wide side laps.

Maximum Design Pressure:

-52.5 psf. (See General Limitation #7)



Membrane Type: APP/SBS

Deck Type 2I: Steel, Insulated

Deck Description: Min. 22 ga. Grade 40, Type B steel deck with supports at a maximum 6 ft. o.c. attached with 5/8" puddle welds at every flute. Laps stitched 24" o.c. with #1/4 x 7/8" HWH screws or concrete. *The deck should record a Minimum Characteristic Resistance Force (MCRF) of 320 lbf when tested with Firestone All-Purpose (Steel deck only) or Heavy-Duty or Concrete Drive Fasteners (Concrete deck only) in accordance with TAS 105.

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

System Type C(22): Membrane fully adhered over mechanically fastened insulation.

All General and System Limitations apply.

One or more layers of any of the following insulations.

Base Insulation Layer (Optional)	Insulation Fasteners (Table 3)	Fastener Density/ft²
ISO 95+ GL, RESISTA Minimum 1/2" thick	N/A	N/A
Top Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft²
SECUROCK Gypsum-Fiber Roof Board, DensDeck Prime Minimum 1/2" thick	1 or 4 with 3 (steel) 1 or 2 with 3 (concrete)	1:1.78 ft²
ISO 95+ GL Minimum 2" thick	1 or 4 with 3 (steel) 1 or 2 with 3 (concrete)	1:1.78 ft²
ISOGARD HD Composite Minimum 1-1/2" thick	1 or 4 with 3 (steel) 1 or 2 with 3 (concrete)	1:1.78 ft²

Note: All Insulation 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.

Base Sheet: One ply of BASEGARD SA, self-adhered with a 3" lap.

Ply Sheet: (Optional) One or more plies of SBS Smooth, SBS Base, SBS Premium Base, SBS Poly Base, SBS Premium Poly Base, Ply IV, Ply VI, or MB Base fully adhered in hot asphalt applied in the EVT range at a rate of 20-40 lbs./sq. with minimum 3" wide side laps.
Or
One or more plies of SBS Glass Torch Base, SBS Poly Base Torch, or SBS Glass Torch Base 1.5 torch adhered with minimum 3" wide side laps.
Or
One or more plies of APP 80 Glass Base, APP Premium Base, APP 160, APP 160 P, APP 160 Cool, APP 170, or APP 170 Cool fully torch adhered with minimum 3" wide side laps.



Membrane:

(Not for use with APP sheets) One ply of 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, or SBS Glass FR UltraWhite fully adhered with hot asphalt applied in the EVT range at a rate of 20-25 lbs./sq. with minimum 3” wide side laps.

Or

(Not for use with APP sheets) One ply of SBS Glass FR Torch, SBS Glass FR Torch UltraWhite, SBS Torch, SBS Torch UltraWhite, SBS Premium Torch, SBS Premium Torch UltraWhite, SBS FR Torch, SBS FR Torch UltraWhite, SBS Premium FR Torch, SBS Premium FR Torch UltraWhite torch adhered with minimum 3” wide side laps.

Or

(Not for use over SBS sheets) One ply of Firestone APP 160, APP 160 P, APP 160 Cool, APP 170, or APP 170 Cool, APP Premium FR, APP 180, APP 180 UltraWhite, APP 180 Cool, APP 180 FR, APP 180 FR UltraWhite or APP 180 FR Cool torch adhered with minimum 3” wide side laps.

Maximum Design Pressure:

-90 psf. (See General Limitation #7)



Membrane Type: APP/SBS
Deck Type 2I: Steel, Insulated
Deck Description: Min. 22 ga. Grade 33, Type B steel deck with supports at a maximum 6 ft. o.c. attached with 5/8" puddle welds at every flute. Laps stitched 24" o.c. with #1/4 x 7/8" HWH screws or concrete. *The deck should record a Minimum Characteristic Resistance Force (MCRF) of 240 lbf when tested with Firestone All-Purpose (Steel deck only) or Heavy-Duty or Concrete Drive Fasteners (Concrete deck only) in accordance with TAS 105.

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

System Type C(23): Membrane fully adhered over mechanically fastened insulation.

All General and System Limitations apply.

One or more layers of any of the following insulations.

Base Insulation Layer (Optional)	Insulation Fasteners (Table 3)	Fastener Density/ft²
ISO 95+ GL, RESISTA Minimum 1/2" thick	N/A	N/A
Top Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft²
SECUROCK Gypsum-Fiber Roof Board, DensDeck Prime Minimum 1/2" thick	1 or 4 with 3 (steel) 1 or 2 with 3 (concrete)	1:2.67 ft ²
ISO 95+ GL Minimum 2" thick	1 or 4 with 3 (steel) 1 or 2 with 3 (concrete)	1:2.67 ft ²
ISOGARD HD Composite Minimum 1-1/2" thick	1 or 4 with 3 (steel) 1 or 2 with 3 (concrete)	1:2.67 ft ²

Note: All Insulation 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.

Base Sheet: One ply of BASEGARD SA, self-adhered with a 3" lap.

Ply Sheet: (Optional) One or more plies of SBS Smooth, SBS Base, SBS Premium Base, SBS Poly Base, SBS Premium Poly Base, Ply IV, Ply VI, or MB Base fully adhered in hot asphalt applied in the EVT range at a rate of 20-40 lbs./sq. with minimum 3" wide side laps.
 Or
 One or more plies of SBS Glass Torch Base, SBS Poly Base Torch, or SBS Glass Torch Base 1.5 torch adhered with minimum 3" wide side laps.
 Or
 One or more plies of APP 80 Glass Base, APP Premium Base, APP 160, APP 160 P, APP 160 Cool, APP 170, or APP 170 Cool fully torch adhered with minimum 3" wide side laps.



Membrane:

(Not for use with APP sheets) One ply of 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, or SBS Glass FR UltraWhite fully adhered with hot asphalt applied in the EVT range at a rate of 20-25 lbs./sq. with minimum 3” wide side laps.

Or

(Not for use with APP sheets) One ply of SBS Glass FR Torch, SBS Glass FR Torch UltraWhite, SBS Torch, SBS Torch UltraWhite, SBS Premium Torch, SBS Premium Torch UltraWhite, SBS FR Torch, SBS FR Torch UltraWhite, SBS Premium FR Torch, SBS Premium FR Torch UltraWhite torch adhered with minimum 3” wide side laps.

Or

(Not for use over SBS sheets) One ply of Firestone APP 160, APP 160 P, APP 160 Cool, APP 170, or APP 170 Cool, APP Premium FR, APP 180, APP 180 UltraWhite, APP 180 Cool, APP 180 FR, APP 180 FR UltraWhite or APP 180 FR Cool torch adhered with minimum 3” wide side laps.

Maximum Design Pressure:

-45 psf. (See General Limitation #7)



Membrane Type: APP/SBS

Deck Type 2I: Steel, Insulated

Deck Description: Min. 22 ga. Grade 33, Type B steel deck with supports at a maximum 6 ft. o.c. attached with 5/8" puddle welds at every flute. Laps stitched 24" o.c. with #1/4 x 7/8" HWH screws or concrete. The existing roof shall be a minimum 1/2" thick. *The deck should record a Minimum Characteristic Resistance Force (MCRF) of 264 lbf when tested with Firestone All-Purpose (Steel deck only) or Heavy-Duty or Concrete Drive Fasteners (Concrete deck only) in accordance with TAS 105.

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

System Type C(24): Membrane fully adhered over mechanically fastened insulation.

All General and System Limitations apply.

One or more layers of any of the following insulations.

Base Insulation Layer (Optional)	Insulation Fasteners (Table 3)	Fastener Density/ft²
ISO 95+ GL, RESISTA Minimum 1/2" thick	N/A	N/A
Top Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft²
SECUROCK Gypsum-Fiber Roof Board, DensDeck Prime Minimum 1/2" thick	1 or 4 with 3 (steel) 1 or 2 with 3 (concrete)	1:1.6 ft²

Note: All Insulation 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.

Base Sheet: One ply of BASEGARD SA, self-adhered with a 3" lap.

Ply Sheet: (Optional) One or more plies of SBS Smooth, SBS Base, SBS Premium Base, SBS Poly Base, SBS Premium Poly Base, Ply IV, Ply VI, or MB Base fully adhered in hot asphalt applied in the EVT range at a rate of 20-40 lbs./sq. with minimum 3" wide side laps.
Or
One or more plies of SBS Glass Torch Base, SBS Poly Base Torch, or SBS Glass Torch Base 1.5 torch adhered with minimum 3" wide side laps.
Or
One or more plies of APP 80 Glass Base, APP Premium Base, APP 160, APP 160 P, APP 160 Cool, APP 170, or APP 170 Cool fully torch adhered with minimum 3" wide side laps.



Membrane:

(Not for use with APP sheets) One ply of 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, or SBS Glass FR UltraWhite fully adhered with hot asphalt applied in the EVT range at a rate of 20-25 lbs./sq. with minimum 3” wide side laps.

Or

(Not for use with APP sheets) One ply of SBS Glass FR Torch, SBS Glass FR Torch UltraWhite, SBS Torch, SBS Torch UltraWhite, SBS Premium Torch, SBS Premium Torch UltraWhite, SBS FR Torch, SBS FR Torch UltraWhite, SBS Premium FR Torch, SBS Premium FR Torch UltraWhite torch adhered with minimum 3” wide side laps.

Or

(Not for use over SBS sheets) One ply of Firestone APP 160, APP 160 P, APP 160 Cool, APP 170, or APP 170 Cool, APP Premium FR, APP 180, APP 180 UltraWhite, APP 180 Cool, APP 180 FR, APP 180 FR UltraWhite or APP 180 FR Cool torch adhered with minimum 3” wide side laps.

Maximum Design Pressure:

-82.5 psf. (See General Limitation #7)



Membrane Type: APP/SBS

Deck Type 2I: Steel, Insulated

Deck Description: Min. 22 ga. Type B, Grade 40 steel deck with supports at a maximum 6 ft. o.c. attached with 5/8" puddle welds at every flute. Laps stitched 24" o.c. with #1/4 x 7/8" HWH screws or concrete. The existing roof shall be a minimum 1/2" thick. *The deck should record a Minimum Characteristic Resistance Force (MCRF) of 320 lbf when tested with Firestone All-Purpose (Steel deck only) or Heavy-Duty or Concrete Drive Fasteners (Concrete deck only) in accordance with TAS 105.

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

System Type C(25): Membrane fully adhered over mechanically fastened insulation.

All General and System Limitations apply.

One or more layers of any of the following insulations.

Base Insulation Layer (Optional)	Insulation Fasteners (Table 3)	Fastener Density/ft²
ISO 95+ GL, RESISTA Minimum 1/2" thick	N/A	N/A
Top Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft²
SECUROCK Gypsum-Fiber Roof Board Minimum 1/2" thick	1 or 4 with 3 (steel) 1 or 2 with 3 (concrete)	1:1.78 ft²
ISOGARD HD Composite Minimum 1-1/2" thick	1 or 4 with 3 (steel) 1 or 2 with 3 (concrete)	1:1.78 ft²

Note: All Insulation 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.

Base Sheet: One ply of BASEGARD SA, self-adhered with a 3" lap.

Ply Sheet: (Optional) One or more plies of SBS Smooth, SBS Base, SBS Premium Base, SBS Poly Base, SBS Premium Poly Base, Ply IV, Ply VI, or MB Base fully adhered in hot asphalt applied in the EVT range at a rate of 20-40 lbs./sq. with minimum 3" wide side laps.
Or
One or more plies of SBS Glass Torch Base, SBS Poly Base Torch, or SBS Glass Torch Base 1.5 torch adhered with minimum 3" wide side laps.
Or
One or more plies of APP 80 Glass Base, APP Premium Base, APP 160, APP 160 P, APP 160 Cool, APP 170, or APP 170 Cool fully torch adhered with minimum 3" wide side laps.



Membrane:

(Not for use with APP sheets) One ply of 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, or SBS Glass FR UltraWhite fully adhered with hot asphalt applied in the EVT range at a rate of 20-25 lbs./sq. with minimum 3” wide side laps.

Or

(Not for use with APP sheets) One ply of SBS Glass FR Torch, SBS Glass FR Torch UltraWhite, SBS Torch, SBS Torch UltraWhite, SBS Premium Torch, SBS Premium Torch UltraWhite, SBS FR Torch, SBS FR Torch UltraWhite, SBS Premium FR Torch, SBS Premium FR Torch UltraWhite torch adhered with minimum 3” wide side laps.

Or

(Not for use over SBS sheets) One ply of Firestone APP 160, APP 160 P, APP 160 Cool, APP 170, or APP 170 Cool, APP Premium FR, APP 180, APP 180 UltraWhite, APP 180 Cool, APP 180 FR, APP 180 FR UltraWhite or APP 180 FR Cool torch adhered with minimum 3” wide side laps.

Maximum Design Pressure:

-90 psf. (See General Limitation #7)



Membrane Type: APP/SBS

Deck Type 7I: Recover, Insulated

Deck Description: Min. 22 ga. Grade 33 steel deck with supports at a maximum 6 ft. o.c. secured with #12-24 x 1-1/4" HWH screws at every flute; Laps stitched 12" o.c. with #1/4 x 7/8" HWH screws or concrete. *The deck should record a Minimum Characteristic Resistance Force (MCRF) of 478 lbf when tested with Firestone Heavy-Duty fasteners in accordance with TAS 105.

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

System Type D(1): All layers of insulation simultaneously mechanically fastened with base sheet

All General and System Limitations apply.

Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft ²
ISO 95+ GL Minimum 1½" thick	N/A	N/A

Note: Insulation shall be loose-laid and membrane mechanically fastened. See base sheet attachment below for fasteners and density. Refer to Roofing Application Standard RAS 117 for insulation attachment requirements.

Base Sheet: One ply of SBS PolyBase mechanically fastened through the insulation with Firestone Heavy-Duty fasteners and Coiled Metal Batten Bar spaced 18" o.c. at the lminimum 3" side laps.

Ply Sheet: One ply of BASEGARD SA self-adhered to base sheet with minimum 3" side laps.

Membrane: One ply of 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, or SBS Glass FR UltraWhite fully adhered with hot asphalt applied in the EVT range at a rate of 20-25 lbs./sq. with minimum 3" wide side laps.

Or

One ply of SBS Glass FR Torch, SBS Glass FR Torch UltraWhite, SBS Torch, SBS Torch UltraWhite, SBS Premium Torch, SBS Premium Torch UltraWhite, SBS FR Torch, SBS FR Torch UltraWhite, SBS Premium FR Torch, SBS Premium FR Torch UltraWhite torch adhered with minimum 3" wide side laps.

Or

One ply of Firestone APP 160, APP 160 P, APP 160 Cool, APP 170, or APP 170 Cool, APP Premium FR, APP 180, APP 180 UltraWhite, APP 180 Cool, APP 180 FR, APP 180 FR UltraWhite or APP 180 FR Cool torch adhered with minimum 3" wide side laps.

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



Membrane Type: APP/SBS
Deck Type 7I: Recover, Insulated
Deck Description: Min. 22 ga. Grade 33, Type B steel deck with supports at a maximum 6 ft. o.c. attached with #12-24 x 1-1/4" HWH self-drilling screws with laps stitched 24" o.c. with #1/4-14 x 7/8" HWH self-drilling screws or concrete. *The deck should record a Minimum Characteristic Resistance Force (MCRF) of 120 lbf when tested with Firestone All-Purpose fasteners (Steel only) or Firestone Heavy-Duty or Concrete Drive Fasteners (concrete only) in accordance with TAS 105.

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

System Type D(2): All layers of insulation simultaneously mechanically fastened with base sheet

All General and System Limitations apply.

Base Insulation Layer (Optional)	Insulation Fasteners (Table 3)	Fastener Density/ft²
ISO 95+ GL, RESISTA Minimum 1/2" thick	N/A	N/A
Top Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft²
ISO 95+ GL, RESISTA Minimum 1" thick	N/A	N/A
ISOGARD HD Composite Minimum 1 1/2" thick	N/A	N/A
DensDeck Prime, SECUROCK Gypsum-Fiber Roof Board Minimum 1/4" thick	N/A	N/A

Note: Insulation shall be loose-laid and membrane mechanically fastened. See base sheet attachment below for fasteners and density. Refer to Roofing Application Standard RAS 117 for insulation attachment requirements.

Base Sheet: One ply of SBS Base mechanically fastened through the insulation with Firestone All-Purpose fasteners (Steel only) or Firestone Heavy-Duty or Concrete Drive Fasteners (concrete only) and Firestone Insulation Fastening Plates spaced 12" o.c. at the minimum 3.4" side laps and 12" o.c. in two staggered rows in the field of the roll.

Ply Sheet: One ply of BASEGARD SA self-adhered to base sheet with minimum 3" side laps.

Membrane: One ply of 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, or SBS Glass FR UltraWhite fully adhered with hot asphalt applied in the EVT range at a rate of 20-25 lbs./sq. with minimum 3" wide side laps.
 Or
 One ply of SBS Glass FR Torch, SBS Glass FR Torch UltraWhite, SBS Torch, SBS Torch UltraWhite, SBS Premium Torch, SBS Premium Torch UltraWhite, SBS FR Torch, SBS FR Torch UltraWhite, SBS Premium FR Torch, SBS Premium FR Torch UltraWhite torch adhered with minimum 3" wide side laps.
 Or
 One ply of Firestone APP 160, APP 160 P, APP 160 Cool, APP 170, or APP 170 Cool, APP Premium FR, APP 180, APP 180 UltraWhite, APP 180 Cool, APP 180 FR, APP 180 FR UltraWhite or APP 180 FR Cool torch adhered with minimum 3" wide side laps.

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



Membrane Type: APP/SBS
Deck Type 7: Recover, Non-Insulated
Deck Description: ¹⁹/₃₂" or greater plywood or wood plank, fastened with 0.113" x 2³/₈" ring shank nails at maximum 6" o.c. to supports at maximum 24" o.c. *The deck should record a Minimum Characteristic Resistance Force (MCRF) of 61 lbf when tested with 12 ga. ring shank nails in accordance with TAS 105.
System Type E(1): Membrane attached over existing roof system.

All General and System Limitations apply.

Base Sheet: One ply of MB Base mechanically fastened into deck with minimum 12 ga. " ring shanks nails and minimum 32 ga., 1-⁵/₈" tin tabs spaced 9" o.c. at the 2" side laps and 9" o.c. in three staggered rows in the field of the roll.

Ply Sheet: One ply of BASEGARD SA self-adhered to base sheet with minimum 3" side laps.

Membrane: One ply of 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, or SBS Glass FR UltraWhite fully adhered with hot asphalt applied in the EVT range at a rate of 20-25 lbs./sq. with minimum 3" wide side laps.
Or
One ply of SBS Glass FR Torch, SBS Glass FR Torch UltraWhite, SBS Torch, SBS Torch UltraWhite, SBS Premium Torch, SBS Premium Torch UltraWhite, SBS FR Torch, SBS FR Torch UltraWhite, SBS Premium FR Torch, SBS Premium FR Torch UltraWhite torch adhered with minimum 3" wide side laps.
Or
One ply of Firestone APP 160, APP 160 P, APP 160 Cool, APP 170, or APP 170 Cool, APP Premium FR, APP 180, APP 180 UltraWhite, APP 180 Cool, APP 180 FR, APP 180 FR UltraWhite or APP 180 FR Cool torch adhered with minimum 3" wide side laps.

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



Membrane Type: APP/SBS
Deck Type 7: Recover, Non-Insulated
Deck Description: ¹⁹/₃₂" or greater plywood or wood plank, fastened with 0.113" x 2³/₈" ring shank nails at maximum 6" o.c. to supports at maximum 24" o.c. *The deck should record a Minimum Characteristic Resistance Force (MCRF) of 156 lbf when tested with Firestone All-Purpose fasteners in accordance with TAS 105.
System Type E(2): Membrane attached over existing roof system.

All General and System Limitations apply.

Base Sheet: One ply of MB Base mechanically fastened into deck with All-Purpose Fasteners and Insulation Fastening Plates spaced 12" o.c. at the 2" wide side laps and 12" o.c. in two staggered rows in the field of the roll.

Ply Sheet: One ply of BASEGARD SA self-adhered with minimum 3" side laps

Membrane: One ply of 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, or SBS Glass FR UltraWhite fully adhered with hot asphalt applied in the EVT range at a rate of 20-25 lbs./sq. with minimum 3" wide side laps.
Or
One ply of SBS Glass FR Torch, SBS Glass FR Torch UltraWhite, SBS Torch, SBS Torch UltraWhite, SBS Premium Torch, SBS Premium Torch UltraWhite, SBS FR Torch, SBS FR Torch UltraWhite, SBS Premium FR Torch, SBS Premium FR Torch UltraWhite torch adhered with minimum 3" wide side laps.
Or
One ply of Firestone APP 160, APP 160 P, APP 160 Cool, APP 170, or APP 170 Cool, APP Premium FR, APP 180, APP 180 UltraWhite, APP 180 Cool, APP 180 FR, APP 180 FR UltraWhite or APP 180 FR Cool torch adhered with minimum 3" wide side laps.

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



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 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