



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

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 Lightweight Concrete Decks.

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

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

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

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

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

This NOA renews and revises NOA No. 12-0508.03 and consists of pages 1 through 9.
 The submitted documentation was reviewed by Jorge L. Acebo.



NOA No.: 17-0825.06
 Expiration Date: 02/07/23
 Approval Date: 01/18/18
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ROOFING SYSTEM APPROVAL

Category:	Roofing
Sub-Category:	Modified
Material:	APP, SBS
Deck Type:	Lightweight Concrete
Maximum Design Pressure	-177.5 psf.

TRADE NAMES OF PRODUCTS MANUFACTURED OR LABELED BY APPLICANT:

TABLE 1

Product	Dimensions	Test Specification	Product Description
BASEGARD SA	36" x 108'	ASTM D6163	Fiberglass reinforced modified bitumen, self-adhering base sheet with a smooth sanded surface.
SBS Glass	39.4" x 33'10"	ASTM D6163	Fiberglass reinforced, granule surfaced, modified bitumen membrane. Applied in hot asphalt.
SBS Torch	48" x 39"	ASTM D6164	Granule surfaced, SBS cap reinforced with a non-woven polyester mat, with burn off film and fiberglass enhanced
SBS Torch UltraWhite	48" x 39"	ASTM D6164	UltraWhite granule surfaced, SBS cap reinforced with a non-woven polyester mat, with burn off film and fiberglass enhanced
SBS FR Torch	48" x 39"	ASTM D6164	Granule surfaced, fire rated, SBS cap reinforced with a non-woven polyester mat, with burn off film and fiberglass enhanced
SBS FR Torch UltraWhite	48" x 39"	ASTM D6164	UltraWhite granule surfaced, fire rated, SBS cap reinforced with a non-woven polyester mat, with burn off film and fiberglass enhanced
SBS Cap	39.4" x 33'10"	ASTM D6164	Granule surfaced, modified bitumen membrane reinforced with non-woven polyester mat.
SBS Cap UltraWhite	39.4" x 33'10"	ASTM D6164	UltraWhite granule surfaced, modified bitumen membrane reinforced with non-woven polyester mat.
SBS FR Cap	39.4" x 33'10"	ASTM D6164	Granule surfaced, modified bitumen membrane reinforced with non-woven polyester mat.
SBS FR Cap UltraWhite	39.4" x 33'10"	ASTM D6164	UltraWhite granule surfaced, modified bitumen membrane reinforced with non-woven polyester mat.



Product	Dimensions	Test Specification	Product Description
SBS Premium FR	39.4" x 33'10"	ASTM D6164	Granule surfaced, fire rated, modified bitumen membrane reinforced with non-woven polyester mat.
SBS Premium FR UltraWhite	39.4" x 33'10"	ASTM D6164	UltraWhite granule surfaced, fire rated, modified bitumen membrane reinforced with non-woven polyester mat.
SBS Premium	39.4" x 33'10"	ASTM D6164	Granule surfaced, modified bitumen membrane reinforced with polyester mat. Applied in hot asphalt.
SBS Premium Torch	39.4" x 33'10"	ASTM D6164	Granule surfaced, modified bitumen membrane with a burn-off film and reinforced with non-woven polyester mat.
SBS Premium Torch UltraWhite	39.4" x 33'10"	ASTM D6164	UltraWhite granule surfaced, modified bitumen membrane with a burn-off film and reinforced with non-woven polyester mat.
SBS Premium FR Torch	39.4" x 33'10"	ASTM D6164	Granule surfaced, fire rated, modified bitumen membrane with a burn-off film and reinforced with non-woven polyester mat.
SBS Premium FR Torch UltraWhite	39.4" x 33'10"	ASTM D6164	UltraWhite granule surfaced, fire rated, modified bitumen membrane with a burn-off film and reinforced with non-woven polyester mat.
I.S.O. 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	Polyisocyanurate Insulation	Firestone Building Products
ISOGARD HD	Polyisocyanurate with a coated fiberglass facer	Firestone Building Products
DensDeck Prime	Silicon treated gypsum	G-P Gypsum



APPROVED FASTENERS:

TABLE 3

Fastener Number	Product Name	Product Description	Dimensions	Manufacturer (With Current NOA)
1.	Firestone All-Purpose	Insulation and membrane fastener	Various	Firestone Building Products
2.	Insulation Fastening Plate	Insulation plate for use with Firestone Fasteners	3” round	Firestone Building Products

EVIDENCE SUBMITTED:

<u>Test Agency</u>	<u>Test Identifier</u>	<u>Description</u>	<u>Date</u>
Factory Mutual Research Corp.	3042665	FM 4470	05/04/12
	3044812	FM 4470	05/04/12
	3040109	FM 4470	03/09/11
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/TAS110	08/24/12
	F31960.08.10-1	ASTM D4977	08/25/10
PRI Construction Materials Technologies, LLC	FBP-073-02-01	TAS 114-D	07/16/12
	FBP-059-02-01	ASTM D1876	07/20/12
	FBP-053-02-01	ASTM D6163	03/23/12
	FBP-038-02-04	ASTM D6164	01/12/11
	FBP-038-02-03	ASTM D6164	01/12/11
	FBP-042-02-01	ASTM D6164	07/26/11
	FBP-042-02-02	ASTM D6164	07/27/11
	FBP-043-02-02	ASTM D6164	08/02/11
	FBP-043-02-03	ASTM D6164	07/26/11
	FBP-043-02-04	ASTM D6164	07/26/11
	FBP-043-02-01	ASTM D6164	08/02/11
	FBP-053-02-01	ASTM D6163	03/23/12
	FBP-071-02-01 Rev 1	TAS 114-J	02/07/13

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	C	10/10/17



APPROVED ASSEMBLIES

- Membrane Type:** SBS
- Deck Type 4I:** Lightweight Concrete, Insulated
- Deck Description:** 1/8” thick slurry of Celcore MF Cellular concrete, 300 psi, is poured over structural concrete. Min. 1” thick EPS board is placed into slurry, followed by 2” thick layer of Celcore MF Cellular concrete, 300 psi. The following day a Celcore PVA Curing Compound is applied at 300 ft²/gal.
- System Type A(1):** All layers of insulation adhered to LWIC. Membranes subsequently adhered to 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
ISO GARD HD Minimum 1/2” thick	N/A	N/A

Note: Insulation shall be adhered to deck with I.S.O. Stick applied in 3/4” – 1” wide ribbons spaced 12 in. 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:** None
- Membrane:** One ply of Firestone 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 a 3” lap.
Or
One ply of Firestone SBS Cap, SBS Cap UltraWhite, SBS FR Cap, SBS FR Cap UltraWhite, SBS Glass, SBS Premium, SBS Premium FR or SBS Premium FR UltraWhite cap sheet fully adhered to the base sheet with hot asphalt adhesive applied within the EVT range and a rate of 20-40 lbs./sq. with a 3” lap.

Maximum Design Pressure: -172.5 psf. (See Limitation #9)



Membrane Type: SBS

Deck Type 4I: Lightweight Concrete, Insulated

Deck Description: 1/8" thick slurry of Celcore MF Cellular concrete, 300 psi, is poured over structural concrete. Min. 1" thick EPS board is placed into slurry, followed by 2" thick layer of Celcore MF Cellular concrete, 300 psi. The following day a Celcore PVA Curing Compound is applied at 300 ft²/gal.

System Type A(2): All layers of insulation adhered to LWIC. Membranes subsequently adhered to 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
DensDeck Prime Minimum 1/4" thick	N/A	N/A

Note: Insulation shall be adhered to deck with I.S.O. Stick applied in 3/4" – 1" wide ribbons spaced 12 in. 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: None

Membrane: One ply of Firestone 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 cap sheet torch adhered to the base sheet with a 3" lap.

Or

One ply of Firestone SBS Cap, SBS Cap UltraWhite, SBS FR Cap, SBS FR Cap UltraWhite, SBS Glass, SBS Premium, SBS Premium FR or SBS Premium FR UltraWhite cap sheet fully adhered to the base sheet with hot asphalt adhesive applied within the EVT range and a rate of 20-40 lbs./sq. with a 3" lap.

Maximum Design Pressure: -177.5 psf. (See Limitation #9)



Membrane Type: SBS

Deck Type 4I: Lightweight Concrete, Insulated

Deck Description: 1/8" thick slurry of Celcore MF Cellular concrete, 300 psi, is poured over structural concrete. Min. 1" thick EPS board is placed into slurry, followed by 2" thick layer of Celcore MF Cellular concrete, 300 psi. The following day a Celcore PVA Curing Compound is applied at 300 ft²/gal.

System Type A(3): All layers of insulation adhered to LWIC. Membranes subsequently adhered to 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 1.0" thick	N/A	N/A

Note: Insulation shall be adhered to deck with I.S.O. Fix II applied in 3/4" – 1" wide ribbons spaced 12 in. 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: None

Membrane: One ply of Firestone 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 cap sheet torch adhered to the base sheet with a 3" lap.

Or

One ply of Firestone SBS Cap, SBS Cap UltraWhite, SBS FR Cap, SBS FR Cap UltraWhite, SBS Glass, SBS Premium, SBS Premium FR or SBS Premium FR UltraWhite cap sheet fully adhered to the base sheet with hot asphalt adhesive applied within the EVT range and a rate of 20-40 lbs./sq. with a 3" lap.

Maximum Design Pressure: -177.5 psf. (See Limitation #9)



Membrane Type: SBS

Deck Type 4I: Lightweight Concrete, Insulated

Deck Description: Lightweight Concrete

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

Deck: Minimum 3” of minimum 340 psi cellular lightweight insulating concrete; having a minimum pull out value of 214 lbf. when tested with a Firestone 1.7 in. Assembled LWC Base Ply Fastener (per TAS 105 Withdrawal Testing). LWC is installed over min. 22 ga. Grade 33 ksi vented steel deck, secured to min. ¼” thick supports at a maximum spacing of 5 ft. o.c. Steel deck is attached to supports with #12-24 x 1¼” HWH self-drilling screws and ¼” washers. Side Laps are fastened at 12” o.c. with #¼ -14 x 7/8” HWH self-drilling screws and ¼” washers.
This Tested Assembly has been analyzed for allowable deck stress. See evidence submitted table.

Vapor Retarder: Any approved asphaltic/modified bitumen vapor barrier.
All General and System Limitations apply.

Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft ²
ISO 95+GL Minimum 2.0” thick	1 with 2	1:1.78 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 Firestone BASEGARD SA, self-adhered with a 3” lap.

Ply Sheet: None

Membrane: One ply of Firestone 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 a 3” lap.
 Or
 One ply of Firestone SBS Cap, SBS Cap UltraWhite, SBS FR Cap, SBS FR Cap UltraWhite, SBS Glass, SBS Premium, SBS Premium FR or SBS Premium FR UltraWhite cap sheet fully adhered to the base sheet with hot asphalt adhesive applied within the EVT range and a rate of 20-40 lbs./sq. with a 3” lap.

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



LIGHTWEIGHT CONCRETE DECK SYSTEM LIMITATIONS:

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

GENERAL LIMITATIONS:

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



NOA No.: 17-0825.06
Expiration Date: 02/07/23
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