



**BUILDING CODE COMPLIANCE OFFICE (BCCO)
PRODUCT CONTROL DIVISION**

**MIAMI-DADE COUNTY, FLORIDA
METRO-DADE FLAGLER BUILDING
140 WEST FLAGLER STREET, SUITE 1603
MIAMI, FLORIDA 33130-1563
(305) 375-2901 FAX (305) 375-2908**

NOTICE OF ACCEPTANCE (NOA)

**Firestone Building Products Company
525 Congressional Boulevard
Carmel, IN 46032-5607**

SCOPE:

This NOA is being issued under the applicable rules and regulations governing the use of construction materials. The documentation submitted has been reviewed by Miami-Dade County Product Control Division and accepted by the Board of Rules and Appeals (BORA) 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 Division (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. BORA reserves the right to revoke this acceptance, if it is determined by Miami-Dade County Product Control Division 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 High Velocity Hurricane Zone of the Florida Building Code.

DESCRIPTION: Firestone EPDM Single Ply Roof Systems over Lightweight Concrete Decks

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

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

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

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

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

This NOA renews NOA # 00-0623.05 and consists of pages 1 through 7.
The submitted documentation was reviewed by Frank Zuloaga, RRC



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Expiration Date: 08/10/08
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ROOFING SYSTEM APPROVAL

Category: Roofing
Sub-Category: Single Ply
Material: EPDM
Deck Type: Lightweight Insulating Concrete
Maximum Design Pressure -75 psf
Fire Classification: See General Limitation #1

<u>Product</u>	<u>Dimensions</u>	<u>Test Specifications</u>	<u>Product Description</u>
Standard RubberGard®	various	ASTM D 4637	EPDM membrane
Fire Retardant RubberGard®	various	ASTM D 4637	Fire Retardant EPDM membrane
Standard Reinforced RubberGard®	various	ASTM D 4637	Polyester scrim reinforced EPDM
Fire Retardant Reinforced RubberGard®	various	ASTM D 4637	Polyester scrim reinforced fire retardant EPDM
EPDM Batten Cover Strip	.045" x 8" x 150'	ASTM D 4637	EPDM cover strip.
FR EPDM Batten Cover Strips	.045" x 7.5" x 150'	ASTM D 4637	Fire Retardant EPDM cover strip
EPDM FormFlash	various	ASTM D 4811	Self-curing EPDM flashing
Neoprene FormFlash	.060" x 24" x 100' or .060" x 48" x 100'	ASTM D 4811	Self-curing neoprene flashing
Reinforced Perimeter Fastening Strip	.045" x 6" x 100'	ASTM D 4637	Non-dusted EPDM reinforced strip for non-penetrating base tie-in details
Bonding Adhesive BA-2004	5 gallon pail		Neoprene based bonding adhesive
Splice Adhesive SA-1065	1 gallon and 5 gallon pails		Synthetic polymer based adhesive
General Purpose Sealant S-40A	10.3 oz. tube		Silicone sealant
Night Sealant S-30A	10 oz. tube		Synthetic polymer based caulking
Acryli-Top Coating PC-100	5 gallon pail		Acrylic coating
Premolded Pipe Boots	small, med, large	ASTM D 4637	Flashing for round penetrations
QuickSeam Pipe Boots	Small, med, large	ASTM D 4637	Pre-fabricated butyl/EPDM adhesive tape laminated to the bottom of the pipe boot flange
Termination Bar	.10" x 1.35" x 10'	3003-H14, 3105-H14 or 6063-T5 aluminum	Aluminum bar for flashing terminations
Batten Rings	.0448" x 1.0" x various diameters	FM 4450	EPDM anchors
Metal Batten Bars	.0448" x 1.0" x 10'	FM 4450	EPDM anchor
Aluminum Drain Bar	.063" to .110" thick x 4" x 10'	FM 4450	Aluminum termination bar



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<u>Product</u>	<u>Dimensions</u>	<u>Test Specifications</u>	<u>Product Description</u>
Polymer Batten	.050" x 1.0" x 250'		EPDM anchor
Firestone EdgeGard			Roof edging system
QuickSeam Flashing	.080" x various widths x 100'		Semi-cured EPDM flashing laminated to cure seam tape
QuickPrime	5 gallon pail		Primer used to clean and prime EPDM
QuickSeam Batten Cover	.095" x various widths x 100'		Cured EPDM and a seam adhesive laminate
QuickSeam Joint Cover	.070" x 5.75" diameter		FormFlash with two layers of butyl/EPDM adhesive tape laminate
QuickSeam Splice Tape	3" x 100'		Tape for field splicing
Splice Wash SW-100	5 gallon pail		Cleaning and prep solution for EPDM
Lap Sealant LS-3029	10 oz. tube, 1 qt. tube and 5 gallon pails		Sealant for membrane laps
Pourable Sealer S-10	.78 gallon, Part A .10 gallon, Part B		Two part polyurethane sealant
Water Block Seal S-20	10 oz. tube		Water sealant
Firestone Protection Mat	15" x 320'		Black polypropylene, non-woven, needle-punched fabric
Firestone Walkway Pads	30" x 30" x .300 thick		EPDM walkway pads

APPROVED INSULATIONS:

TABLE 2

<u>Product Name</u>	<u>Product Description</u>	<u>Manufacturer (With Current NOA)</u>
ACFoam II	Isocyanurate Insulation	Atlas Roofing Corp.
ISO 95+ GL, 95+ GW / Rhoflex Isocyanurate GL	Isocyanurate Insulation	Firestone
Fiber Top	Regular wood fiber insulation	Firestone
ENRGY 2, ENRGY PSI-25	Isocyanurate Insulation	Johns Manville
Wood Fiberboard	Regular wood fiber insulation	Generic
High Density Wood Fiberboard	High Density Wood Fiber insulation board.	Generic
Perlite Insulation Board	Perlite Insulation	Generic
Type X Gypsum	Gypsum Wallboard	Generic
XPS	Extruded polystyrene	Generic
Multi-Max FA	Isocyanurate Insulation	Rmax, Inc.



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APPROVED FASTENERS:**TABLE 3**

Fastener Number	Product Name	Product Description	Dimensions	Manufacturer (With Current NOA)
1.	N/A	N/A	N/A	N/A

EVIDENCE SUBMITTED:

<u>Test Agency</u>	<u>Test Identifier</u>	<u>Description</u>	<u>Date</u>
Underwriters Laboratories, Inc.	Letter	Fire Classification	07/09/93
Underwriters Laboratories, Inc.	88NK1932	Fire Classification	12/08/93
Underwriters Laboratories, Inc.	91NK15494	Fire Classification	02/28/92
Underwriters Laboratories, Inc.	90NK16256	Fire Classification	02/27/91
Underwriters Laboratories, Inc.	91NK7843	Fire Classification	08/06/91
Factory Mutual Research Corp.	J.I. #1V1A7.AM	Fastener Approval	06/25/92
Factory Mutual Research Corp.	J.I. #1W3A4.AM	Wind Uplift	12/01/92
Factory Mutual Research Corp.	J.I. #1T7A3.AM	Wind Uplift and Fire Classification	01/18/92
Factory Mutual Research Corp.	J.I. #1V6A9.AM	Wind Uplift and Fire Classification	02/27/92
Factory Mutual Research Corp.	J.I. #2W6A2.AM	Wind Uplift	06/25/93
Factory Mutual Research Corp.	J.I.# 2X9A8.AM	Wind Uplift Report	06/14/94



APPROVED ASSEMBLIES

- Membrane Type:** Single Ply, EPDM, Reinforced, Nonreinforced
- Deck Type 4I:** Lightweight Concrete, Insulated
- Deck Description:** Cellular or aggregate lightweight concrete
- System Type A:** Anchor sheet mechanically fastened; one or more layers of insulation adhered with approved asphalt; membrane fully adhered.

All General and System Limitations apply.

Base Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft²
ISO 95+ GL, ENRGY 2, ENRGY PSI-25, Multi-Max FA, ACFoam II Minimum 1.4" thick	N/A	N/A
Top Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft²
FiberTop, Minimum 1/2" thick	N/A	N/A

Note: Apply top layer of insulation in a full mopping of any approved mopping hot asphalt within the EVT range and at a rate of 20-40 lbs/100 ft². Please refer to Roofing Application Standard RAS 117 for insulation attachment. Insulation listed as Base Layer only shall be used only as base layers with a second layer of approved top layer insulation installed as the final membrane substrate. Composite insulation panels may be used as a top layer placed with the polyisocyanurate side facing down.

- Barrier:** Install one ply of Firestone MB Base Sheet, Celotex Channel Vent GB, GAF GAFGLAS Stratavent, Manville Ventsulation or Tamko Vapor Chan mechanically attached, as below.
- Fasteners:** ES 90 base ply fasteners, 7 1/2" o.c. at the lap and two rows 18" o.c. in the field; or, Olympic BasePly fasteners, 7 1/2" o.c. at the lap and two rows 18" o.c. in the field.
- Membrane:** Fully adhere any RubberGard® EPDM membrane to the insulation with Firestone Bonding Adhesive BA-2004 at a rate of 45-60 sq. ft./gal. (coverage area is for adhesive application to both mating surfaces).
- Surfacing:** (Optional) Firestone Acryli-Top (PC-100) to be applied at 1 gal/100 sq. ft. with an airless sprayer. If roller applied, two separate coats of 200 sq. ft. per gallon are required.
- Maximum Design Pressure:** -45 psf (See General Limitation #9)



LIGHTWEIGHT INSULATING CONCRETE SYSTEM LIMITATIONS:

If mechanical attachment to the structural deck through the lightweight insulating concrete is proposed, a field withdrawal resistance testing shall be performed to determine 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 Professional Engineer, Registered Architect, or Registered Roof Consultant.

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.

For systems where specific lightweight insulating concrete is not referenced, the minimum design mix shall be a minimum of 250 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. **(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 9B-72 of the Florida Administrative Code.

END OF THIS ACCEPTANCE



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