MIAMI-DADE

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 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 NOA # 00-0623.04 and consists of pages 1 through 9.
The submitted documentation was reviewed by Frank Zuloaga, RRC

PRODUCT CONTROL ACCEPTED

ROOFING SYSTEM APPROVAL

Category:	Roofing
Sub-Category:	Single Ply
Material:	EPDM
Deck Type:	Recover
Maximum Design Pressure	-52.5 psf
Fire Classification:	See General Limitation #1

TRADE NAMES OF PRODUCTS MANUFACTURED OR LABELED BY APPLICANT:

TABLE 1

Product	Dimensions	Test Specifications	Product Description
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

Product	Dimensions	Test Specifications	Product Description
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
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

Product Name	Product Description	Manufacturer (With Current NOA)
ACFoam Composite	Isocyanurate Insulation with perlite facer	Atlas Roofing Corp.
ACFoam I, ACFoam II	Isocyanurate Insulation	Atlas Roofing Corp.
Styropor	Expanded polystyrense insulation	BASF Corp.
Styrofoam	Extruded polystyrense insulation	Dow
ISO 95+ GL, 95+ GW	Isocyanurate Insulation	Firestone
ISO 95+ Composite	Isocyanurate Insulation with perlite facer	Firestone
Fiber Top	Regular wood fiber insulation	Firestone
Dens Deck	Silicon treated gypsum	G-P Products
ENRGY 2, ENRGY PSI-25	Isocyanurate Insulation	Johns Manville
Fesco Foam	Isocyanurate Insulation with perlite facer	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
Huntsman EPS	Expanded polystyrense insulation	Huntsman Corp.
FOAMULAR	Extruded polystyrense insulation	Owens Corning
Multi-Max FA	Isocyanurate Insulation	Rmax, Inc.
Thermaroof Composite	Isocyanurate Insulation with perlite facer	Rmax, Inc.

APPROVED FASTENERS:

TABLE 3

Fastener Number	Product Name	Product Description	Dimensions	Manufacturer (With Current NOA)
1.	Firestone All-Purpose Fastener	Insulation and membrane fastener	Various	Firestone
2.	Firestone HD Fastener	Insulation and membrane fastener	Various	Firestone
3.	Firestone Concrete Drive	Insulation and membrane fastener for concrete decks.	Various	Firestone
4.	Barbed Metal Seam Plate	Metal plates used for membrane securement.	2" dia	Firestone
5.	Hexagonal Plate	Insulation attachment hexagonal plate	$3\text{-}^{3}/_{8}$" x $2\text{-}^{7}/_{8}$"	Firestone
6.	Seam Plate	Membrane seam attachment plate.	2" dia	Firestone
7.	Firestone Polymer Fastener	Insulation and membrane fastener for gypsum decks.	Various	Firestone
8.	Firestone Polymer Metal Plate	Galvalume AZ55 stress plate	3" square	Firestone
9.	Dekfast Fasteners	Insulation and membrane fastener	Various	Construction Fasteners, Inc.
10.	Dekfast Hex Plate	Insulation and membrane fastener	Various	Construction Fasteners, Inc.
11.	#12 & #14 Roofgrip	Insulation and membrane fastener	Various	ITW Buildex
12.	Metal Plate	Galvalume AZ50 stress plate	3" square 3" round	ITW Buildex
13.	Plastic Plate	Polyethylene stress plate	3.2" round	ITW Buildex
14.	Polymer Gyptec	Insulation and membrane fastener for gypsum decks.	Various	ITW Buildex
15.	Polymer Gyptec Metal Plate	Galvalume AZ50 stress plate	3" square	ITW Buildex
16.	Olympic Fasteners	Insulation and membrane fastener	Various	Olympic Mfg. Group
17.	Olympic Standard	Galvalume AZ55 stress plate	3" round	Olympic Mfg. Group
18.	Olympic	Plastic plates for fasteners.	3" round	Olympic Mfg. Group
19.	Rawl Fasteners	Insulation fastener for steel and wood decks	Various	Powers Fasteners Inc.
20.	Rawl Insulation Plate	Galvalume AZ55 stress plate	3" round	Powers Fasteners Inc.
21.	HD Insul-Fixx Fastener	Insulation fastener for use in steel and concrete decks	Various	SFS Stadler, Inc.

APPROVED FASTENERS:

TABLE 3

Fastener Number	Product Name	Product Description	Dimensions	Manufacturer (With Current NOA)
22.	Insul-Fixx S	Galvalume AZ55 stress plate	3" round	SFS Stadler, Inc.
23.	Insul-Fixx PG	Polyethylene stress plate	3" round	SFS Stadler, Inc.
24.	Tru-Fast HD Fasteners	Insulation and membrane fastener	Various	The Tru-Fast Corp.
25.	Tru-Fast MP-3	Galvalume AZ50 steel plate	3.23" round	The Tru-Fast Corp.
26.	Tru-Fast Plastic Plate	Polyethylene stress plate	3" round	The Tru-Fast Corp.

EVIDENCE SUBMITTED:

Test Agency	Test Identifier	Description	Date
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 7I: Recover, Insulated

Deck Description: Concrete, cementitious wood fiber, gypsum concrete, wood, steel

System Type C: Base Layer, Top Layer (optional or required), Membrane

All General and System Limitations shall apply.

Base Insulation Layer	**Insulation Fasteners (Table 3)**	**Fastener Density/ft^2**
ISO 95+ GL, ENRGY 2, ENRGY PSI-25, Multi-Max FA, ACFoam II Minimum 1.3" thick	**See Table 3**	**1:2 ft^2**

Note: If top layer is used, both insulation layers shall be simultaneously fastened; see Top Layer below for fasteners and density.

Top Insulation Layer (Optional)	**Insulation Fasteners (Table 3)**	**Fastener Density/ft^2**
FiberTop Minimum ½" thick	**See Table 3**	**1:2 ft^2**

Note: All layers of insulation shall be mechanically attached using the fastener density listed above. The insulation panels listed are minimum sizes and dimensions; if larger panels are used, the number of fasteners shall be increased maintaining the same fastener density. Insulation fasteners shall be tested for withdrawal resistance in compliance with Testing Application Standard TAS 105 to confirm compliance with the wind load requirements. Please refer to Roofing Application Standard RAS 117 for insulation attachment.

Barrier: None.

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)

Membrane Type: Single Ply, EPDM, Reinforced, Nonreinforced

Deck Type 7I: Recover, Insulated

Deck Description: Concrete, cementitious wood fiber, gypsum concrete, wood, steel

System Type D: Base layer, top layer (optional or required), Membrane

All General and System Limitations shall apply.

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

Top Insulation Layer (Optional)	**Insulation Fasteners (Table 3)**	**Fastener Density/ft^2**
FiberTop Minimum ½" thick	**N/A**	**N/A**

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

Barrier: None.

Membrane: Mechanically attach any 7 1/2' Reinforced RubberGard® EPDM membrane with Firestone AP or HD fasteners in 2" Seam Plates (or metal battens) 6" o.c. within the 7" wide side laps, or any nominal 10' Reinforced RubberGard® EPDM membrane with Firestone AP or HD Fasteners in metal batten strip only 6" o.c. with 7" side laps.

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: -52.5 psf. (See General Limitation #9.)

RECOVER SYSTEM LIMITATIONS:

1. All System Limitations and General Limitations shall apply. See specific deck type Notice of Acceptance for deck type System Limitations.

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