MIAMI-DADE COUNTY, FLORIDA
METRO-DADE FLAGLER BUILDING

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

CONTRACTOR LICENSING SECTION
(305) 375-2527 FAX (305) 375-2558

CONTRACTOR ENFORCEMENT DIVISION
(305) 375-2966 FAX (305) 375-2908

PRODUCT CONTROL DIVISION
(305) 375-2902 FAX (305) 372-6339

PRODUCT CONTROL NOTICE OF ACCEPTANCE

Firestone Building Products Co.
525 Congressional Boulevard
Carmel ,IN 46032-5607

Your application for Notice of Acceptance (NOA) of:
Firestone EPDM Single-Ply Roofing Membrane for Cementitious Wood Fiber
under Chapter 8 of the Code of Miami-Dade County governing the use of Alternate Materials and Types of Construction, and completely described herein, has been recommended for acceptance by the Miami-Dade County Building Code Compliance Office (BCCO) under the conditions specified herein.

This NOA shall not be valid after the expiration date stated below. BCCO reserves the right to secure this product or material at any time from a jobsite or manufacturer's plant for quality control testing. If this product or material fails to perform in the approved manner, BCCO may revoke, modify, or suspend the use of such product or material immediately. BCCO reserves the right to revoke this approval, if it is determined by BCCO that this product or material fails to meet the requirements of the South Florida Building Code.

The expense of such testing will be incurred by the manufacturer.

ACCEPTANCE NO.: 00-0623.06
EXPIRES: 08/10/2003

Raul Rodriguez
Chief Product Control Division

THIS IS THE COVERSHEET, SEE ADDITIONAL PAGES FOR SPECIFIC AND GENERAL CONDITIONS
BUILDING CODE & PRODUCT REVIEW COMMITTEE

This application for Product Approval has been reviewed by the BCCO and approved by the Building Code and Product Review Committee to be used in Miami-Dade County, Florida under the conditions set forth above.

Francisco J. Quintana, R.A.
Director
Miami-Dade County
Building Code Compliance Office

APPROVED: 08/10/2000

ROOFING ASSEMBLY APPROVAL

Category:	Roofing	Approval Date: **August 10, 2000**
Sub-Category:	Single Ply	
Materials:	EPDM	Expiration Date: **August 10, 2003**

Deck Type:	Cementitious Wood Fiber
Maximum Design Pressure	-45 psf
Fire Classification:	See General Limitation #1

TRADE NAMES OF PRODUCTS MANUFACTURED OR LABELED BY APPLICANT:

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
ISO 95+ GL / Rhoflex Isocyanurate GL	min. 4' x 4'	PA 110	Polyisocyanurate insulation board
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 4637-87	Flashing for round penetrations
QuickSeam Pipe Boots	Small, med, large	ASTM D 4637-87	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
2" Seam Plate	.017" x 2" diameter	FM 4450	Membrane seam attachment plate
Hex Insulation Plate	.017" x 2 7/8" diameter	FM 4450	Insulation attachment plate

Frank Zuloaga, RRC
Roofing Plans Examiner

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
Polymer Fastener	.675 OD (nominal) x various lengths		Cementitious wood fiber and gypsum deck fastener
Polymer Fastener Seam Plate	.017" x 2" diameter		Polymer Fastener plate
Firestone EdgeGard			Roof edging system
Firestone All-Purpose Fastener	#14 or #15	PA 114	Steel, wood or concrete fastener
Firestone Concrete Drive	¼" x various lengths	PA 114	Insulation fastener for concrete decks
Firestone Stainless Steel Drive Pins	¼" x various lengths	PA 114	Compression type fastener
Firestone FiberTop Wood Fiber Insulation	min. 4' x 4'	PA 110	Non-asphaltic, wood fiberboard insulation board
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

TRADE NAMES OF PRODUCTS MANUFACTURED BY OTHERS:

Products	Dimensions	Test Specifications	Product Description	Manufacturer
AC Foam I	min. 4' x 4'	PA 110	Polyisocyanurate insulation board	Atlas Energy
AC Foam II	min. 4' x 4'	PA 110	Polyisocyanurate insulation board	Atlas Energy
AC Foam I Composite	min. 4' x 4'	PA 110	Polyisocyanurate /perlite insulation board	Atlas Energy
AC Foam II Composite	min. 4' x 4'	PA 110	Polyisocyanurate /perlite insulation board	Atlas Energy

Frank Zuloaga, RRC
Roofing Plans Examiner

Products	Dimensions	Test Specifications	Product Description	Manufacturer
E'NRG'Y I	min. 4' x 4'	PA 110	Polyisocyanurate insulation board	NRG Barriers, Inc.
E'NRG'Y II	min. 4' x 4'	PA 110	Polyisocyanurate insulation board	NRG Barriers, Inc.
E'NRG'Y PSI-25	min. 4' x 4'	PA 110	Polyisocyanurate insulation board	NRG Barriers, Inc.
Barrier Board Plus	min. 4' x 4'	PA 110	Polyisocyanurate /perlite insulation board	NRG Barriers, Inc.
Multi-Max	min. 4' x 4'	PA 110	Polyisocyanurate insulation board	RMAX
Multi-Max FA	min. 4' x 4'	PA 110	Polyisocyanurate insulation board	RMAX
Thermaroof Composite	min. 4' x 4'	PA 110	Polyisocyanurate /perlite insulation board	RMAX
UltraGard Gold II	min. 4' x 4'	PA 110	Polyisocyanurate insulation board	Schuller
Fesco Foam SP	min. 4' x 4'	PA 110	Polyisocyanurate /perlite insulation board	Schuller
Hy-Therm AP	min. 4' x 4'	PA 110	Polyisocyanurate insulation board	Celotex
Hy-Tec Composite	min. 4' x 4'	PA 110	Polyisocyanurate /perlite insulation board	Celotex
High Density Wood Fiberboard	min. 4' x 4'	PA 110	Non-asphaltic fiberboard insulation board	Celotex
Sturdi-Top/High Density Wood Fiberboard	min. 4' x 4'	PA 110	Non-asphaltic fiberboard insulation board	Georgia Pacific
Structodek	min. 4' x 4'	PA 110	Non-asphaltic fiberboard insulation board	Wood Fiber Industries
Dekfast #14	various lengths	PA 110	Insulation fastening system	Construction Fasteners, Inc.
Dekfast #15	various lengths	PA 110	Insulation fastening system	Construction Fasteners, Inc.
Dekfast Hex Plate		PA 110	Insulation fastening system	Construction Fasteners, Inc.
Roofgrip #14		PA 114	Insulation fastening system	ITW-Buildex
Buildex Flat Bottom Plate		PA 114	Insulation fastening system	ITW-Buildex
Polymer GypTec		PA 114	Insulation fastening system	ITW-Buildex
Polymer GypTec Metal Plate		PA 114	Insulation fastening system	ITW-Buildex
Olympic #14	various	PA 114	Insulation fastening system	Olympic Mfg. Group
Olympic Standard Fastener		PA 114	Insulation fastening system	Olympic Mfg. Group
Olympic G-2		PA 114	Insulation fastening system	Olympic Mfg. Group
C-R Base Felt Fastener		PA 114	Insulation fastening system	Olympic Mfg. Group

Frank Zuloaga, RRC
Roofing Plans Examiner

Products	Dimensions	Test Specifications	Product Description	Manufacturer
C-R Base Sheet Disc		PA 114	Insulation fastening system	Olympic Mfg. Group
Rawl #14	various with 3" steel insulation plate	PA 114	Insulation fastening system	Rawlplug Co.
Rawlite	.437" diameter with 3" diameter steel stress plate	PA 114	Insulation fastening system	Rawlplug Co.
Insul-Fixx	various with 3" steel insulation plates	PA 114	Insul-Fixx Fastening System with steel stress plates	SFS Stadler
TruFast	various with stell stress plate	PA 114	TruFast HD and MP-3 fastening systems	TruFast Corp.

EVIDENCE SUBMITTED:

Test Agency	Test Identifier	Description	Date
Underwriters Laboratories, Inc.	Letter	Fire Classification - see current directory	07/09/93
Underwriters Laboratories, Inc.	Letter	Fire Classification - see current directory	10/20/89
Underwriters Laboratories, Inc.	90NK20845	Fire Classification - see current directory	10/10/90
Underwriters Laboratories, Inc.	88NK20089	Fire Classification - see current directory	01/11/89
Underwriters Laboratories, Inc.	89NK8606	Fire Classification - see current directory	05/31/89
Underwriters Laboratories, Inc.	88NK1932	Fire Classification - see current directory	12/08/93
Underwriters Laboratories, Inc.	89NK3270	Fire Classification - see current directory	02/27/89
Underwriters Laboratories, Inc.	87NK28449	Fire Classification - see current directory	03/22/88
Underwriters Laboratories, Inc.	88NK3242	Fire Classification - see current directory	08/08/88
Underwriters Laboratories, Inc.	85NK2714	Fire Classification - see current directory	11/18/85
Underwriters Laboratories, Inc.	86NK23356	Fire Classification - see current directory	01/26/87
Underwriters Laboratories, Inc.	89NK15966	Fire Classification - see current directory	03/12/90
Underwriters Laboratories, Inc.	87NK13007	Fire Classification - see current directory	08/21/87
Underwriters Laboratories, Inc.	86NK30106	Fire Classification - see current directory	01/26/87
Underwriters Laboratories, Inc.	88NK23629	Fire Classification - see current directory	01/03/89
Underwriters Laboratories, Inc.	88NK18694	Fire Classification - see current directory	11/23/88
Underwriters Laboratories, Inc.	87NK20937	Fire Classification - see current directory	11/06/87

Frank Zuloaga, RRC
Roofing Plans Examiner

Test Agency	Test Identifier	Description	Date
Underwriters Laboratories, Inc.	87NK20936	Fire Classification - see current directory	11/10/87
Underwriters Laboratories, Inc.	91NK15494	Fire Classification - see current directory	02/28/92
Underwriters Laboratories, Inc.	90NK16256	Fire Classification - see current directory	02/27/91
Underwriters Laboratories, Inc.	91NK7843	Fire Classification - see current directory	08/06/91
Factory Mutual Research Corporation	J.I. #1V1A7.AM	Fastener Approval	06/25/92
Factory Mutual Research Corporation	J.I. #1W3A4.AM	Wind Uplift	12/01/92
Factory Mutual Research Corporation	J.I. #1T7A3.AM	Wind Uplift and Fire Classification	01/18/92
Factory Mutual Research Corporation	J.I. #1V6A9.AM	Wind Uplift and Fire Classification	02/27/92
Factory Mutual Research Corporation	J.I. #2W6A2.AM	Wind Uplift	06/25/93
SBCCI	Report No. 9051	Compliance	07/01/90
ICBO	Report No. 4482	Evaluation report	08/01/88
Factory Mutual Research Corporation	J.I.# 2X9A8.AM	Wind Uplift Report	06/14/94

Frank Zuloaga, RRC
Roofing Plans Examiner

Membrane Type: Single Ply, EPDM, Reinforced, Nonreinforced

Deck Type 5I: Cementitious Wood Fiber, Insulated, New Construction

Deck Description: Cementitious wood fiber

System Type C: All layers of insulation simultaneously attached; membrane fully adhered.

All General and System Limitations shall apply.

Insulation Base Layer	Fastener Type	Fastening Detail No.	Fasteners Per Board	Fastener Density
Approved Type(s): **ISO 95+ GL, Rhoflex Isocyanurate GL, E'NRG'Y II, E'NRG'Y PSI-25, UltraGard Gold, ACFoam II**				
Minimum: 1.4" x 4' x 4'	Firestone Polymer	[3]	8	1:2 ft^2
Minimum: 1.4" x 4' x 4'	Buildex Polymer	[3]	8	1:2 ft^2
Approved Type(s): **Multi-Max FA**				
Minimum: 1.5" x 4' x 4'	Firestone Polymer	[3]	8	1:2 ft^2
Minimum: 1.5" x 4' x 4'	Buildex Polymer	[3]	8	1:2 ft^2

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

Insulation Top Layer	Fastener Type	Fastening Detail No.	Fasteners Per Board	Fastener Density
Approved Type(s): (Optional) **FiberTop C, FiberTop E, FiberTop S**				
Minimum: 1" x 4' x 4'	Firestone Polymer	[3]	8	1:2 ft^2
Minimum: 1" x 4' x 4'	Buildex Polymer GypTec	[3]	8	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 Miami-Dade County Testing Application Standard TAS 105 to confirm compliance with the wind load requirements set forth in Chapter 23 of the S.F.B.C. Please refer to Miami-Dade County 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

Maximum Fire Classification: See General Limitation #1

Frank Zuloaga, RRC
Roofing Plans Examiner

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 applied 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 may 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 TAS 105. If the fastener value, as field-tested, is 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 the 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 or Architect may be submitted. Said revised fastener spacing utilize the withdrawal resistance value taken from Miami-Dade Protocol TAS 105 and calculations in compliance with Miami-Dade Roofing Application Standard RAS 117.

7 Perimeter and corner areas shall comply with the enhanced uplift pressure of these areas, as calculated in compliance with Chapter 23 of the South Florida Building Code. Fastener densities shall be increase for both insulation and base sheet as needed calculated in compliance with Miami-Dade Roofing Application Standard TAS 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 Miami-Dade County Roofing Application Standard TAS 111 and the wind load requirements of Chapter 23 of the South Florida Building Code.

9 The maximum designed pressure limitation listed shall be applicable to all roof pressure zones (i.e. field, perimeters, corners). No 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.)**

Frank Zuloaga, RRC
Roofing Plans Examiner

NOTICE OF ACCEPTANCE STANDARD CONDITIONS

1 Renewal of this Acceptance (approval) shall be considered after a renewal application has been filed and the original submitted documentation, including test supporting data, engineering documents, are no older than eight (8) years.

2 Any and all approved products shall be permanently labeled with the manufacturer's name, city, state, and the following statement: "Miami-Dade County Product Control Approved", or as specifically stated in the specific conditions of this Acceptance.

3 Renewals of Acceptance will not be considered if:
a) There has been a change in the South Florida Building Code affecting the evaluation of this product and the product is not in compliance with the code changes;
b) The product is no longer the same product (identical) as the one originally approved;
c) If the Acceptance holder has not complied with all the requirements of this acceptance, including the correct installation of the product;
d) The engineer who originally prepared, signed and sealed the required documentation initially submitted, is no longer practicing the engineering profession.

4 Any revision or change in the materials, use, and/or manufacture of the product or process shall automatically be cause for termination of this Acceptance, unless prior written approval has been requested (through the filing of a revision application with appropriate fee) and granted by this office.

5 Any of the following shall also be grounds for removal of this Acceptance:
a) Unsatisfactory performance of this product or process;
b) Misuse of this Acceptance as an endorsement of any product, for sales, advertising or any other purposes.

6 The Notice of Acceptance 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 Notice of Acceptance is displayed, then it shall be done in its entirety.

7 A copy of this Acceptance as well as approved drawings and other documents, where it applies, shall be provided to the user by the manufacturer or its distributors and shall be available for inspection at the job site at all times. The copies need not be resealed by the engineer.

8 Failure to comply with any section of this Acceptance shall be cause for termination and removal of Acceptance.

9 This Acceptance contains pages 1 through 9.

END OF THIS ACCEPTANCE

Frank Zuloaga, RRC
Roofing Plans Examiner