



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

PRODUCT CONTROL NOTICE OF ACCEPTANCE

W. P. Hickman Systems, Inc.
30700 Solon Industrial Parkway
Solon OH 44139

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

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

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

Your application for Product Approval of:

Conventional Bur System-Cementitious Wood Fiber Deck

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 approval shall not be valid after the expiration date stated below. BCCO reserves the right to secure this product or material at anytime 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 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.: 00-0208.12

Expires: 08/01/2003

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 Dade County, Florida under the conditions set forth above.

Francisco J. Quintana, R.A.
Director

Miami-Dade County
Building Code Compliance Office

Approved: 07/20/2000



ROOFING ASSEMBLY APPROVAL

Category: Roofing
Sub-Category: Built-up Roofing
Deck Type: Cementitious Wood Fiber
Maximum Design Pressure -45 psf
Fire Classification: See General Limitation #1
 Approval Date: **July 20, 2000**
 Expiration Date: **August 01, 2003**

TRADE NAMES OF PRODUCTS MANUFACTURED OR LABELED BY APPLICANT:

<u>Product</u>	<u>Dimensions</u>	<u>Test Specification</u>	<u>Product Description</u>
Aluminum Shield	5, 55 gallons	ASTM D 1227 type I	An asphalt based, asbestos free, non-fibred aluminized coating.
ElastoShield	5, 55 gallons	ASTM D 1227 type III	A polymer modified, asbestos free asphalt roofing emulsion.
HK Aluminum Shield	5, 55 gallons	ASTM D 2824 Type I	Asphalt based, asbestos free non-fibred aluminum paint.
HK Aluminum Shield Fibred	5, 55 gallons	ASTM D 2824 type III	Asphalt based, asbestos free aluminized coating.
HK ReCoat	5, 55 gallons	ASTM D 1227 type III	An asphalt clay, asbestos free roofing emulsion.
BUR Plus™ 101	Kegs	ASTM D 312	Approved, Type III asphalt.
BUR Plus™ 202	40 lb. boxes	ASTM D 312	Approved modified SEBS asphalt.
BUR Plus™ 303	40 lb. boxes	ASTM D 312	Approved, modified SEBS asphalt.
BUR Plus™ 404	40 lb. boxes	ASTM D 312	Approved, heavy modified SEBS asphalt.
BUR Plus™ 505	40 lb. boxes	ASTM D 450	Approved, modified coal tar pitch adhesive.
BUR Plus™ 606	40 lbs. boxes	ASTM D 312	Approved, modified SEBS asphalt.
HK Tar Plus	Kegs	ASTM D 450	Approved, modified coal tar pitch
Multi-Ply Adhesive	5, 55 gallon pails	proprietary	Asphalt based, asbestos free adhesive.
Multi-Ply Adhesive-SEBS	5, 55 gallon pails	proprietary	Asphalt based, asbestos free SEBS modified adhesive.
HK Tarred Felt	39.5" x 333'	ASTM D 2626	Organic roofing felt saturated with coal tar.
HK Tarred Glass	39.5" x 333'	ASTM D 4990	Fiberglass sheet impregnated with coal tar.
BUR Plus™ Polyester Ply	39.5" x 333'	proprietary	A 170 gram/m ² uncoated polyester ply sheet.
Multi-Ply Glass CL	36" x 72'; weight: 33 lbs./sq.	ASTM D 2178	Tri-laminated polyester / glass / polyester mat coated with asphalt.
Multi-Ply Glass CL /W	39 3/8" x 99' x 45 mils	ASTM D 5147	SBS modified fiberglass reinforced base sheet.
Multi-Ply Glass	36" x 72'; weight: 33 lbs./sq.	ASTM D 2178	Fiberglass sheet coated with asphalt.
HK Glass Ply	36" x 180'	ASTM D 2178 Type IV	Type IV fiberglass base and/or ply sheet
Premium Ply	36" x 180'	ASTM D 2178 Type VI	Type VI fiberglass ply sheet.
Premium Ply W	39 3/8" x 165'	ASTM D 2178	Type VI fiberglass ply sheet.
Performance Ply	39.5" x 68'		Spunbonded, non-woven bitumen coated polyester sheet.


 Frank Zuloaga, RRC
 Roofing Product Control Examiner

<u>Product</u>	<u>Dimensions</u>	<u>Test Specification</u>	<u>Product Description</u>
Pika Ply SS-2	36" x 68'		SEBS polymer modified asphalt, polyester reinforced, smooth surfaced membrane.
Hickman Premium Cap	39 ³ / ₈ " x 33'	ASTM D 3909	Fiberglass reinforced mineral surface cap sheet.
Weather Ply	39.5" x 68'		Spunbonded, non-woven bitumen coated polyester sheet.

EVIDENCE SUBMITTED:

<u>Test Agency</u>	<u>Test Identifier</u>	<u>Test Name/Report</u>	<u>Date</u>
Factory Mutual	PA 114 - FMRC 4470	J.I. 1V9A3.AM	11/07/92
Factory Mutual	PA 114 - FMRC 4470	J.I. 0W7A4.AM	02/09/93
Factory Mutual	PA 114 - FMRC 4470	J.I. 0X2A0.AM	03/30/93
Factory Mutual	PA 114 - FMRC 4470	J.I. 0P3A6.AM	01/15/88
Factory Mutual	PA 114 - FMRC 4470	J.I. 1R4A2.AM	03/14/90
Factory Mutual	PA 114 - FMRC 4470	J.I. 1R6A2.AM	04/21/91
Factory Mutual	PA 114 - FMRC 4470	J.I. 1T7A2.AM	02/28/92
Factory Mutual	PA 114 - FMRC 4470	J.I. 1T7A1.AM	01/10/92
Factory Mutual	PA 114 - FMRC 4470	J.I. 0X0A9.AM	03/25/94
Factory Mutual	PA 114 - FMRC 4470	J.I. 0W6A2.AM	02/05/93
Factory Mutual	PA 114 - FMRC 4470	J.I. 0X7A4.AM	08/26/93
Factory Mutual	PA 114 - FMRC 4470	J.I. 3Y4A1.AM	09/20/95
Factory Mutual	PA 114 - FMRC 4470	J.I. 4D9A5.AM	01/15/99
Factory Mutual	PA 114 - FMRC 4470	J.I. 1D7A4.AM	11/09/98
Warnock Hersey	PA 114 - ASTM E 108	495-R-0344	01/01/90
Warnock Hersey	PA 114 - ASTM E 108	495-R-0400	01/01/90
Warnock Hersey	PA 114 - ASTM E 108	495-R-0430	01/01/90
Warnock Hersey	PA 114 - ASTM E 108	495-R-0447	01/01/90
Warnock Hersey	PA 114 - ASTM E 108	495-R-0526	01/01/90
Warnock Hersey	PA 114 - ASTM E 108	495-R-0400A	01/01/90
Exterior Research & Design, LLC	PA 114(J)	#4473.10.97-1	11/17/97



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APPROVED ASSEMBLIES:

- Membrane Type:** Conventional BUR
- Deck Type 5I:** Cementitious Wood Fiber, Insulated, New Construction, Reroof
- Deck Description:** Cementitious wood fiber
- System Type B:** Base layer of insulation mechanically fastened, top layer adhered with approved asphalt.

All General and System Limitations apply.

<u>Insulation Base Layer</u>	<u>Fastener Type</u>	<u>Fastening Detail No.</u> (see RAS 117)	<u>Fasteners Per Board</u>	<u>Fastener Density</u>
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one or more layers of any of the following insulations under those listed as Top Layer:

Approved Type(s): **ACFoam II, AC Foam Composite, Isotherm R**

Minimum: 1.3" x 3' x 4'	Rawlite	[2]	4	1:3 ft ²
Minimum: 1.3" x 3' x 4'	Polymer Gyptec	[2]	4	1:3 ft ²
Minimum: 1.3" x 3' x 4'	NTB Magnum	[2]	4	1:3 ft ²

Approved Type(s): **Pyrox, Whiteline**

Minimum: 1.3" x 3' x 4'	Rawlite	[2]	4	1:3 ft ²
Minimum: 1.3" x 3' x 4'	Polymer Gyptec	[2]	5	1:2.4 ft ²
Minimum: 1.3" x 3' x 4'	NTB Magnum	[2]	6	1:2 ft ²

Approved Type(s): **E'NRG'Y-2, Iso 95+**

Minimum: 1.4" x 3' x 4'	Rawlite	[2]	4	1:3 ft ²
Minimum: 1.4" x 3' x 4'	Polymer Gyptec	[2]	4	1:3 ft ²
Minimum: 1.4" x 3' x 4'	NTB Magnum	[2]	4	1:3 ft ²

Approved Type(s): **Isoroc**

Minimum: 1.5" x 3' x 4'	Rawlite	[2]	4	1:3 ft ²
Minimum: 1.5" x 3' x 4'	Polymer Gyptec	[2]	4	1:3 ft ²
Minimum: 1.5" x 3' x 4'	NTB Magnum	[2]	4	1:3 ft ²

Approved Type(s): **E'NRG'Y-2 Plus, Hy-Tec, Hy-Tec II, Hy-Tec Composite, Fesco Foam**

Minimum: 1.5" x 3' x 4'	Rawlite	[2]	3	1:4 ft ²
Minimum: 1.5" x 3' x 4'	Polymer Gyptec	[2]	4	1:3 ft ²
Minimum: 1.5" x 3' x 4'	NTB Magnum	[2]	3	1:4 ft ²

Approved Type(s): **ACFoam II, USIso**

Minimum: 1.3" x 4' x 4'	Rawlite	[3]	4	1:2 ft ²
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<u>Insulation Base Layer</u>	<u>Fastener Type</u>	<u>Fastening Detail No.</u> (see RAS 117)	<u>Fasteners Per Board</u>	<u>Fastener Density</u>
Approved Type(s): Fesco Foam SP				
Minimum: 1.5" x 4' x 4'	Rawlite	[3]	6	1:2.7 ft ²
Minimum: 1.5" x 4' x 4'	NTB Magnum	[3]	6	1:2.7 ft ²
Approved Type(s): Celotherm, ConPerl, GAFTEMP Permalite, FescoBoard Perlite				
Minimum: ¾" x 2' x 4'	Rawlite	[1]	4	1:2 ft ²
Minimum: ¾" x 2' x 4'	Polymer Gyptec	[1]	4	1:2 ft ²
Minimum: ¾" x 2' x 4'	NTB Magnum	[1]	4	1:2 ft ²
Approved Type(s): BP High Strength, FM-90 Traffic Top/High Density, GAFTEMP High Density, Roof Insulation Board, High Density Wood Fiberboard, Sturdi-Top, Fiber Base HD1, HD6, Structodeck, Esgard, Celotex Fiberboard, GAFTEMP Fiberboard, Huebert Fiberboard				
Minimum: ¾" x 3' x 4'	Rawlite	[1]	2	1:4 ft ²
Minimum: ¾" x 3' x 4'	Polymer Gyptec	[1]	4	1:2 ft ²
Minimum: ¾" x 3' x 4'	NTB Magnum	[1]	4	1:2 ft ²
Approved Type(s): Fiberglas				
Minimum: 1 ⁵ / ₁₆ " x 4' x 4'	Rawlite	[3]	6	1:2.7 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 Miami-Dade County Roofing Application Standard RAS 117 for fastener details).

<u>Insulation Top Layer</u>	<u>Fastener Type</u>	<u>Fastening Detail No.</u> (see RAS 117)	<u>Fasteners Per Board</u>	<u>Fastener Density</u>
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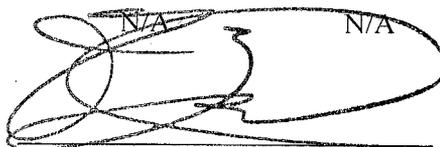
one or more layers of any of the following insulations

Approved Type(s): BP High Strength, FM-90 Traffic Top/High Density, GAFTEMP High Density, Roof Insulation Board, High Density Wood Fiberboard, Sturdi-Top, Fiber Base HD1, HD6, Structodeck, Esgard, Celotex Fiberboard, GAFTEMP Fiberboard, Huebert Fiberboard				
Minimum: ½" x 4' x 4'	N/A	N/A	N/A	N/A

Approved Type(s): Celotherm, ConPerl, GAFTEMP Permalite, FescoBoard Perlite				
Minimum: ¾" x 2' x 4'	N/A	N/A	N/A	N/A

Approved Type(s): Paroc Cap Board				
Minimum: ¾" x 4' x 4'	N/A	N/A	N/A	N/A

Approved Type(s): Fiberglas				
Minimum: 1 ⁵ / ₁₆ " x 4' x 4'	N/A	N/A	N/A	N/A


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 Roofing Product Control Examiner

Note: Optional top layer of insulation shall be adhered with approved asphalt within the EVT range and at a rate of 20-40 lbs. Please refer to Miami-Dade County 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: (Optional) One ply of Pika Ply SS-2, Premium Ply, HK Glass Ply, Multi-Ply Glass, Multi-Ply Glass CL, Multi-Ply Glass CL/W, Performance Ply, Weather Ply or an approved ASTM D 4601 base sheet adhered with approved asphalt applied within the EVT range and at a rate of 20-40 lbs./sq.; or, one ply of Performance Ply, Weather Ply, Pika Ply SS-2, Multi-Ply Glass, or Multi-Ply Glass CL adhered with BUR Plus 505 or HK Tar Plus at a rate of 20-40 lbs./sq.; or, one ply of Performance Ply, Weather Ply, Pika Ply SS-2, Multi-Ply Glass, Multi-Ply Glass CL, or Multi-Ply Glass CL/W adhered with Multi-Ply Adhesive at a rate of 2.5 to 3 gal./sq.

Ply Sheet: Two or more plies of Premium Ply, HK Glass Ply, BUR Plus Polyester Ply, Pika Ply SS-2, Multi-Ply Glass, Multi-Ply Glass CL, Multi-Ply Glass CL/W, Performance Ply, Weather Ply, Performance Ply W or an approved ASTM D 2178 ply sheet, in any combination, adhered to any of the base sheets noted above with approved asphalt applied within the EVT range and at a rate of 20-40 lbs./sq.; or, two or more plies of Pika Ply SS-2, Multi-Ply Glass, Multi-Ply Glass CL, HK Tarred Felt or HK Tarred Glass, in any combination, adhered to Performance Ply, Weather Ply, Pika Ply SS-2, Multi-Ply Glass, or Multi-Ply Glass CL base sheets with BUR Plus 505 or HK Tar Plus at a rate of 20-40 lbs./sq.; or, two or more plies of Pika Ply SS-2, Multi-Ply Glass, Multi-Ply Glass CL, Multi-Ply Glass CL/W, Performance Ply, Weather Ply or Performance Ply W, in any combination, adhered to Pika Ply SS-2, Multi-Ply Glass, Multi-Ply Glass CL, Multi-Ply Glass CL/W, Performance Ply or Weather Ply base sheets with Multi-Ply Adhesive at a rate of 2.5 to 3 gal./sq.

Surfacing: (Optional) Install one of the following (review published fire classification listings for applicable installation requirements):

1. 400 lb./sq. gravel or 300 lb./sq. slag in a flood coat of approved asphalt at a rate of 40 lb./sq. or in a flood coat of BUR Plus 505 or HK Tar Plus at a rate of 75 lbs./sq.
2. 400 lb./sq. gravel or 300 lb./sq. slag in Multi-Ply Adhesive or Multi-Ply Adhesive SEBS at a rate of 4-5 gal./sq.
3. 60 lbs. of roofing granules embedded in Multi-Ply Adhesive at a rate of 3-4 gal./sq.
4. ElastoShield or HK ReCoat at a rate of 5 gal./sq. followed by HK Aluminum Shield at a rate of 0.75gal./sq.
5. HK Aluminum Shield Fibrated at a rate of 1.5-2.0 gal./sq.



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

Maximum Fire
Classification: See General Limitation #1

Maximum Slope: See General Limitation #1

CEMENTITIOUS WOOD FIBER SYSTEM LIMITATIONS:

- 1 If the deck has a fully bonded felt facer, a separation board or insulation board may be fully adhered to the deck in full moppings of hot asphalt applied within the EVT range and at a rate of 20-40 lbs./sq. Joints shall be stripped in prior to application of the separation board or insulation board.
- 2 A red rosin sheet shall be installed on all cementitious wood decks to eliminate asphalt seepage and bonding of base sheet or anchor sheet to plank and deck.



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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 PA 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 or Architect may be submitted. Said revised fastener spacing shall utilize the withdrawal resistance value taken from Miami-Dade County Protocol PA 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 calculated in compliance with Miami-Dade County 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 Miami-Dade County Roofing Application Standard PA 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, 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.)**



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Roofing Product Control 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 Product Control Examiner