



**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)

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

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 the BCCO and accepted by the Building Code and Product Review Committee 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 Florida Building Code and the High Velocity Hurricane Zone of the Florida Building Code.

DESCRIPTION: Modified Bitumen over LWC

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 No. 01-0919.07 and consists of pages 1 through 9.

The submitted documentation was reviewed by Jorge L. Acebo.



**NOA No.: 06-0809.08
Expiration Date: 11/15/11
Approval Date: 10/19/06
Page 1 of 9**

ROOFING SYSTEM APPROVAL:

Category: Roofing
Sub-Category: SBS Modified Bitumen
Deck Type: Lightweight Concrete
Maximum Design Pressure -82.5 psf
Fire Classification: See General Limitation #1

TRADE NAMES OF PRODUCTS MANUFACTURED OR LABELED BY APPLICANT:

TABLE 1

<u>Product</u>	<u>Dimensions</u>	<u>Test Specification</u>	<u>Product Description</u>
Multi-Ply Glass CL	36" x 72'	ASTM D 4601	Tri-laminated polyester / glass / polyester mat coated with asphalt.
Multi-Ply Glass	36" x 72'	ASTM D 4601	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.
Performance Ply	36" x 72'	Proprietary	Polyester reinforced asphalt saturated ply sheet
Weather Ply	36" x 72'	Proprietary	Polyester reinforced asphalt saturated ply sheet
Performance Ply FR Mineral	39" x 32.8"	ASTM D 6164	Polyester reinforced, fire retardant, mineral surfaced cap sheet
Weather Ply FR Mineral	39" x 32.8"	ASTM D 6164	Polyester reinforced, fire retardant, mineral surfaced cap sheet
Pika Ply 808 MSFR	39" x 32.8"	ASTM D 6162	SBS modified, composite reinforced, mineral surfaced, fire resistant cap sheet.
Pika Ply 808 SS	39" x 32.8'	ASTM D 6162	SBS modified, composite reinforced, smooth surfaced ply or cap sheet.
Duoflex S FR	39 x 32.8'	ASTM D 6223	APP/APO modified, composite reinforced, smooth surfaced, ply or cap sheet.
Duoflex G FR	39' x 32.8"	ASTM D 6223	APP/APO modified, composite reinforced, granule surfaced, fire resistant cap sheet.
Pika Ply Supreme FR	39" x 32.8'	ASTM D 6162	SBS/SIS/ES, composite reinforced, granule surfaced ply or cap sheet.
Weather Ply MA FR	39" x 32.8'	ASTM D 6222	APP/APO, polyester reinforced, granule surfaced, fire resistant cap sheet
BUR Plus™ 101	Kegs	ASTM D 312	Approved Type III Asphalt.
BUR Plus™ 102	Kegs	ASTM D 312	Approved Type III Asphalt.
BUR Plus™ 200	Kegs	ASTM D 312	Approved modified SEBS asphalt.



NOA No.: 06-0809.08
 Expiration Date: 11/15/11
 Approval Date: 10/19/06
 Page 2 of 9

<u>Product</u>	<u>Dimensions</u>	<u>Test Specification</u>	<u>Product Description</u>
BUR Plus™ 201	Kegs	ASTM D 312	Approved modified SEBS asphalt.
BUR Plus™ 202	60 lb. Kegs	ASTM D 412	Approved polymer modified asphalt.
BUR Plus™ 303	40 lb. boxes	ASTM D 6152	Approved modified SEBS asphalt.
BUR Plus™ 404	40 lb. boxes	ASTM D 6152	Approved modified SEBS asphalt.
BUR Plus™ 505	52 lb. boxes	ASTM D 450	Approved, polymer modified coal tar pitch adhesive.
BUR Plus™ 606	40 lbs. boxes	proprietary	Approved, modified SEBS asphalt.
BUR Plus Polyester Ply	39" x 333'	ASTM D 5726	A 170 g/m ² uncoated polyester ply sheet.
Multi-Ply Adhesive	5, 55 gallon pails	proprietary	Asphalt based, asbestos free SEBS adhesive.

EVIDENCE SUBMITTED:

<u>Test Agency/Identifier</u>	<u>Test Name/Report</u>	<u>Report No.</u>	<u>Date</u>
Factory Mutual Research Corporation	Class 4470	J.I. 4D9A5.AM (weatherply)	12/31/98
		J.I. 3007285 (bur plus 200 & 201)	05/16/00
		J.I. 0B3A9.AM (performance ply)	08/05/97
		J.I. 1D7A4.AM (concrecel)	
		J.I. 3007285 (BUR Plus 200 and 201)	05/16/00
Structural Research, Inc.	TAS 114	October 19, 2000 (Pika Ply Supreme FR)	10/19/00
Exterior Research & Design, LLC.	TAS 114	#4474.11.97-1	11/30/97
		#4474.07.98-1	07/28/98
		#4473.10.97-1	10/30/97
		#4472.03.96-1	03/30/96
		#4470.05.95-1	05/30/95



APPROVED SYSTEMS:

- Deck Type 4I:** Lightweight Concrete, Insulated
- Deck Description:** Cellular or Aggregate Lightweight Concrete (Min.300 psi)
- System Type A:** Anchor sheet mechanically fastened; one or more layers of insulation adhered with approved asphalt.
- Deck:** 18-22 ga. Type B Grade E steel deck shall be secured 6" o.c. to structural supports spaced a maximum of 5 ft. on center with the screws or puddle welds. Side laps shall be secured with ITW Traxx/I screws 18" o.c.

All General and System Limitations apply.

- Anchor Sheet:** One ply of Multi-Ply Glass CL, Multi-Ply Glass, Performance Ply or Pika Ply SS-2 fastened to the deck as described below.
- Fastening#1:** Fasten anchor sheet with ES Products FM-90 fasteners, FM-60 fasteners with FM-30 disks or Olympic CR Base Felt Fasteners spaced 7" o.c. at a 4" side lap and 7" o.c. in two staggered rows in the center of the sheet.
- Fastening#2:** Fasten anchor sheet (excluding Multi-Ply Glass and inverted Hickman Premium Cap) with Simplex Base-Lok Fasteners or SFS Stadler Base-Lok Fasteners spaced 10" o.c. at a 4" side lap and 10" o.c. in two staggered rows in the center of the sheet.

<u>Insulation Base Layer</u>	<u>Fastener Density ft²</u>	<u>Fastener Type</u>
one or more layers of any of the following insulations under those listed as Top Layer: E'NRG'Y-2 Minimum: 1.5" thick	N/A	N/A
<u>Insulation Top Layer</u>	<u>Fastener Density ft²</u>	<u>Fastener Type</u>
one or more layers of any of the following insulations High Density Wood Fiberboard Minimum: 1/2" thick	N/A	N/A
Dens-Deck Minimum: 1/4" thick	N/A	N/A
Fesco Board Minimum: 3/4" thick	N/A	N/A

Note: All insulation shall be adhered to the anchor sheet in full moppings of approved hot asphalt within the EVT range and at a rate of 20-40 lbs/100 ft². Please refer to RAS No. 117 for insulation attachment. Insulations 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 face down.



Base Sheet: (Optional if ply sheet used) One ply of Multi-Ply Glass CL, Multi-Ply Glass, BUR Plus Polyester Ply, Performance Ply, Pika Ply SS-2 or Weather Ply adhered to the top layer of the insulated substrate with a full mopping of BUR Plus 101, 102, 200, 201, 202, 303, 404, 606, Type III, Type IV or other approved asphalt applied within the EVT range and at a rate of 20-40 lbs./sq.

Ply Sheet: (Optional if base sheet used) One or two plies of Performance Ply, Pika Ply SS-2, BUR Plus Polyester Ply, Weather Ply, Premium Ply or HK Glass Ply adhered with a full mopping of BUR Plus 101, 102, 200, 201, 202, 303, 404, 606, Type III, Type IV or other approved asphalt within the EVT range and at a rate of 20-40 lbs./sq.

Membrane: One ply of Performance Ply FR Mineral, Weather Ply FR Mineral, Pika Ply 808 MSFR, Pika Ply 808 SS, Pika Ply Supreme FR, Weather Ply MA FR, Duoflex G FR or Duoflex S FR adhered with a full mopping of BUR Plus 101, 102, 200, 201, 202, 303, 404, 606, Type III, Type IV or other approved asphalt within the EVT range and at a rate of 20-40 lbs./sq.

Surfacing: (Optional) Use one of the following for those systems that require surfacing.

1. Flood coat of BUR Plus 101, 102, 200, 201, 202, 303, 404, 606, Type III or Type IV asphalt with an application rate of 60 lbs./sq. plus gravel or slag at an application rate of 400 lbs/sq.
2. Flood coat of BUR Plus 505 with an application rate of 75 lbs./sq. plus gravel or slag at an application rate of 500 lbs/sq.
3. Multi-Ply Adhesive with an application rate of 4-5 gal/sq, plus gravel or slag at an application rate of 400 lbs/sq or 300 lbs/sq, respectively.
4. Multi-Ply Adhesive with an application rate of 3-4 gal/sq, plus granules at an application rate of 60 lbs/sq.

Maximum Design Pressure: -45 psf. (See General Limitation #7.)



- Deck Type 4:** Lightweight Concrete
- Deck Description:** Approved Cellular Lightweight Concrete over steel or concrete substrate, Minimum 300 psi.
- System Type E(1):** Base sheet mechanically fastened.

All General and System Limitations apply.

- Base Sheet:** One ply of Multi-Ply Glass CL, Multi-Ply Glass, Performance Ply or Pika Ply SS-2 fastened to the deck as described below.
- Fastening#1:** Fasten anchor sheet with ES Products FM-90 fasteners, FM-60 fasteners with FM-30 disks or Olympic CR Base Felt Fasteners spaced 7" o.c. at a 4" side lap and 7" o.c. in two staggered rows in the center of the sheet.
- Fastening#2:** Fasten anchor sheet (excluding Multi-Ply Glass and inverted Hickman Premium Cap) with Simplex Base-Lok Fasteners or SFS Stadler Base-Lok Fasteners spaced 10" o.c. at a 4" side lap and 10" o.c. in two staggered rows in the center of the sheet.
- Ply Sheet:** (Optional if base sheet used) One or two plies of Performance Ply, Pika Ply SS-2, BUR Plus Polyester Ply, Weather Ply, Premium Ply or HK Glass Ply adhered with a full mopping of BUR Plus 101, 102, 200, 201, 202, 303, 404, 606, Type III, Type IV or other approved asphalt within the EVT range and at a rate of 20-40 lbs./sq.
- Membrane:** One ply of Performance Ply FR Mineral, Weather Ply FR Mineral, Pika Ply 808 MSFR, Pika Ply 808 SS, Pika Ply Supreme FR, Weather Ply MA FR, Duoflex G FR or Duoflex S FR adhered with a full mopping of BUR Plus 101, 102, 200, 201, 202, 303, 404, 606, Type III, Type IV or other approved asphalt within the EVT range and at a rate of 20-40 lbs./sq.
- Surfacing:** (Optional) Use one of the following for those systems that require surfacing.
1. Flood coat of BUR Plus 101, 102, 200, 201, 202, 303, 404, 606, Type III or Type IV asphalt with an application rate of 60 lbs./sq. plus gravel or slag at an application rate of 400 lbs/sq.
 2. Flood coat of BUR Plus 505 with an application rate of 75 lbs./sq. plus gravel or slag at an application rate of 500 lbs/sq.
 3. Multi-Ply Adhesive with an application rate of 4-5 gal/sq. plus gravel or slag at an application rate of 400 lbs/sq or 300 lbs/sq, respectively.
 4. Multi-Ply Adhesive with an application rate of 3-4 gal/sq. plus granules at an application rate of 60 lbs/sq.
- Maximum Design Pressure:** -45 psf (See General Limitation #7.)



- Deck Type 4:** Lightweight Concrete
- Deck Description:** Concrecel, Lightweight Insulating Concrete, 300 psi. min over structural concrete deck.
- System Type E(2):** Base sheet mechanically fastened

All general and system limitations apply.

Base Sheet: One ply of Performance Ply fastened to the deck with Olympic CR Base Felt Fasteners spaced 7" o.c. at a 4" side lap and 7" o.c. in two staggered rows in the center of the sheet.

Ply Sheet: (Optional if base sheet used) One or two plies of Performance Ply Pika Ply SS-2, BUR Plus Polyester Ply, Weather Ply, Premium Ply or HK Glass Ply adhered with a full mopping of BUR Plus 101, 102, 200, 201, 202, 303, 404, 606, Type III, Type IV or other approved asphalt within the EVT range and at a rate of 20-40 lbs./sq.

Membrane: One ply of Performance Ply FR Mineral, Weather Ply FR Mineral, Pika Ply 808 MSFR, Pika Ply 808 SS, Pika Ply Supreme FR, Weather Ply MA FR, Duoflex G FR or Duoflex S FR adhered with a full mopping of BUR Plus 101, 102, 200, 201, 202, 303, 404, 606, Type III, Type IV or other approved asphalt within the EVT range and at a rate of 20-40 lbs./sq.

Surfacing: (Optional) Use one of the following for those systems that require surfacing.

1. Flood coat of BUR Plus 101, 102, 200, 201, 202, 303, 404, 606, Type III or Type IV asphalt with an application rate of 60 lbs./sq. plus gravel or slag at an application rate of 400 lbs/sq.
2. Flood coat of BUR Plus 505 with an application rate of 75 lbs./sq. plus gravel or slag at an application rate of 500 lbs/sq.
3. Multi-Ply Adhesive with an application rate of 4-5 gal/sq, plus gravel or slag at an application rate of 400 lbs/sq or 300 lbs/sq, respectively.
4. Multi-Ply Adhesive with an application rate of 3-4 gal/sq, plus granules at an application rate of 60 lbs/sq.

Maximum Design Pressure: -82.5 psf (See General Limitation #7.)



Deck Type 4: Lightweight Concrete

Deck Description: Concrecel, Lightweight Insulating Concrete, 300 psi. min over steel deck

System Type E(3): Base sheet mechanically fastened

All general and system limitations apply.

Deck: **Lightweight Concrete:** Slurry coat of Concrecel Concrete, min 43 lb/ft³ (689 kg/m³) wet cast density, is placed on the form deck filling the corrugations plus a min 1/4 in. (6 mm) above the top flange immediately followed by a single layer of min 1 in. (25 mm) thick to max. 12 in. (305 mm) thick Apache Holey Board Polystyrene Insulation. The Holey Board insulation is tapped in as it is placed to remove trapped air bubbles below and allowed to dry for 24 hours. The following day, the Holey board is inspected and any portions not bonded to the slurry coat below are removed and replaced. Over the Holey Board min 2 1/4 in. (57 mm) thick Concrecel Concrete topping, min 43 lb/ft³ (689 kg/m³) wet cast density, is placed. After setting to support foot traffic, Concrecel Curing Compound is applied at a nominal rate of 600 ft²/gal (14.7 m²/L).

Base Sheet: One ply of Performance Ply fastened to the deck with Olympic CR Base Felt Fasteners spaced 7" o.c. at a 4" side lap and 7" o.c. in two staggered rows in the center of the sheet.

Ply Sheet: (Optional if base sheet used) One or two plies of Performance Ply, Pika Ply SS-2, BUR Plus Polyester Ply, Weather Ply, Premium Ply or HK Glass Ply adhered with a full mopping of BUR Plus 101, 102, 200, 201, 202, 303, 404, 606, Type III, Type IV or other approved asphalt within the EVT range and at a rate of 20-40 lbs./sq.

Membrane: One ply of Performance Ply FR Mineral, Weather Ply FR Mineral, Pika Ply 808 MSFR, Pika Ply 808 SS, Pika Ply Supreme FR, Weather Ply MA FR, Duoflex G FR or Duoflex S FR adhered with a full mopping of BUR Plus 101, 102, 200, 201, 202, 303, 404, 606, Type III, Type IV or other approved asphalt within the EVT range and at a rate of 20-40 lbs./sq.

Surfacing: (Optional) Use one of the following for those systems that require surfacing.

1. Flood coat of BUR Plus 101, 102, 200, 201, 202, 303, 404, 606, Type III or Type IV asphalt with an application rate of 60 lbs./sq. plus gravel or slag at an application rate of 400 lbs/sq.
2. Flood coat of BUR Plus 505 with an application rate of 75 lbs./sq. plus gravel or slag at an application rate of 500 lbs/sq.
3. Multi-Ply Adhesive with an application rate of 4-5 gal/sq, plus gravel or slag at an application rate of 400 lbs/sq or 300 lbs/sq, respectively.
4. Multi-Ply Adhesive with an application rate of 3-4 gal/sq, plus granules at an application rate of 60 lbs/sq.

Maximum Design Pressure: -82.5 psf (See General Limitation #7.)



NOA No.: 06-0809.08
Expiration Date: 11/15/11
Approval Date: 10/19/06
Page 8 of 9

LIGHTWEIGHT INSULATING CONCRETE 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 Professional Engineer, Registered 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 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 side lap 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.)**

END OF THIS ACCEPTANCE



NOA No.: 06-0809.08
Expiration Date: 11/15/11
Approval Date: 10/19/06
Page 9 of 9