



**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)

**Commercial Innovations, Inc.
9105 Way Ave.
Cleveland, OH 44105-2197**

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 BCCO (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. BCCO reserves the right to revoke this acceptance, if it is determined by BCCO 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: Commercial Innovations Modified Bitumen Roof System Over Steel Deck

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 consists of pages 1 through 9.

The submitted documentation was reviewed by Jorge L. Acebo.



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ROOFING ASSEMBLY NOTICE OF ACCEPTANCE

Category: Roofing
Sub-Category: Modified Bitumen
Material: SBS/SIS/SEBS
Deck Type: Steel
Maximum Design Pressure -45 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>
Viking AB II	36" x 108'	ASTM D 4601, Type II	Type II, asphalt coated fiberglass base sheet.
Viking AG IV	36" x 180'	ASTM D 2178, Type IV	Type IV asphalt impregnated glass felt for use in conventional and modified bitumen built-up system.
Viking Poly Shield	40" x 324'	ASTM D 5726	Polyester felt for use in conventional and modified bitumen built-up roof systems.
Viking SPMC 4H	40" x 324'	ASTM D 6163	Polyester membrane for use in conventional and modified bitumen built-up roof systems.
Viking TG VI	36" x 180'	ASTM D 4990, Type I	Coal Tar impregnated glass felt for use in conventional and modified bitumen built-up systems.
Viking AOB	36" x 72'	ASTM D 2626	Asphalt coated organic base sheet.
Viking Walk Pads	24" x 36"		Rubber walking pad.
Viking AB Mastic	5 gallon	ASTM D 4586	Trowel grade, asphalt based roofing mastic for use in repair and patching against leaks in built-up asphalt roofs.
Viking TB Mastic	5 gallon		Trowel grade tar based roofing mastic for use in repair and patching.
Viking Sun Shield Fibered	5, 55 gallon	ASTM D 2824, Type III	High solids, aluminized roof coating.
Deck-Grabber II	3 gallon	Proprietary	Single component insulation adhesive
Viking AB II	36" x 108'	ASTM D 4601, Type II	Type II, asphalt coated fiberglass base sheet.



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APPROVED INSULATIONS:

TABLE 2

Product Name	Product Description	Manufacturer (With Current NOA)
Apache Pyrox, Apache White Line, Apache Pyrox PSI-25, Apache White Line PSI-25	Polyisocyanurate foam insulation	Apache Products Company
Apache Millox, Apache Millox-P	Composite polyisocyanurate insulation	Apache Products Company
ACFoam II, ACFoam III	Polyisocyanurate foam insulation	Atlas Energy Products
ACFoam Composite	Composite polyisocyanurate insulation board	Atlas Energy Products
Hytherm AP	Polyisocyanurate foam insulation	Dow
Hytherm Composite	Composite polyisocyanurate insulation	Dow
ISO 95+, ISO 95+ (25psi), ISO 95+GL	Polyisocyanurate foam insulation	Firestone
ISO 95+ Composite	Composite polyisocyanurate insulation board	Firestone
Extruded or Expanded Polystyrene Gypsum	Polystyrene Insulation Gypsum board	generic generic
High Density Wood Fiberboard	Wood fiber insulation board	generic
Perlite Insulation	Perlite insulation board	generic
DensDeck, DensDeck Prime, DensDeck Fireguard, DensDeck Prime Fireguard, DensDeck DuraGuard	Water resistant gypsum board	G-P Gypsum Corp.
H-Shield	Polyisocyanurate foam insulation	Hunter Panels, Inc.
H-Shield CG	Polyisocyanurate foam insulation	Hunter Panels, Inc.
H-Shield-P, H-Shield-WF	Composite Insulation board	Hunter Panels, Inc.
ENRGY-2	Polyisocyanurate foam insulation	Johns Manville
ENRGY-2 Plus, Composite, Fesco Foam	Composite Insulation board	Johns Manville
ENRGY-3	Polyisocyanurate foam insulation	Johns Manville
ENRGY-3 Plus	Composite Insulation board	Johns Manville
Multi-Max FA	Polyisocyanurate foam insulation	RMax
Thermarroof Composite	Composite Insulation board	RMax
UltraMax	Polyisocyanurate foam insulation	RMax
Multi-Max FA-3	Polyisocyanurate foam insulation	RMax
Thermarroof Composite-3	Composite insulation board	RMax
SECUROCK®	Gypsum board	US Gypsum



APPROVED FASTENERS:

TABLE 3

Fastener Number	Product Name	Product Description	Dimensions	Manufacturer (With Current NOA)
1.	Dekfast Fasteners #12, #14 & #15	Insulation fastener for wood, steel and concrete decks		Construction Fasteners Inc.
2.	Omega	Insulation fastener for wood and steel		Construction Fasteners Inc.
3.	Dekfast Hex Plate	Galvalume hex stress plate.	2 7/8" x 3 1/4"	Construction Fasteners Inc.
4.	Dekfast Lock Plate	Polypropylene locking plate.	3" x 3 1/4"	Construction Fasteners Inc.
5.	#12 Roofgrip Fasteners	Insulation fastener for wood and steel.		ITW Buildex Corp.
6.	Metal Plate	Galvalume stress plate.	3" round 3" square	ITW Buildex Corp.
7.	Gearlok Plastic Plate	Polypropylene round plate	3.2"	ITW Buildex Corp.
8.	Olympic Fastener #12 & #14	Insulation fastener		Olympic Manufacturing Group, Inc.
9.	Olympic Fastener ASAP	Pre-assembled Insulation fastener and plate		Olympic Manufacturing Group, Inc.
10.	Olympic Polypropylene	Polypropylene plastic plate	3.25" round	Olympic Manufacturing Group, Inc.
11.	Olympic G-2	3.5" round galvalume AZ55 steel plate	3.5" round	Olympic Manufacturing Group, Inc.
12.	Olympic Standard	3" round galvalume AZ50 steel plate	3" round	Olympic Manufacturing Group, Inc.
13.	Insul-Fixx Fastener	Insulation fastener for steel and wood decks		SFS Stadler, Inc.
14.	System ES-1	Pre-assembled Insulation fastener and plate		SFS Stadler, Inc.
15.	Insul-Fixx S Plate	3" round galvalume AZ50 steel plate	3" round	SFS Stadler, Inc.
16.	Insul-Fixx P Plate	3" round polyethylene stress plate	3" round	SFS Stadler, Inc.
17.	Tru-Fast	Insulation fastener for steel and wood decks		The Tru-Fast Corp.
18.	Tru-Fast Plates	3" round galvalume AZ55 steel plate	3" round	The Tru-Fast Corp.
19.	Tru-Fast Plates	Polyethylene plastic plate	3" round	The Tru-Fast Corp.



EVIDENCE SUBMITTED:

<u>Test Agency</u>	<u>Test Identifier</u>	<u>Description</u>	<u>Date</u>
Dynatech Engineering Corporation	#4530.05.95-1	Wind Uplift Classification	5/31/95
Factory Mutual Research Corporation	J.I. IVOA7.AM	FM 4470	02/21/95
	J.I. 1B4A7.AM	FM 4470	12/15/97
	J.I. 4B4A9.AM	FM 4470	12/31/97
	J.I. 0Y5A6.AM	FM 4470	09/08/97
	J.I. 3D3A5.AM	FM 4470	09/15/98
	J.I. 3004392	FM 4470	09/21/99
	3000637	FM 4470	4/26/00
	J.I. 0D9A0.AM	FM 4470	05/02/00
	J.I. 3004907	FM 4470	05/16/00
	J.I. 3009117	FM 4470	12/21/00
	3010113	FM 4470	11/18/02
	3019046	FM 4470	03/04/05
	3021718	FM 4470	04/11/05
	Trinity Engineering, Inc.	#4532.12.95-1	Wind Uplift Classification (6" x 6" Adhesion Testing)
PRI Asphalt Technologies, Inc.	GRD-03-02-01	Physical Properties ASTM D 5147	01/07/98
	GRD-05-02-01		12/18/97
	GRD-06-02-01 TX21G5A		01/09/98 04/25/06
Exterior Research & Design, LLC. TRINITY ERD	#4533.05.98-1	PA 114(J)	05/15/98
	4544.11.06	TAS 114	11/02/06



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APPROVED ASSEMBLIES:

Deck Type 2I: Steel, Insulated

Deck Description: 18-22 ga. steel

System Type B(8): Base layer of insulation mechanically fastened, optional top layer adhered with approved asphalt.

All General and System Limitations apply.

Base Insulation Layer

DensDeck, DensDeck Prime, DensDeck Duragard

Minimum 5/8" thick

Insulation Fasteners
(Table 2)

Fastener
Density/ft²

10

1:4 ft²

Note: Base layer shall be mechanically attached with fasteners and density described. 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 Roofing Application Standard RAS 117 for fastening details).

Vapor Barrier: Two ply ASTM D2178 Type IV or Type VI ply sheet, adhered in full mopping of approved asphalt at 25 lb/sq.

Top Insulation Layer

ACFoam II, Hy-Therm AP, ENRGY 3, H-Sheild, Multi-Max FA

Minimum 1.5" thick

Insulation Fasteners
(Table 2)

Fastener
Density/ft²

N/A

N/A

High Density Wood Fiberboard

Maximum 1" thick

N/A

N/A

Note: Apply top layer of insulation shall be adhered with approved hot asphalt within the EVT range and at a rate of 20-40 lbs/100 ft² or in 1/2" – 3/4" wide beads of Insta-Stik spaced 12" o.c. Please refer to Roofing Application Standard RAS 117 for insulation attachment. Insulations listed as the base layer shall only be used as the base layer with a second layer of approved top layer insulation installed as the final membrane substrate.

System 1: Base/Ply Sheet: Three to five plies Viking TG IV, Viking TG VI or Viking Poly-Shield, adhered in full mopping of Viking CTP or approved Type I or Type III Coal Tar Pitch at a rate of 30 lbs/sq.

System 2: Base/Ply Sheet: One ply Viking AOB, or Viking AB II adhered in full mopping of approved asphalt at a rate of 25 lbs/sq.

Cap Sheet: Two to four plies Viking TG IV, Viking TG VI or Viking Poly-Shield, adhered in full mopping of Viking CTP or approved Type I or Type III Coal Tar Pitch at a rate of 30 lbs/sq.

Surfacing: 1. 400 lb./sq. gravel or 300 lb./sq. slag in a flood coat of approved mopping of Viking CTP or approved Type I or Type III Coal Tar Pitch at a rate of 70 lbs/sq.

Maximum Design Pressure: -45.0 psf (See General Limitation # 9)



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Deck Type 2I: Steel, Insulated
Deck Description: 18-22 ga. steel
System Type B(9): Base layer of insulation mechanically fastened, optional top layer adhered with approved asphalt.

All General and System Limitations apply.

<u>Base Insulation Layer</u>	<u>Insulation Fasteners (Table 2)</u>	<u>Fastener Density/ft²</u>
Hy-Therma AP, ENRGY 3, PSI-25, H-Shield Minimum 1.5" thick	1, 4, 10, 11, 17, 20	1:4 ft ²
ENRGY 3, PSI-25 Minimum 1.5" thick	1, 4, 10, 11, 17, 20	1:2 ft ²
ACFoam Composite/PB, GAFTEMP Permalite Minimum 1.5" thick	1, 4, 10, 11, 17, 20	1:4 ft ²
Structodek Minimum 0.5" thick	1, 4, 10, 11, 17, 20	1:4 ft ²
Fesco Minimum 0.75" thick	1, 4, 10, 11, 17, 20	1:2 ft ²
Fiberglas Standard, Fiberglas Wide Flute Minimum 0.5" thick	1, 4, 10, 11, 17, 20	1:2 ft ²

Note: Base layer shall be mechanically attached with fasteners and density described. 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 Roofing Application Standard RAS 117 for fastening details).

<u>Top Insulation Layer</u>	<u>Insulation Fasteners (Table 2)</u>	<u>Fastener Density/ft²</u>
Armor Board High Density Fiberboard, GAFTEMP High Density Fiberboard, Roof Insulating Board, Fiber Base HD1, HD6 Minimum 0.5" thick	N/A	N/A
Structodek, Armor Board Fiberboard Minimum 1.0" thick	N/A	N/A
GAFTEMP Premalite Recover Board, Insul-Roof, Permagrip, Retro-Fit Minimum 0.5" thick	N/A	N/A
Armor Lite, GAFTEMP Permalite, Fesco Minimum 0.75" thick	N/A	N/A
DensDeck, DensDeck Prime Minimum 0.25" thick	N/A	N/A



Note: Apply top layer of insulation shall be adhered with approved hot asphalt, within the EVT range and at a rate of 20-40 lbs/100 ft² or Type I or Type III Coal Tar at a rate of 30 lbs/100 ft². Please refer to Roofing Application Standard RAS 117 for insulation attachment. Insulations listed as the base layer shall only be used as the base layer with a second layer of approved top layer insulation installed as the final membrane substrate.

System 1: **Base/Ply Sheet:** Three to five plies Viking TG IV, Viking TG VI or Viking Poly-Shield, adhered in full mopping of Viking CTP or approved Type I or Type III Coal Tar Pitch at a rate of 30 lbs/sq.

System 2: **Base/Ply Sheet:** One ply Viking AOB, or Viking AB II adhered in full mopping of approved asphalt at a rate of 25 lbs/sq.

Cap Sheet: Two to four plies Viking TG IV, Viking TG VI or Viking Poly-Shield, adhered in full mopping of Viking CTP or approved Type I or Type III Coal Tar Pitch at a rate of 30 lbs/sq.

Surfacing: 1. 400 lb./sq. gravel or 300 lb./sq. slag in a flood coat of approved mopping of Viking CTP or approved Type I or Type III Coal Tar Pitch at a rate of 70 lbs/sq.

Maximum Design Pressure: -45.0 psf (See General Limitation # 9)



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STEEL DECK 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 Engineer, 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.

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 Professional Engineer, Registered 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



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