



MIAMI-DADE COUNTY
BUILDING AND NEIGHBORHOOD COMPLIANCE DEPARTMENT (BNC)
 BOARD AND CODE ADMINISTRATION DIVISION

MIAMI-DADE COUNTY
PRODUCT CONTROL SECTION

11805 SW 26 Street, Room 208

Miami, Florida 33175-2474

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www.miamidade.gov/building

NOTICE OF ACCEPTANCE (NOA)

Canadian General-Tower Limited
52 Middleton Street
Cambridge, Ontario
Canada N1R 5T6

SCOPE:

This NOA is being issued under the applicable rules and regulations governing the use of construction materials. The documentation submitted has been reviewed and accepted by Miami-Dade County BNC -Product Control Section 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 Section (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. BNC reserves the right to revoke this acceptance, if it is determined by Miami-Dade County Product Control Section 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: Tower Single Ply PVC Roof Systems over Concrete 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 No. 05-1121.02 and consists of pages 1 through 21.

The submitted documentation was reviewed by Jorge L. Acebo.



NOA No.: 11-0214.02
Expiration Date: 05/06/14
Approval Date: 04/21/11
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ROOFING SYSTEM APPROVAL

Category: Roofing
Sub-Category: Single Ply
Material: PVC
Deck Type: Concrete
Maximum Design Pressure -512.5 psf

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>
Tower PVC		ASTM D4434	Polyester reinforced PVC membrane.
Tower PVC Fleeceback		ASTM D4434	Polyester reinforced PVC membrane with a non-woven polyester fleeceback.

APPROVED INSULATIONS:

TABLE 2

<u>Product Name</u>	<u>Product Description</u>	<u>Manufacturer (With Current NOA)</u>
ACFoam II, ACFoam III	Polyisocyanurate Insulation	Atlas Roofing Corp.
DensDeck, DensDeck Prime, DensDeck DuraGuard	Gypsum insulation	GP Gypsum
ENRGY-3	Polyisocyanurate Insulation	Johns Manville
SECUROCK Gypsum-Fiber Roof Board	Gypsum insulation	US Gypsum
Insulfoam EPS	Closed-cell, Type IX (min 1.8 pcf) expanded polystyrene.	Carlisle Syntec
Multi-Max FA-3	Polyisocyanurate foam insulation	RMax, Inc.



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APPROVED FASTENERS:

TABLE 3

Fastener Number	Product Name	Product Description	Dimensions	Manufacturer (With Current NOA)
1.	Dekfast Fasteners	Insulation and membrane fastener	Various	SFS Intec, Inc.
2.	Dekfast HS Plate	Galvalume stress plate.	2 ½" round	SFS Intec, Inc.
3.	Dekfast Hex Plate	Galvalume hex stress plate.	2 7/8" x 3 ¼"	SFS Intec, Inc.
4.	Dekfast Lock Plate	Polypropylene locking plate.	3" x 3 ¼"	SFS Intec, Inc.
5.	Dekfast DekSpike Fastener		Various	SFS Intec, Inc.
6.	Olympic Fasteners	Insulation and membrane fasteners	Various	Olympic Mfg. Group
7.	Olympic XHD Fasteners		Various	Olympic Mfg. Group
8.	Olympic XHD Plate	Galvalume AZ55 stress plate	2-3/8" round	Olympic Mfg. Group
9.	Olympic Standard	Galvalume AZ55 stress plate	3" round	Olympic Mfg. Group
10.	Olympic G-2	Galvalume AZ55 stress plate	3.5" round	Olympic Mfg. Group
11.	Olympic	Plastic plates for fasteners.	3" round	Olympic Mfg. Group
12.	Olympic CD-10	Membrane and Insulation Fastener	Various	Olympic Mfg. Group
13.	Extra Load Fastener	Insulation fastener for use in wood, steel and concrete decks	Various	SFS Intec, Inc.
14.	Isofast Plates	Galvalume AZ55 stress plate	2-3/8" round	SFS Intec, Inc.

EVIDENCE SUBMITTED:

<u>Test Agency/Identifier</u>	<u>Name</u>	<u>Report</u>	<u>Date</u>
Factory Mutual Research Corp.	FMRC 4470	3005937 3005938	11/23/99
Underwriters Laboratories, Inc.	UL 790	97NK38018	07/22/98
	CGSB-37.54-95	02NK18635	11/12/03
Exterior Research & Design, LLC	TAS 114	03900.05.05-2	05/19/05
Trinity ERD	ASTM D4434	C35830.03.11	03/28/11



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APPROVED ASSEMBLIES:

- Membrane Type:** Single Ply, Thermoplastic PVC, Insulated
- Deck Type 3I:** Concrete
- Deck Description:** Min. 2500 psi structural concrete or concrete plank
- System Type A(1):** One or more layers of insulation adhered with approved adhesive, membrane fully adhered

All General and System Limitations apply.

One or more layers of the following insulations:

Base Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft²
ASTM C578 Type IX expanded polystyrene (min. 1.8 pcf) listed in Table 2 Minimum 1.5" thick	N/A	N/A
Top Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft²
DensDeck, SECUROCK Gypsum-Fiber Roof Board Minimum 0.25" thick	N/A	N/A

Note: All insulation shall be adhered to the deck or subsequent layers of insulation in ½" wide beads 12" o.c. of Pliodeck Insulation Adhesive. Please refer to Roofing Application Standard RAS 117 for insulation attachment. Insulation 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.

Membrane: Tower PVC or Tower PVC Fleeceback roof cover adhered to the insulation with Pliobond 7008 at 280 ft² per gallon.

Maximum Design Pressure: -52.5 psf (See General Limitation #9)



Membrane Type: Single Ply, Thermoplastic PVC, Insulated
Deck Type 3I: Concrete
Deck Description: Min. 2500 psi structural concrete or concrete plank
System Type A(2): One or more layers of insulation adhered with approved adhesive, membrane fully adhered

All General and System Limitations apply.

One or more layers of the following insulations:

Base Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft²
ASTM C578 Type IX expanded polystyrene (min. 1.8 pcf) listed in Table 2		
Minimum 1.0" thick	N/A	N/A
Minimum 2.0" thick	N/A	N/A
Top Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft²
DensDeck, SECUROCK Gypsum-Fiber Roof Board		
Minimum 0.25" thick	N/A	N/A

Note: All insulation shall be adhered to the deck or subsequent layers of insulation in ¾" – 1" wide beads 12" o.c. of OlyBond 500 Adhesive Fastener. Please refer to Roofing Application Standard RAS 117 for insulation attachment. Insulation 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.

Membrane: Tower PVC or Tower PVC Fleeceback roof cover adhered to the insulation with Pliobond 7008 at 280 ft² per gallon.
Maximum Design Pressure: -52.5 psf (min 1.0" thick EPS) (See General Limitation #9)
-120 psf (min 2.0" thick EPS) (See General Limitation #9)



Membrane Type: Single Ply, Thermoplastic PVC, Insulated
Deck Type 3I: Concrete
Deck Description: Min. 2500 psi structural concrete or concrete plank
System Type A(3): One or more layers of insulation adhered with approved adhesive, membrane fully adhered

All General and System Limitations apply.

One or more layers of the following insulations:

Base Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft²
ACFoam II Minimum 1.5" thick	N/A	N/A
Multi-Max FA-3 Minimum 1.5" thick	N/A	N/A
(Optional) Top Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft²
DensDeck, SECUROCK Gypsum-Fiber Roof Board Minimum 0.25" thick	N/A	N/A

Note: All insulation shall be adhered to the deck or subsequent layers of insulation in ¾" – 1" wide beads 12" o.c. of Insta-Stik. Please refer to Roofing Application Standard RAS 117 for insulation attachment. Insulation 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.

Membrane: Tower PVC or Tower PVC Fleeceback roof cover adhered to the insulation with Pliobond 7008 at 280 ft² per gallon.

Maximum Design Pressure: -67.5 psf (using Multi-Max FA-3) (See General Limitation #9)
-120 psf (using ACFoam II) (See General Limitation #9)



Membrane Type: Single Ply, Thermoplastic PVC, Insulated
Deck Type 3I: Concrete
Deck Description: Min. 2500 psi structural concrete or concrete plank
System Type A(4): One or more layers of insulation adhered with approved adhesive, membrane fully adhered

All General and System Limitations apply.

One or more layers of the following insulations:

Base Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft²
ACFoam II, Multi-Max FA-3 Minimum 1.5" thick	N/A	N/A
Top Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft²
DensDeck, SECUROCK Gypsum-Fiber Roof Board Minimum 0.25" thick	N/A	N/A

Note: All insulation shall be adhered to the deck or subsequent layers of insulation in ½" wide beads 12" o.c. of Pliodeck Insulation Adhesive. Please refer to Roofing Application Standard RAS 117 for insulation attachment. Insulation 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.

Membrane: Tower PVC or Tower PVC Fleeceback roof cover adhered to the insulation with Pliobond 7008 at 280 ft² per gallon.

Maximum Design Pressure: -105 psf (See General Limitation #9)



Membrane Type: Single Ply, Thermoplastic PVC, Insulated
Deck Type 3I: Concrete
Deck Description: Min. 2500 psi structural concrete or concrete plank
System Type A(5): One or more layers of insulation adhered with approved adhesive, membrane fully adhered

All General and System Limitations apply.

One or more layers of the following insulations:

Base Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft²
ASTM C578 Type IX expanded polystyrene (min. 1.8 pcf) listed in Table 2 Minimum 1.5" thick	N/A	N/A

Top Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft²
DensDeck, SECUROCK Gypsum-Fiber Roof Board Minimum 0.25" thick	N/A	N/A

Note: All insulation shall be adhered to the deck or subsequent layers of insulation in 3/4" – 1" wide beads 12" o.c. of Insta-Stik. Please refer to Roofing Application Standard RAS 117 for insulation attachment. Insulation 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.

Membrane: Tower PVC or Tower PVC Fleeceback roof cover adhered to the insulation with Pliobond 7008 at 280 ft² per gallon.

Maximum Design Pressure: -120 psf (See General Limitation #9)



Membrane Type: Single Ply, Thermoplastic PVC, Insulated
Deck Type 3I: Concrete
Deck Description: Min. 2500 psi structural concrete or concrete plank
System Type A(6): One or more layers of insulation adhered with approved adhesive, membrane fully adhered

All General and System Limitations apply.

One or more layers of the following insulations:

Base Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft²
ACFoam II Minimum 1.5" thick	N/A	N/A
(Optional) Top Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft²
DensDeck, SECUROCK Gypsum-Fiber Roof Board Minimum 0.25" thick	N/A	N/A

Note: All insulation shall be adhered to the deck or subsequent layers of insulation in ¾" – 1" wide beads 12" o.c. of OlyBond 500 Adhesive Fastener. Please refer to Roofing Application Standard RAS 117 for insulation attachment. Insulation 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.

Membrane: Tower PVC or Tower PVC Fleeceback roof cover adhered to the insulation with Pliobond 7008 at 280 ft² per gallon.

Maximum Design Pressure: -150 psf (See General Limitation #9)



Membrane Type: Single Ply, Thermoplastic PVC, Insulated
Deck Type 3I: Concrete
Deck Description: Min. 2500 psi structural concrete or concrete plank
System Type A(7): One or more layers of insulation adhered with approved adhesive, membrane fully adhered

All General and System Limitations apply.

One or more layers of the following insulations:

Base Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft²
ASTM C578 Type IX expanded polystyrene (min. 1.8 pcf) listed in Table 2 Minimum 1.5" thick	N/A	N/A
Top Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft²
DensDeck, SECUROCK Gypsum-Fiber Roof Board Minimum 0.25" thick	N/A	N/A

Note: All insulation shall be adhered to the deck or subsequent layers of insulation in 3" to 3.5" wide beads 12" o.c. of TITE-SET Roofing Adhesive. Please refer to Roofing Application Standard RAS 117 for insulation attachment. Insulation 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.

Membrane: Tower PVC or Tower PVC Fleeceback roof cover adhered to the insulation with Pliobond 7008 at 280 ft² per gallon.

Maximum Design Pressure: -180 psf (See General Limitation #9)



Membrane Type: Single Ply, Thermoplastic PVC, Insulated
Deck Type 3I: Concrete
Deck Description: Min. 2500 psi structural concrete or concrete plank
System Type A(8): One or more layers of insulation adhered with approved adhesive onto vapor barrier, membrane fully adhered

All General and System Limitations apply.

Primer: Any approved ASTM D41 Asphaltic primer.
Vapor Barrier / Secondary Roof: Hot-applied, Self-adhering, Torch-applied or Cold-applied vapor barrier or Secondary roof is installed to the primed concrete deck as indicated below:
Hot-applied: Optional hot asphalt-applied base and/or ply sheets approved for use with roof cover followed by an additional asphalt-applied sheet.
Self-adhered: Optional self-adhered base membrane approved for use with roof cover followed by an additional self-adhered sheet.
Torch-applied: Optional torch-applied base membrane approved for use with roof cover followed by an additional torch-applied sheet.
Cold-applied: Optional cold-applied base and/or ply sheet approved for use with the roof cover followed by an additional cold-applied sheet.

One or more layers of the following insulations:

Base Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft²
ASTM C578 Type IX expanded polystyrene (min. 1.8 pcf) listed in Table 2 Minimum 1.5" thick	N/A	N/A
Top Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft²
DensDeck, SECUROCK Gypsum-Fiber Roof Board Minimum 0.25" thick	N/A	N/A

Note: All insulation shall be adhered to the deck or subsequent layers of insulation in 3" to 3.5" wide beads 12" o.c. of TITE-SET Roofing Adhesive. Please refer to Roofing Application Standard RAS 117 for insulation attachment. Insulation 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.

Membrane: Tower PVC or Tower PVC Fleeceback roof cover adhered to the insulation with Pliobond 7008 at 280 ft² per gallon.

Maximum Design Pressure: -180 psf (See General Limitation #9)



Membrane Type: Single Ply, Thermoplastic PVC, Insulated
Deck Type 3I: Concrete
Deck Description: Min. 2500 psi structural concrete or concrete plank
System Type A(9): One or more layers of insulation adhered with approved adhesive, membrane fully adhered

All General and System Limitations apply.

One or more layers of the following insulations:

Base Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft²
ASTM C578 Type IX expanded polystyrene (min. 1.8 pcf) listed in Table 2 Minimum 1.5" thick	N/A	N/A
Top Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft²
DensDeck, SECUROCK Gypsum-Fiber Roof Board Minimum 0.25" thick	N/A	N/A

Note: All insulation shall be adhered to the deck or subsequent layers of insulation in full mopping of approved asphalt within the EVT range and at a rate of 25 lbs/100 ft². Please refer to Roofing Application Standard RAS 117 for insulation attachment. Insulation 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.

Membrane: Tower PVC or Tower PVC Fleeceback roof cover adhered to the insulation with Pliobond 7008 at 280 ft² per gallon.

Maximum Design Pressure: -202.5 psf (See General Limitation #9)



Membrane Type: Single Ply, Thermoplastic PVC, Insulated
Deck Type 3I: Concrete
Deck Description: Min. 2500 psi structural concrete or concrete plank
System Type A(10): One or more layers of insulation adhered with approved adhesive onto vapor barrier, membrane fully adhered

All General and System Limitations apply.

Primer: Any approved ASTM D41 Asphaltic primer.
Vapor Barrier / Secondary Roof: Hot-applied, Self-adhering, Torch-applied or Cold-applied vapor barrier or Secondary roof is installed to the primed concrete deck as indicated below:
Hot-applied: Optional hot asphalt-applied base and/or ply sheets approved for use with roof cover followed by an additional asphalt-applied sheet.
Self-adhered: Optional self-adhered base membrane approved for use with roof cover followed by an additional self-adhered sheet.
Torch-applied: Optional torch-applied base membrane approved for use with roof cover followed by an additional torch-applied sheet.
Cold-applied: Optional cold-applied base and/or ply sheet approved for use with the roof cover followed by an additional cold-applied sheet.

One or more layers of the following insulations:

Base Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft²
ASTM C578 Type IX expanded polystyrene (min. 1.8 pcf) listed in Table 2 Minimum 1.5" thick	N/A	N/A
Top Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft²
DensDeck, SECUROCK Gypsum-Fiber Roof Board Minimum 0.25" thick	N/A	N/A

Note: All insulation shall be adhered to the deck or subsequent layers of insulation in full mopping of approved asphalt within the EVT range and at a rate of 25 lbs/100 ft². Please refer to Roofing Application Standard RAS 117 for insulation attachment. Insulation 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.

Membrane: Tower PVC or Tower PVC Fleeceback roof cover adhered to the insulation with Pliobond 7008 at 280 ft² per gallon.

Maximum Design Pressure: -202.5 psf (See General Limitation #9)



Membrane Type: Single Ply, Thermoplastic PVC, Insulated
Deck Type 3I: Concrete
Deck Description: Min. 2500 psi structural concrete or concrete plank
System Type A(11): One or more layers of insulation adhered with approved adhesive, membrane fully adhered

All General and System Limitations apply.

One or more layers of the following insulations:

Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft²
ACFoam II, Multi-Max FA-3 Minimum 1.5" thick	N/A	N/A

Note: All insulation shall be adhered to the deck or subsequent layers of insulation in ¾" to 1" wide beads 12" o.c. of Millennium One Step Foamable Insulation Adhesive, 3" to 3.5" wide beads 12" o.c. of TITE-SET Roofing Adhesive or full mopping of approved asphalt within the EVT range and at a rate of 25 lbs/100 ft². Please refer to Roofing Application Standard RAS 117 for insulation attachment.

Membrane: Tower PVC or Tower PVC Fleeceback roof cover adhered to the insulation with Pliobond 7008 at 280 ft² per gallon.

Maximum Design Pressure: -215 psf (See General Limitation #9)



Membrane Type: Single Ply, Thermoplastic PVC, Insulated
Deck Type 3I: Concrete
Deck Description: Min. 2500 psi structural concrete or concrete plank
System Type A(12): One or more layers of insulation adhered with approved adhesive onto vapor barrier, membrane fully adhered

All General and System Limitations apply.

Primer: Any approved ASTM D41 Asphaltic primer.
Vapor Barrier / Secondary Roof: Hot-applied, Self-adhering, Torch-applied or Cold-applied vapor barrier or Secondary roof is installed to the primed concrete deck as indicated below:
Hot-applied: Optional hot asphalt-applied base and/or ply sheets approved for use with roof cover followed by asphalt-applied an additional asphalt-applied sheet.
Self-Adhered: Optional self-adhered base membrane approved for use with roof cover followed by an additional self-adhered sheet.
Torch-applied: Optional torch-applied base membrane approved for use with roof cover followed by an additional torch-applied sheet.
Cold-applied: Optional cold-applied base and/or ply sheet approved for use with the roof cover followed by an additional cold-applied sheet.

One or more layers of the following insulations:

Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft²
ACFoam II, Multi-Max FA-3 Minimum 1.5" thick	N/A	N/A

Note: All insulation shall be adhered to the deck or subsequent layers of insulation in ¾" to 1" wide beads 12" o.c. of Millennium One Step Foamable Insulation Adhesive, 3" to 3.5" wide beads 12" o.c. of TITE-SET Roofing Adhesive or full mopping of approved asphalt within the EVT range and at a rate of 25 lbs/100 ft². Please refer to Roofing Application Standard RAS 117 for insulation attachment.

Membrane: Tower PVC or Tower PVC Fleeceback roof cover adhered to the insulation with Pliobond 7008 at 280 ft² per gallon.

Maximum Design Pressure: -215 psf (See General Limitation #9)



Membrane Type: Single Ply, Thermoplastic PVC, Insulated
Deck Type 3I: Concrete
Deck Description: Min. 2500 psi structural concrete or concrete plank
System Type A(13): One or more layers of insulation adhered with approved adhesive, membrane fully adhered

All General and System Limitations apply.

One or more layers of the following insulations:

Base Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft²
ACFoam II, Multi-Max FA-3 Minimum 1.5" thick	N/A	N/A
Top Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft²
DensDeck, SECUROCK Gypsum-Fiber Roof Board Minimum 0.25" thick	N/A	N/A

Note: All insulation shall be adhered to the deck or subsequent layers of insulation in ¾" – 1" wide beads 12" o.c. of Millennium One Step Foamable Adhesive. Please refer to Roofing Application Standard RAS 117 for insulation attachment. Insulation 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.

Membrane: Tower PVC or Tower PVC Fleeceback roof cover adhered to the insulation with Pliobond 7008 at 280 ft² per gallon.

Maximum Design Pressure: -232.5 psf (See General Limitation #9)



Membrane Type: Single Ply, Thermoplastic PVC, Insulated
Deck Type 3I: Concrete
Deck Description: Min. 2500 psi structural concrete or concrete plank
System Type A(14): One or more layers of insulation adhered with approved adhesive, membrane fully adhered

All General and System Limitations apply.

One or more layers of the following insulations:

Base Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft²
ACFoam II, Multi-Max FA-3 Minimum 1.5" thick	N/A	N/A
Top Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft²
DensDeck, SECUROCK Gypsum-Fiber Roof Board Minimum 0.25" thick	N/A	N/A

Note: All insulation shall be adhered to the deck or subsequent layers of insulation in 3" to 3.5" wide beads 12" o.c. of TITE-SET Roofing Adhesive or full mopping of approved asphalt within the EVT range and at a rate of 25 lbs/100 ft². Please refer to Roofing Application Standard RAS 117 for insulation attachment. Insulation 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.

Membrane: Tower PVC or Tower PVC Fleeceback roof cover adhered to the insulation with Pliobond 7008 at 280 ft² per gallon.

Maximum Design Pressure: -255 psf (See General Limitation #9)



Membrane Type: Single Ply, Thermoplastic PVC, Insulated
Deck Type 3I: Concrete
Deck Description: Min. 2500 psi structural concrete or concrete plank
System Type A(15): One or more layers of insulation adhered with approved adhesive onto vapor barrier, membrane fully adhered

All General and System Limitations apply.

Primer: Any approved ASTM D41 Asphaltic primer.
Vapor Barrier / Secondary Roof: Hot-applied, Self-adhering, Torch-applied or Cold-applied vapor barrier or Secondary roof is installed to the primed concrete deck as indicated below:
Hot-applied: Optional hot asphalt-applied base and/or ply sheets approved for use with roof cover followed by an additional asphalt-applied sheet.
Self-adhered: Optional self-adhered base membrane approved for use with roof cover followed by an additional self-adhered sheet.
Torch-applied: Optional torch-applied base membrane approved for use with roof cover followed by an additional torch-applied sheet.
Cold-applied: Optional cold-applied base and/or ply sheet approved for use with the roof cover followed by an additional cold-applied sheet.

One or more layers of the following insulations:

Base Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft²
ACFoam II, Multi-Max FA-3 Minimum 1.5" thick	N/A	N/A
Top Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft²
DensDeck, SECUROCK Gypsum-Fiber Roof Board Minimum 0.25" thick	N/A	N/A

Note: All insulation shall be adhered to the deck or subsequent layers of insulation in 3" to 3.5" wide beads 12" o.c. of TITE-SET Roofing Adhesive or full mopping of approved asphalt within the EVT range and at a rate of 25 lbs/100 ft². Please refer to Roofing Application Standard RAS 117 for insulation attachment. Insulation 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.

Membrane: Tower PVC or Tower PVC Fleeceback roof cover adhered to the insulation with Pliobond 7008 at 280 ft² per gallon.

Maximum Design Pressure: -255 psf (See General Limitation #9)



Membrane Type: Single Ply, Thermoplastic PVC, Insulated
Deck Type 3I: Concrete
Deck Description: 2500 psi structural concrete.
System Type D: Membrane mechanically attached over preliminary fastened insulation.

All General and System Limitations apply.

One or more layers of the following.

Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft ²
ACFoam II, ACFoam III Minimum 1.3" thick	N/A	N/A
ENRGY 3 Minimum 1.4" thick	N/A	N/A

Note: Top layer shall have preliminary attachment, prior to the installation of the membrane 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 sheet below for fasteners and density.

Vapor Retarder: Any UL or FMRC approved vapor retarder may be installed on the deck or over the layer of insulation.

Barrier: None.

Membrane: Tower PVC or Tower PVC Fleeceback mechanically fastened through the insulation as specified below:

Fastening #1: Install maximum 72" wide sheets with a 5" overlap fastened 12" o.c. using Olympic CD-10 or XHD Fasteners and Plates, Dekfast DekSpike Fasteners and Plates or SFS Extra Load Fasteners and Plates. The roof cover outer 1-1/2" side lap is heat welded.
Maximum Design Pressure –45 psf (See General Limitation #7)

Fastening #2: Install maximum 72" wide sheets with a 5" overlap fastened 6" o.c. using Olympic CD-10 or XHD Fasteners and Plates, Dekfast DekSpike Fasteners and Plates or SFS Extra Load Fasteners and Plates. The roof cover outer 1-1/2" side lap is heat welded.
Maximum Design Pressure –60 psf (See General Limitation #7)

Maximum Design Pressure: See Fastening Options Above



Membrane Type: Single Ply, Thermoplastic PVC, Non-Insulated
Deck Type 3: Concrete
Deck Description: Min 2500 psi structural concrete or concrete plank
System Type F(1): Membrane fully adhered to deck.

All General and System Limitations apply.

Membrane: Tower PVC or Tower PVC Fleeceback roof cover adhered to the concrete with Pliobond 7008 at 280 ft² per gallon.

Maximum Design Pressure: -512.5 psf; (See General Limitation #9.)



CONCRETE 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 and/or RAS 137, calculations shall be signed and sealed by a Florida registered Professional Engineer, Registered Architect, or Registered Roof Consultant.

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 and/or RAS 137. 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 to 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



NOA No.: 11-0214.02
Expiration Date: 05/06/14
Approval Date: 04/21/11
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