



MIAMI-DADE COUNTY
PRODUCT CONTROL SECTION
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DEPARTMENT OF REGULATORY AND ECONOMIC RESOURCES (RER)
 BOARD AND CODE ADMINISTRATION DIVISION
NOTICE OF ACCEPTANCE (NOA)

Tamko Building Products, Inc.
 220 West 4th Street
 Joplin, MO 64801

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 RER - 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. RER 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 including the High Velocity Hurricane Zone of the Florida Building Code.

DESCRIPTION: TAMKO BUR Roofing System over Recover 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 revises NOA No. 12-0601.09 and consists of pages 1 through 19.
 The submitted documentation was reviewed by Jorge L. Acebo.



NOA No.: 12-0716.09
 Expiration Date: 08/23/16
 Approval Date: 08/01/13
 Page 1 of 19

ROOFING SYSTEM APPROVAL

Category:	Roofing
Sub-Category:	Built-up Roofing
Material:	Fiberglass
Deck Type:	Recover
Maximum Design Pressure:	See Specific Deck Type

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>
Awaplan Versa-Smooth	39 ³ / ₈ " wide	ASTM D6164 Type I	Polyester reinforced SBS modified bitumen membrane. Applied in hot asphalt, by torch, or mechanically fastened, as a base ply in 2 ply modified systems.
Base-N-Ply [®]	36" wide	ASTM D4601 Type II	Type II asphalt impregnated and coated glass fiber base sheet for use in conventional and modified bitumen built-up roofing.
Glass-Base [™]	36" wide	ASTM D4601 Type II	Type II asphalt impregnated and coated glass fiber base sheet for use in conventional and modified bitumen built-up roofing.
Tam-Cap [™]	36" wide	ASTM D3909	Asphalt impregnated and coated felt surfaced with mineral granules used as the top ply in conventional built-up roof membranes.
Tam-Glass Premium [™]	36" wide	ASTM D2178 Type VI	Type VI asphalt impregnated glass felt for use in conventional and modified bitumen built-up roofing.
Tam-Ply IV [™]	36" wide	ASTM D2178 Type IV	Type IV asphalt impregnated glass felt for use in conventional and modified bitumen built-up roofing.
Type 43 Base Sheet	36" wide	ASTM D2626	An organic felt reinforced asphalt base sheet. Applied in hot asphalt or mechanically fastened.
Vapor-Chan [™]	36" wide	ASTM D4897 Type II	Heavy-duty fiberglass base sheet impregnated and coated on both sides with asphalt with or without a fine mineral stabilizer. Surfaced on the bottom side with coarse mineral granules embedded in hot asphaltic coating.



<u>Product</u>	<u>Dimensions</u>	<u>Test Specification</u>	<u>Product Description</u>
Tam-Pro 846 Fibered Emulsion Coating	5 gallon	ASTM D1227, Type II	Protective coating.
Tam-Pro 813 Asphalt Primer	5 gallon	ASTM D41	Asphalt based primer
Tam-Pro 842 FR Fibered Aluminum Coating	5 gallons	ASTM D2824, Type III	Flame retardant protective coating

APPROVED INSULATIONS:

TABLE 2

Product Name	Product Description	Manufacturer (With Current NOA)
ACFoam Composite	Isocyanurate Insulation with perlite facer	Atlas Roofing Corp.
ACFoam II	Isocyanurate Insulation	Atlas Roofing Corp.
EnergyGuard Polyiso	Polyisocyanurate	GAF
DensDeck	Silicon treated gypsum	Georgia Pacific Gypsum LLC
High Density Wood Fiberboard	High Density Wood Fiber insulation board.	Generic
ENRGY 3	Isocyanurate Insulation.	Johns Manville Corp.
ENRGY 3 25 PSI	Isocyanurate Insulation	Johns Manville Corp.
Fesco Foam	Polyisocyanurate / woodfiber insulation	Johns Manville Corp.
Fesco Board	Expanded perlite and fiber insulation	Johns Manville Corp.
Structodek High Density Fiberboard Roof Insulation	High Density Wood Fiber insulation board.	Blue Ridge Fiberboard
Multi-Max FA-3	Isocyanurate Insulation.	Rmax Operating LLC
H-Shield	Polyisocyanurate foam insulation	Hunter Panels LLC
H-Shield WF	Wood fiber/Isocuanurate Composite Insulation	Hunter Panels LLC
ISO 95+ GL	Polyisocyanurate Foam Insulation	Firestone Building Products Company, LLC



APPROVED FASTENERS:

TABLE 3

Fastener Number	Product Name	Product Description	Dimensions	Manufacturer (With Current NOA)
1.	#12 Standard Roofgrip	Insulation fastener for wood and steel.		OMG Inc.
2.	#14 Roofgrip	Insulation fastener		OMG Inc.
3.	OMG Accutracs Fasteners	Insulation fastener for wood and steel.		OMG Inc.
4.	AccuTrac Plate	Galvalume AZ50 steel plate	3" square	OMG Inc.
5.	3 in. Round Metal Plate	Galvalume AZ50 steel plate	3" round	OMG Inc.
6.	OMG Plastic Plate	Polypropylene plastic plate	3.25" round	OMG Inc.
7.	#12 Dekfast	Insulation fastener for steel and wood decks		SFS Intec, Inc.
8.	#14 Dekfast	Insulation fastener for steel and wood decks		SFS Intec, Inc.
9.	Dekfast 3" Round Steel Insulation Plate	Galvalume AZ50 steel plate	3" round	SFS Intec, Inc.
10.	Trufast #12 DP Fastener	Insulation fastener for steel and wood decks		Altenloh, Brinck & Co. U.S., Inc.
11.	Trufast 3" Metal Insulation Plates	Galvalume AZ55 steel plate	3" round	Altenloh, Brinck & Co. U.S., Inc.
12.	#15 Roofgrip	Insulation fastener		OMG Inc.



EVIDENCE SUBMITTED:

<u>Test Agency/Identifier</u>	<u>Name</u>	<u>Report</u>	<u>Date</u>
Factory Mutual Research Corporation	Class 4470	J.I. 4D0A7.AM	10/21/98
	Class 4470	J.I. 0Z4A3.AM	08/27/97
	Class 4470	J.I. 1D4A7.AM	10/20/97
	Class 4470	J.I. 3B5A9.AM	08/27/97
	Class 4470	3027787	08/14/06
	Class 4470	3027789	08/14/06
	Class 4470	3027790	08/14/06
	Class 4470	3027791	08/14/06
Underwriters Laboratories, Inc.	UL 790	R3225	10/03/12
Dynatech Engineering Corporation	TAS 114	4440.05.95-2	05/01/95
	TAS 114	4440.05.95-1	05/01/95
Exterior Research & Design, LLC.	TAS 114	4444.06.98-1	06/15/98
Trinity ERD	TAS 117	C8500SC.00.07	11/30/07
	TAS 117 & TAS 114	C12410.08.09	08/14/09
PRI Construction Materials Technologies LLC	ASTM D 5147/ D 6164	TAP-252-02-01	03/14/12
	ASTM D 5147/ D 6164	TAP-253-02-01	03/14/12
	ASTM D 6163	TAP-254-02-02	01/24/12
	ASTM D 4601	TAP-255-02-01	11/04/11
	ASTM D 4601	TAP-255-02-02	11/04/11
	ASTM D 2178	TAP-256-02-01	11/04/11
	ASTM D 2178	TAP-256-02-02	11/04/11
	ASTM D 2626	TAP-257-02-01	12/12/11
	ASTM D 4897	TAP-257-02-02	11/18/11
	ASTM D 3909	TAP-257-02-03	11/18/11
	ASTM D 5147/ D 6164	TAP-266-02-01	06/19/12
ASTM D 6164	TAP-272-02-01	08/03/12	



APPROVED ASSEMBLIES

Membrane Type: BUR
Deck Type 7I: Recover
Deck Description: Wood/Steel/Concrete
System Type A(1): Anchor sheet mechanically attached; all layers of insulation adhered with approved asphalt.

All General and System Limitations apply.

Anchor Sheet: One ply of Tamko Glass-Base, Vapor-Chan, Base-N-Ply or Awaplan Versa-Smooth fastened to the deck as described below:

Fastening: *(Option #1 – wood decks only)* Attach anchor sheet using 11 ga. annular ring shank nails and 1-5/8” diameter tin caps spaced 9” o.c. in a 4” lap and 9” o.c. in two staggered rows in the center of the sheet.
Maximum Design Pressure –52.5 psf. (See General Limitation #7.)

(Option #2 – wood or steel decks only) Attach anchor sheet using #14 Dekfast Fasteners with Plates spaced 12” o.c. in a 4” lap and 12” o.c. in two staggered rows in the center of the sheet.
Maximum Design Pressure –60 psf. (See General Limitation #7.)

(Option #3 – steel or concrete decks only) Attach anchor sheet using #12 Dekfast with Plate or OMG Accutrak Fasteners or #14 Roofgrip and 3” Plates spaced 12” o.c. in a 4” lap and 12” o.c. in two staggered rows in the center of the sheet.
Maximum Design Pressure –75 psf. (See General Limitation #7.)

(Option #4 – steel or concrete decks only - Awaplan Versa-Smooth only) Attach anchor sheet using OMG Accutrak Fasteners or #14 Roofgrip or #15 Roofgrip Fasteners and 3” Plates spaced 12” o.c. in a 4” lap and 12” o.c. in two staggered rows in the center of the sheet.
Maximum Design Pressure –120 psf. (See General Limitation #7.)

Note: Anchor sheet fasteners shall be tested for withdrawal resistance in compliance with Testing Application Standard TAS 105 to confirm compliance with the wind load requirements set forth in applicable Building Code.

Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft ²
One or more layers of any of the following insulations: ACFoam II, ENRGY 3, EnergyGuard Polyiso, ISO 95+GL, ACFoam Composite, Multi-Max FA-3, H-Shield, H-Shield WF Minimum 1” thick	N/A	N/A
Fesco Board Minimum 1/2” thick	N/A	N/A
Approved High Density Wood Fiberboard, Structodek High Density Fiberboard Minimum 1/2” thick	N/A	N/A

Note: All insulation shall be adhered to the anchor sheet in full mopping of approved hot asphalt within the EVT range and at a rate of 20-40 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. Composite insulation panels may be used as a top layer placed with the polyisocyanurate side facing down.



Base Sheet: (Optional) Install one ply of Type 43 coated base sheet, Glass-Base™ or Base-N-Ply® base sheet directly to the insulated substrate. Adhere in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs./sq.. If base sheet is applied directly to polyisocyanurate insulation only a spot or strip mopped application as detailed in this approval is approved; see General Limitation #4.

Note: **Type 43 coated base sheet cannot be spot mopped.**

Ply Sheet: Two or more plies of Tam-Glass Premium® or Tam-Ply IV ply sheet adhered in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs./sq..(See specification number for appropriate number of plies).

Cap Sheet: (Optional) One ply of Tam-Cap® adhered in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs./sq.. (See Tamko application instructions for approved method of installation).

Surfacing: (Required if no cap sheet is used) Any coating, listed below, used as a surfacing, must be listed within a current NOA. Install one of the following:

1. Tam-Pro 842 FR Fibered Aluminum Coating applied at 1½ gal./sq. or Tam-Pro 846 Fibered Emulsion at 3 gal./sq.
2. Flood coat of approved asphalt with an application rate of 60 lbs./sq.; plus gravel or slag with an application rate of 400 or 300 lbs./sq. respectively.

Maximum Design Pressure:

See Anchor Sheet Fastening Options.

Membrane Type: BUR

Deck Type 7I: Recover

Deck Description: Concrete

System Type A(2): One or more layers of insulation adhered with approved asphalt.

All General and System Limitations apply.

Base Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft²
One or more layers of any of the following insulations: ACFoam II, ENRGY 3, EnergyGuard Polyiso, ISO 95+GL, Multi-Max FA-3, H-Shield, H-Shield WF		
Minimum 1” thick	N/A	N/A
ACFoam Composite		
Minimum 1.5” thick	N/A	N/A
DensDeck		
Minimum 1/4” thick	N/A	N/A
Top Insulation Layer (Optional)	Insulation Fasteners (Table 3)	Fastener Density/ft²
DensDeck		
Minimum 1/4” thick	N/A	N/A
Fesco Board		
Minimum 3/4” thick	N/A	N/A
Approved High Density Wood Fiberboard, Structodek High Density Fiberboard		
Minimum 1/2” thick	N/A	N/A

Note: Existing roof shall be primed with ASTM D 41 asphalt primer and allowed to dry prior to application of insulation. All insulation shall be adhered to the anchor sheet in full mopping of approved hot asphalt within the EVT range and at a rate of 20-40 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. Composite insulation panels may be used as a top layer placed with the polyisocyanurate side facing down.

Base Sheet: (Optional) Install one ply of Type 43 coated base sheet, Glass-Base™ or Base-N-Ply® base sheet directly to the insulated substrate. Adhere in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs./sq. If base sheet is applied directly to polyisocyanurate insulation only a spot or strip mopped application as detailed in this approval is approved; see General Limitation #4.

Note: **Type 43 coated base sheet cannot be spot mopped.**

Ply Sheet: Two or more plies of Tam-Glass Premium® or Tam-Ply IV ply sheet adhered in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs./sq. (See specification number for appropriate number of plies).

Cap Sheet: (Optional) One ply of Tam-Cap® adhered in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs./sq.. (See Tamko application instructions for approved method of installation).



Surfacing:

(Required if no cap sheet is used) Any coating, listed below, used as a surfacing, must be listed within a current NOA. Install one of the following:

1. Tam-Pro 842 FR Fibered Aluminum Coating applied at 1½ gal./sq. or Tam-Pro 846 Fibered Emulsion at 3 gal./sq.
2. Flood coat of approved asphalt with an application rate of 60 lbs./sq.; plus gravel or slag with an application rate of 400 or 300 lbs./sq. respectively.

Maximum Design Pressure:

- 165 psf. (for minimum 1.5” thick Approved polyisocyanurate followed by minimum ¾” thick Fesco Board applied in hot asphalt.) (See General Limitation #9)
- 230 psf. (for minimum 1.5” thick Approved polyisocyanurate followed by minimum ¼” thick DensDeck or minimum ½” Approved High Density Wood Fiberboard applied in hot asphalt.) (See General Limitation #9)
- 200 psf. (for minimum 1.5” thick ACFoam II Composite applied in hot asphalt.) (See General Limitation #9)
- 230 psf. (for minimum ¼” thick DensDeck applied in hot asphalt with no additional insulation.) (See General Limitation #9)



Membrane Type: BUR

Deck Type 7I: Recover

Deck Description: Concrete/Lightweight Concrete/Cementitious Wood Fiber/Wood/Steel

System Type B(1): Base layer of insulation mechanically fastened; top layer adhered with hot asphalt.

All General and System Limitations apply.

Base Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft²
ACFoam II, H-Shield Minimum 1.3" thick	1, 2, 5, 7, 8, 9	1:3 ft²
ENRGY 3 Minimum 1.4" thick	1, 2, 5, 7, 8, 9, 10, 11	1:3 ft²
ISO 95+ GL Minimum 1.4" thick	1, 2, 5, 7, 8, 9, 10, 11	1:4 ft²
Fesco Foam Minimum 1.5" thick	1, 2, 5, 7, 8, 9, 10, 11	1:4 ft²
ACFoam Composite Minimum 1.5" thick	1, 2, 5, 10, 11	1:2.67 ft²
Fesco Board Minimum 3/4" thick	1, 2, 5, 7, 8, 9, 10, 11	1:2 ft²
Approved High Density Wood Fiberboard Minimum 1/2" thick	1, 2, 5, 7, 8, 9, 10, 11	1:2 ft²

Note: Base layers of insulation shall be mechanically attached using the fastener density listed. The insulation panels listed are minimum sizes and dimensions; if larger panels are used, the number of fasteners shall be increased maintaining the same fastener density. Insulation fasteners shall be tested for withdrawal resistance in compliance with Protocol TAS 105 to confirm compliance with the wind load requirements. Please refer to Roofing Application Standard RAS 117 for insulation attachment.

Top Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft²
Any of the insulations listed for Base Layer, above or; H-Shield-WF Minimum 1.5" thick	N/A	N.A

Note: Apply top layer of insulation in a full mopping of any approved mopping asphalt within the EVT range and at a rate of 20-40 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. Composite insulation panels may be used as a top layer placed with the polyisocyanurate side facing down.

Base Sheet: (Optional) Install one ply of Type 43 coated base sheet, Glass-Base™ or Base-N-Ply® base sheet directly to the insulated substrate. Adhere in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs./sq.. If base sheet is applied directly to polyisocyanurate insulation only a spot or strip mopped application as detailed in this approval is approved; see General Limitation #4.



- Note:** **Type 43 coated base sheet cannot be spot mopped.**
- Ply Sheet:** Two or more plies of Tam-Glass Premium[®] or Tam-Ply IV ply sheet adhered in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs./sq..(See specification number for appropriate number of plies)
- Cap Sheet:** (Optional) One ply of Tam-Cap[®] adhered in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs./sq.. (See Tamko application instructions for approved method of installation).
- Surfacing:** (Required if no cap sheet is used) Any coating, listed below, used as a surfacing, must be listed within a current NOA. Install one of the following:
1. Tam-Pro 842 FR Fibered Aluminum Coating applied at 1½ gal./sq. or Tam-Pro 846 Fibered Emulsion at 3 gal./sq.
 2. Flood coat of approved asphalt with an application rate of 60 lbs./sq.; plus gravel or slag with an application rate of 400 or 300 lbs./sq. respectively.
- Maximum Design Pressure:** -45 psf. (See General Limitation #9.)



Membrane Type: BUR
Deck Type 7I: Recover
Deck Description: Wood/Steel/Concrete
System Type B(2): Base insulation layer mechanically fastened; top layer adhered with approved asphalt.

All General and System Limitations apply.

Base Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft²
ACFoam II, ENRGY 3, ENRGY 3 25 PSI, H-Shield Minimum 1.5" thick	1, 2, 5	1:1.33 ft ²

Note: Base layers of insulation shall be mechanically attached using the fastener density listed. The insulation panels listed are minimum sizes and dimensions; if larger panels are used, the number of fasteners shall be increased maintaining the same fastener density. Insulation fasteners shall be tested for withdrawal resistance in compliance with Protocol TAS 105 to confirm compliance with the wind load requirements. Please refer to Roofing Application Standard RAS 117 for insulation attachment.

Top Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft²
Approved High Density Wood Fiberboard Minimum 1/2" thick	N/A	N/A

Note: Apply top layer of insulation in a full mopping of any approved mopping asphalt within the EVT range and at a rate of 20-40 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. Composite insulation panels may be used as a top layer placed with the polyisocyanurate side facing down.

Base Sheet: (Optional) Install one ply of Type 43 coated base sheet, Glass-Base™ or Base-N-Ply® base sheet directly to the insulated substrate. Adhere in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs./sq. If base sheet is applied directly to polyisocyanurate insulation only a spot or strip mopped application as detailed in this approval is approved; see General Limitation #4.

Note: **Type 43 coated base sheet cannot be spot mopped.**

Ply Sheet: Two or more plies of Tam-Glass Premium® or Tam-Ply IV ply sheet adhered in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs./sq. (See specification for appropriate number of plies).

Cap Sheet: (Optional) One ply of Tam-Cap® adhered in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs./sq. (See Tamko application instructions for approved method of installation).

Surfacing: (Required if no cap sheet is used) Any coating, listed below, used as a surfacing, must be listed within a current NOA. Install one of the following:

1. Tam-Pro 842 FR Fibered Aluminum Coating applied at 1½ gal./sq. or Tam-Pro 846 Fibered Emulsion at 3 gal./sq.
2. Flood coat of approved asphalt with an application rate of 60 lbs./sq.; plus gravel or slag with an application rate of 400 or 300 lbs./sq. respectively.

Maximum Design Pressure: -60 psf. – Wood deck (See General Limitation #7.)
-75 psf. – Steel or Concrete deck (See General Limitation #7.)



Membrane Type: BUR
Deck Type 7I: Recover
Deck Description: Wood/Steel/Concrete/Cementitious Wood Fiber/Gypsum
System Type C: All layers of insulation simultaneously fastened.

All General and System Limitations apply.

Base Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft²
ACFoam II, H-Shield Minimum 1.3" thick	N/A	N/A
ENRGY 3, ISO 95+ GL Minimum 1.4" thick	N/A	N/A
Fesco Foam, ACFoam Composite, H-Shield WF, Multi-Max FA-3 Minimum 1.5" thick	N/A	N/A
Fesco Board, Approved High Density Wood Fiberboard Minimum 1/2" thick	N/A	N/A

Note: All layers shall be simultaneously fastened; see top layer below for fasteners and density. Insulation panels listed are minimum sizes and dimensions; if larger panels are used, the number of fasteners shall be increased maintaining the same fastener density. Please refer to Roofing Application Standard RAS 117 for insulation attachment.

Top Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft²
ACFoam II, H-Shield Minimum 1.3" thick	1, 2, 5, 7, 8, 9	1:3 ft ²
ENRGY 3 Minimum 1.4" thick	1, 2, 5, 7, 8, 9, 10, 11	1:3 ft ²
ISO 95+ GL Minimum 1.4" thick	1, 2, 5, 7, 8, 9, 10, 11	1:4 ft ²
Fesco Foam Minimum 1.5" thick	1, 2, 5, 7, 8, 9, 10, 11	1:4 ft ²
ACFoam Composite Minimum 1.5" thick	1, 2, 10, 11	1:2.67 ft ²
Fesco Board Minimum 3/4" thick	1, 2, 5, 7, 8, 9, 10, 11	1:2 ft ²
Approved High Density Wood Fiberboard Minimum 1/2" thick	1, 2, 5, 7, 8, 9, 10, 11	1:2 ft ²

Note: All layers of insulation shall be mechanically attached simultaneously using the fastener density listed for Top Layer of Insulation. The insulation panels listed are minimum sizes and dimensions; if larger panels are used, the number of fasteners shall be increased maintaining the same fastener density. Insulation fasteners shall be tested for withdrawal resistance in compliance with Testing Application Standard TAS 105 to confirm compliance with the wind load requirements. Please refer to Roofing Application Standard RAS 117 for insulation attachment.



Base Sheet: (Optional) Install one ply of Type 43 coated base sheet, Glass-Base™ or Base-N-Ply® base sheet directly to the insulated substrate. Adhere in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs./sq.. If base sheet is applied directly to polyisocyanurate insulation only a spot or strip mopped application as detailed in this approval is approved; see General Limitation #4.

Note: **Type 43 coated base sheet cannot be spot mopped.**

Ply Sheet: Two or more plies of Tam-Glass Premium® or Tam-Ply IV ply sheet adhered in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs./sq. (See specification for appropriate number of plies).

Cap Sheet: (Optional) One ply of Tam-Cap® adhered in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs./sq. (See Tamko application instructions for approved method of installation).

Surfacing: (Required if no cap sheet is used) Any coating, listed below, used as a surfacing, must be listed within a current NOA. Install one of the following:

1. Tam-Pro 842 FR Fibered Aluminum Coating applied at 1½ gal./sq. or Tam-Pro 846 Fibered Emulsion at 3 gal./sq.
2. Flood coat of approved asphalt with an application rate of 60 lbs./sq.; plus gravel or slag with an application rate of 400 or 300 lbs./sq. respectively.

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



Membrane Type: BUR
Deck Type 7I: Recover
Deck Description: Wood/Steel/Concrete
System Type D: Base sheet attached over insulation.

All General and System Limitations apply.

Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft²
One or more layers of any of the following insulations: ACFoam II, ENRGY 3, EnergyGuard Polyiso, ISO 95+GL, ACFoam Composite, Multi-Max FA-3, H-Shield, H-Shield WF		
Minimum 1” thick	N/A	N/A
Fesco Board		
Minimum 1/2” thick	N/A	N/A
Approved High Density Wood Fiberboard, Structodek High Density Fiberboard		
Minimum 1/2” thick	N/A	N/A

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

Base Sheet: One ply of Tamko Glass-Base, Vapor-Chan, Base-N-Ply, or Awaplan Versa-Smooth fastened to the deck as described below:

Fastening: *(Option #1 – wood decks only)* Attach anchor sheet using 11 ga. annular ring shank nails and 1-5/8” diameter tin caps spaced 9” o.c. in a 4” lap and 9” o.c. in two staggered rows in the center of the sheet.
Maximum Design Pressure –52.5 psf. (See General Limitation #7.)

(Option #2 – wood or steel decks only) Attach anchor sheet using #14 Dekfast Fasteners with Plates spaced 12” o.c. in a 4” lap and 12” o.c. in two staggered rows in the center of the sheet.
Maximum Design Pressure –60 psf. See General Limitation #7.)

(Option #3 – steel or concrete decks only) Attach anchor sheet using #12 Deckfast with Plate or OMG Accutrak Fasteners or #14 Roofgrip and 3” Plates spaced 12” o.c. in a 4” lap and 12” o.c. in two staggered rows in the center of the sheet.
Maximum Design Pressure –75 psf. (See General Limitation #7.)

(Option #4 – steel or concrete decks only - Awaplan Versa-Smooth only) Attach anchor sheet using OMG Accutrak Fasteners or #14 Roofgrip or #15 Roofgrip and 3” Plates spaced 12” o.c. in a 4” lap and 12” o.c. in two staggered rows in the center of the sheet.
Maximum Design Pressure –120 psf. (See General Limitation #7.)

Note: Base sheet fasteners shall be tested for withdrawal resistance in compliance with Testing Application Standard TAS 105 to confirm compliance with the wind load requirements set forth in applicable Building Code.



Ply Sheet: Two or more plies of Tam-Glass Premium[®] or Tam-Ply IV ply sheet adhered in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs./sq. (See specification number for appropriate number of plies.)

Cap Sheet: (Optional) One ply of Tam-Cap[®] adhered in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs./sq.. (See Tamko application instructions for approved method of installation).

Surfacing: (Required if no cap sheet is used) Any coating, listed below, used as a surfacing, must be listed within a current NOA. Install one of the following:

1. Tam-Pro 842 FR Fibered Aluminum Coating applied at 1½ gal./sq. or Tam-Pro 846 Fibered Emulsion at 3 gal./sq.
2. Flood coat of approved asphalt with an application rate of 60 lbs./sq.; plus gravel or slag with an application rate of 400 or 300 lbs./sq. respectively.

Maximum Design Pressure:

See Base Sheet Fastening Options.



Membrane Type: BUR
Deck Type 7: Recover
Deck Description: Wood/Steel/Concrete
System Type E: Base sheet mechanically attached.

All General and System Limitations apply.

Base Sheet: One ply of Tamko Glass-Base, Vapor-Chan, Base-N-Ply, or Awaplan Versa-Smooth fastened to the deck as described below:

Fastening: *(Option #1 – wood decks only)* Attach anchor sheet using 11 ga. annular ring shank nails and 1-5/8” diameter tin caps spaced 9” o.c. in a 4” lap and 9” o.c. in two staggered rows in the center of the sheet.
Maximum Design Pressure –52.5 psf. (See General Limitation #7.)
(Option #2 – wood or steel decks only) Attach anchor sheet using #14 Dekfast Fasteners with Plates spaced 12” o.c. in a 4” lap and 12” o.c. in two staggered rows in the center of the sheet.
Maximum Design Pressure –60 psf. (See General Limitation #7.)
(Option #3 – steel or concrete decks only) Attach anchor sheet using #12 Deckfast with Plate or OMG Accutrac Fasteners or #14 Roofgrip and 3” Plates spaced 12” o.c. in a 4” lap and 12” o.c. in two staggered rows in the center of the sheet.
Maximum Design Pressure –75 psf. (See General Limitation #7.)
(Option #4 – steel or concrete decks only - Awaplan Versa-Smooth only) Attach anchor sheet using OMG Accutrac Fasteners or #14 Roofgrip or #15 Roofgrip and 3” Plates spaced 12” o.c. in a 4” lap and 12” o.c. in two staggered rows in the center of the sheet.
Maximum Design Pressure –120 psf. (See General Limitation #7.)

Note: Base sheet fasteners shall be tested for withdrawal resistance in compliance with Testing Application Standard TAS 105 to confirm compliance with the wind load requirements set forth in applicable Building Code.

Ply Sheet: Two or more plies of Tam-Glass Premium[®] or Tam-Ply IV ply sheet adhered in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs./sq..(See specification for appropriate number of plies).

Cap Sheet: (Optional) One ply of Tam-Cap[®] adhered in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs./sq.. (See Tamko application instructions for approved method of installation).

Surfacing: (Required if no cap sheet is used) Any coating, listed below, used as a surfacing, must be listed within a current NOA. Install one of the following:

- 1 Tam-Pro 842 FR Fibered Aluminum Coating applied at 1½ gal./sq. or Tam-Pro 846 Fibered Emulsion at 3 gal./sq.
2. Flood coat of approved asphalt with an application rate of 60 lbs./sq.; plus gravel or slag with an application rate of 400 or 300 lbs./sq. respectively.

Maximum Design Pressure: *See Base Sheet Fastening Options.*



Membrane Type: BUR

Deck Type 7: Recover

Deck Description: Concrete

System Type F: Base sheet adhered with approved asphalt.

All General and System Limitations apply.

Note: Existing roof surface deck shall be primed with ASTM D 41 asphalt primer and allowed to dry prior to application.

Base Sheet: One ply of one of Glass-Base™, Base-N-Ply® or Vapor-Chan® venting base sheet adhered directly to the existing system in a spot mopping of ASTM D 312, type III or type IV asphalt, 12" diameter circles, 24" o.c., or strip mopped according to the manufacturers' recommendations. Application of either system shall be at a rate of 12 lbs./sq..

Ply Sheet: Two or more plies of Tam-Glass Premium® or Tam-Ply IV ply sheet adhered in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs./sq. (See specification for appropriate number of plies.)

Cap Sheet: (Optional) One ply of Tam-Cap® adhered in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs./sq.. (See Tamko application instructions for approved method of installation).

Surfacing: (Required if no cap sheet is used) Any coating, listed below, used as a surfacing, must be listed within a current NOA. Install one of the following:

1. Tam-Pro 842 FR Fibered Aluminum Coating applied at 1½ gal./sq. or Tam-Pro 846 Fibered Emulsion at 3 gal./sq.
2. Flood coat of approved asphalt with an application rate of 60 lbs./sq.; plus gravel or slag with an application rate of 400 or 300 lbs./sq. respectively.

Maximum Design Pressure: -230 psf (See General Limitation #9.)



RECOVER SYSTEM LIMITATIONS:

1. All System Limitations and General Limitations shall apply. See specific deck type Notice of Acceptance for deck type System Limitations.

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 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 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 9N-3 of the Florida Administrative Code.

END OF THIS ACCEPTANCE



NOA No.: 12-0716.09
Expiration Date: 08/23/16
Approval Date: 08/01/13
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