MIAMI-DADE

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)

Tamko Building Products, Inc.
P.O. Box 1404
Joplin, MO 64802

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 Miami-Dade County Product Control Division and accepted by the Board of Rules and Appeals (BORA) 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 High Velocity Hurricane Zone of the Florida Building Code.

DESCRIPTION: TAMKO Built-Up Roof System 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 revises No. 06-0613.07 and consists of pages 1 through 17.
The submitted documentation was reviewed by Alex Tigera.

MIAMI-DADE COUNTY APPROVED

ROOFING SYSTEM APPROVAL

Category:	Roofing
Sub-Category:	Built-up Roofing
Material:	Fiberglass
Deck Type:	Concrete
Maximum Design Pressure	**-382.5 psf**
Fire Classification:	See General Limitation #1

TRADE NAMES OF PRODUCTS MANUFACTURED OR LABELED BY APPLICANT:

TABLE 1

Product	Dimensions	Test Specification	Product Description
Awaplan 170 FR	Roll weight: 98 lbs.; 33' 11" x 39 $^3/_8$"	ASTM D 6164 Type I	A 180 g/m² polyester reinforced SBS modified bitumen membrane surfaced with granules and treated for additional fire resistance. Applied in hot asphalt or cold adhesive.
Awaplan 170™	Roll weight: 98 lbs.; 33' 11" x 39 $^3/_8$"	ASTM D 6164 Type I	A 180 g/m² polyester reinforced SBS modified bitumen membrane surfaced with granules. Applied in hot asphalt or cold adhesive.
Awaplan Heat Welding™	Roll weight: 96 lbs.; 25' 5" x 39 $^3/_8$"	ASTM D 6164 Type II	A 250 g/m² polyester reinforced SBS modified bitumen membrane surfaced with granules. Applied by torch and also used as a walkway material.
Awaplan Premium FR™	Roll weight: 101 lbs.; 33' 11" x 39 $^3/_8$"	ASTM D 6164 Type II	A 250 g/m² polyester reinforced modified bitumen membrane surfaced with granules. Applied by hot asphalt and also used as a walkway material.
Awaplan Premium™	Roll weight: 101 lbs.; 33' 11" x 39$^3/_8$"	ASTM D 6164 Type II	A 250 g/m² polyester reinforced SBS modified bitumen membrane surfaced with granules. Applied in hot asphalt or cold adhesive, and also used as a walkway material.
Awaflex	Roll weight: 76 lbs.; 35.9' x 36"	ASTM D 5147	SBS modified cap sheet constructed with a 155gm/m² non- woven polyester mat saturated with asphalt, coated on both sides with SBS rubber modified asphalt and surfaced with ceramic granules for UV protection.
Awaflex FR	Roll weight: 76 lbs.; 35.9' x 36"	ASTM D 5147	SBS FR modified cap sheet constructed with a 155gm/m² non- woven polyester mat saturated with asphalt, coated on both sides with SBS rubber modified asphalt, FR treated, and surfaced with ceramic granules for UV protection.
Awaplan Versa-Smooth	Roll weight: 100 lbs. 33' 11" x 39$^3/_8$"	ASTM D 6164 Type I	A 180 g/m² polyester reinforced SBS modified bitumen membrane. Applied in hot asphalt, by torch, or mechanically fastened, as a base ply in 2 ply modified systems.

Product	Dimensions	Test Specification	Product Description
Awaplan Versa-Flex	Roll weight: 76 lbs.; 33' 11" x 39-3/8"	ASTM D 6164 Type I	A 190 g/m² nonwoven polyester reinforced SBS modified bitumen membrane. Applied in hot asphalt, as a base ply in 2 ply-modified systems.
Base-N-Ply®	Roll weight: 72 lbs.; 108' x 36"	ASTM D 4601 Type II	Type II asphalt impregnated and coated glass fiber base sheet for use in conventional and modified bitumen built-up roofing.
Glass-Base™	Roll weight: 72 lbs.; 108' x 36";	ASTM D 4601 Type II	Type II asphalt impregnated and coated glass fiber base sheet for use in conventional and modified bitumen built-up roofing.
Tam-Cap™	Roll weight: 83 lbs.; 36' x 36"	ASTM D 3909	Asphalt impregnated and coated felt surfaced with mineral granules used as the top ply in conventional built-up roof membranes.
Tam-Glass Premium™	Roll weight: 53 lbs.; 180' x 36"	ASTM D 2178 Type VI	Type VI asphalt impregnated glass felt for use in conventional and modified bitumen built-up roofing.
Tam-Ply IV™	Roll weight: 44 lbs.; 180' x 36"	ASTM D 2178 Type IV	Type IV asphalt impregnated glass felt for use in conventional and modified bitumen built-up roofing.
Type 43 Base Sheet	Roll weight: 85 lbs.; 72' x 36"	ASTM D 2626	An organic felt reinforced asphalt base sheet. Applied in hot asphalt or mechanically fastened.
Vapor-Chan™	Roll weight: 86 lbs.; 36' x 36"	ASTM D 4897 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.
Versa-Base FR™	Roll weight: 60 lbs.; 54' x 36"	ASTM D 5147	Asphalt impregnated and coated glass fiber base sheet for use in conventional and modified bitumen built-up roofing.
Versa-Base™	Roll weight: 94 lbs.; 54' x 36"	ASTM D 6163 Type I	Asphalt impregnated and coated glass fiber base sheet for use in conventional and modified bitumen built-up roofing.
Versa-Cap FR™	Roll weight: 87 lbs.; 36' 4" x 36"	ASTM D 5147	A fiberglass reinforced, mineral surfaced, SBS modified bitumen top membrane.
Tam-Pro Fibered Emulsion	5 gallon	ASTM D 1227, type II	Protective coating.
Tam-Pro Primer	5 gallon	ASTM D 41	Asphalt based primer
Tam-Pro FR Aluminum Coating	5 gallons	ASTM D2824, type III	Flame retardant protective coating

APPROVED INSULATIONS:

TABLE 2

Product	Dimensions	Test Specification	Product Description	Manufacturer
Pyrox	Various	TAS 110	Polyisocyanurate foam insulation	Apache Products Co. (With current NOA)
ACFoam II, ACFoam Composite	Various	TAS 110	Polyisocyanurate foam insulation	Atlas Energy Products (With current NOA)
ISO 95+, ISO 95+ Composite	Various	TAS 110	Polyisocyanurate foam insulation	Firestone Bldg. Products (With current NOA)
GAFTEMP Isotherm R	Various	TAS 110	Polyisocyanurate foam insulation	GAF Material Corp. (With current NOA)
High Density Wood Fiberboard	Various	TAS 110	Wood fiber insulation board	Generic (With current NOA)
Perlite Insulation	Various	TAS 110	Perlite insulation board	Generic (With current NOA)
Dens-Deck	Various	TAS 110	Gypsum insulation board	Georgia-Pacific (With current NOA)
E'NRG'Y-3, E'NRG'Y-3 Plus, E'NRG'Y-3 Composite, PSI-25	Various	TAS 110	Polyisocyanurate foam insulation	Johns Manville Corp. (With current NOA)
Fesco Board, Retro-Fit Board	Various	TAS 110	Expanded mineral fiber	Johns Manville Corp. (With current NOA)
Structodek, Structodek FS	various	TAS 110	Wood fiber board	Masonite (With current NOA)
Multi-Max, FA	various	TAS 110	Expanded glass	Rmax, Inc. (With current NOA)
H-Shield	Various	TAS 110	Polyisocyanurate foam insulation	Hunter Panels

APPROVED FASTENERS:

TABLE 3

Fastener Number	Product Name	Product Description	Dimensions	Manufacturer (With Current NOA)
1.	Dekfast Fasteners #14 & #15	Insulation fastener for wood, steel and concrete decks		SFS Intec.
2.	Dekfast Autoset Plate	Galvalume stress plate.	2 7/8" x 3 ¼"	SFS Intec.
3.	Dekfast Lock Plate	Polypropylene stress plate.	3" x 3 ¼"	SFS Intec.
4.	Dekfast Hex Plate	Galvalume hex stress plate.	2 7/8" x 3 ¼"	SFS Intec.
5.	UltraFast #14	Insulation fastener		Johns Manville
6.	UltraFast Metal Plate	Round galvalume AZ55 steel plate	3" round	Johns Manville
7.	UltraFast Plastick Plate	Round galvalume AZ55 steel plate	3.5" round	Johns Manville
8.	Glasfast	Round galvalume AZ55 steel plate	3.5" round	Johns Manville
9.	OMG Fastener #14	Insulation fastener		OMG
10.	OMG Standard	3" round galvalume AZ50 steel plate	3" round	OMG
11.	OMG	Polypropylene stress plate	3" round	OMG
12.	OMG G-2	3.5" round galvalume AZ55 steel plate	3.5" round	OMG
13.	Rawl Drive	Insulation fastener		Powers Fasteners, Inc.
14.	Rawl Plate	Galvalume AZ50 steel plate	3" round	Powers Fasteners, Inc.
15.	#14 HD Insul-Fixx Fastener	Insulation fastener for wood, steel and concrete decks		SFS Intec
16.	Insul-Fixx S Plate	3" round galvalume AZ50 steel plate	3" round	SFS Intec
17.	Insul-Fixx PG Plate	Polyethylene stress plate	3" round	SFS Intec
18.	Tru-Fast HD	Insulation fastener for wood, steel and concrete decks		The Tru-Fast Corp.
19.	Tru-Fast Plates	3" round galvalume AZ55 steel plate	3" round	The Tru-Fast Corp.

EVIDENCE SUBMITTED:

Test Agency/Identifier	Name	Report	Date
Underwriters Laboratories	Wind Uplift	93NK8375	02.17.94
Factory Mutual Research Corporation	Comparative Rupture Testing	J.I. 4D0A7.AM	10.21.98
	Class 1 Fire	J.I. 0Z4A3.AM	08.27.97
	Class 1 Fire; I-90 Windstorm Classification	J.I.1D4A7.AM	10.20.97
	Class 1 Fire; I-90 Windstorm Classification	J.I. 3B5A9.AM	08.27.98
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
Exterior Research & Design, LLC.	TAS 114	4441.04.99-1	04.09.99
Factory Mutual Research Corporation	Class 4470	3010612	04.16.01
Trinity ERD	TAS 117	C8500SC.00.07	11.30.07

APPROVED ASSEMBLIES:

Deck Type 3I: Concrete Decks, Insulated

Deck Description: 2500 psi structural concrete or concrete plank

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

All General and System Limitations apply.

One or more layers of any of the following insulations:

Base Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft^2
AC-Foam II, E'NRG'Y 3, E'NRG'Y 3 Plus, E'NRG'Y 3 Composite, ISO 95+, ISO 95+ Composite, AC-Foam Composite, Pyrox, Multi-Max FA, Foamglas, H-Shield		
Minimum 1" thick	**N/A**	**N/A**
Fesco Board, High Density Wood Fiberboard, Structodek FS, Retro-Fit		
Minimum ½" thick	**N/A**	**N/A**

Note: Concrete deck shall be primed with ASTM D 41 asphalt primer and allowed to dry prior to application of base sheet. All insulation shall be adhered to the deck in full mopping of approved asphalt within the EVT range and at a rate of 20-40 lbs./100 ft^2. 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 used as a top layer shall be placed with the polyisocyanurate side facing down

Base Sheet: (Optional) Install one ply of Type 43 coated base sheet, Glass-Base, Tam-Ply IV, Tam-Glass Premium®, Base-N-Ply® or Versa Base 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., or spot mopped as detailed in this approval; see General Limitation #4. If base sheet is adhered 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.

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.

Surfacing: (Required if no cap sheet is used) Install one of the following:

1. 400 lb./sq. gravel or 300 lb./sq. slag in a flood coat of approved mopping asphalt at an application rate of 60 lb./sq.
2. Tam-Pro FR Aluminum Coating applied at 1½ gal./sq. or Tam-Pro Fibered Emulsion at 3 gal./sq.

Maximum Design Pressure:

-165 psf	(for minimum 1.5" thick Approved polyisocyanurate followed by minimum ¾" thick Approved perlite applied in hot asphalt.) (See General Limitation #9)
-230 psf	(for minimum 1.5" thick Approved polyisocyanurate followed by minimum ¼" thick Dens Deck or minimum ½" Approved High Density Wood Fiberboard applied in hot asphalt.) (See General Limitation #9)
-147 psf	(for minimum 1.5" thick Approved polyisocyanurate followed by minimum ½" thick Approved Regular Density Wood Fiberboard applied in hot asphalt.) (See General Limitation #9)
-200 psf	(for minimum 1.5" thick ACFoam II Composite or E'NRG'Y-2 Composite applied in hot asphalt.) (See General Limitation #9)
-230 psf	(for minimum ¼" thick Dens Deck applied in hot asphalt with no underlying insulation.) (See General Limitation #9)
-240 psf	(for minimum ½" thick Retrofit applied in hot asphalt with no underlying insulation. Requires one ply of Versa Base.) (See General Limitation #9)
-382.5 psf	(for minimum ½" thick Approved High Density Wood Fiberboard applied in hot asphalt with no underlying insulation. Requires one ply of Versa Base.) (See General Limitation #9)
-45 psf	(for all other applications) (See General Limitation #9)

Deck Type 3I: Concrete Decks, Insulated

Deck Description: 2500 psi structural concrete or concrete plank

System Type B (1): Optional base sheet adhered with approved asphalt; base insulation layer mechanically fastened, optional top layer adhered with approved asphalt.

All General and System Limitations apply.

Base Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft^2
UltraGard Gold, ISORoc Minimum 1.3" thick	**Any Approved Fasteners**	**1:2.67**
E'NRG'Y 3, Iso 95 +, H-Shield Minimum 1.4" thick	**Any Approved Fasteners**	**1:3**
E'NRG'Y 3 Plus Minimum 1.5" thick	**Any Approved Fasteners**	**1:4**
Multi-Max Minimum 1.5" thick	**Any Approved Fasteners**	**1:2.9**
Isotherm 'R' Minimum 1.3" thick	**Any Approved Fasteners**	**1:3**
High Density Wood Fiber Minimum ½" thick	**Any Approved Fasteners**	**1:4**
Fesco Board Minimum ½" thick	**Any Approved Fasteners**	**1:2**

Note: Base layer shall be mechanically attached with fasteners and density described above. Insulation panels listed are minimum sizes and dimensions; if larger panels are used the number of fasteners per board shall be increased maintaining the same fastener density. See Roofing Application Standard RAS 117 for fastening details.

Top Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft^2
Any of the approved insulations listed for Base Layer, above.		

Note: Apply top layer of insulation in a full mopping of any approved mopping 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. 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 side facing down.

Base Sheet: (Optional) Install one ply of Type 43 coated base sheet, Glass-Base, Tam-Ply IV, Tam-Glass Premium® 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.
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 method of installation).
Surfacing:	(Required if no cap sheet is used) Install one of the following: 1. 400 lb./sq. gravel or 300 lb./sq. slag in a flood coat of approved mopping asphalt at an application rate of 60 lb./sq.. 2. Tam-Pro FR Aluminum Coating applied at 1½ gal./sq. or Tam-Pro Fibered Emulsion at 3 gal./sq.
Maximum Design Pressure:	-45 psf (See General Limitation #9.)

Deck Type 3I: Concrete Decks, Insulated

Deck Description: 2500 psi structural concrete or concrete plank

System Type B (2): Base layer of insulation mechanically fastened; top layer adhered with approved asphalt.

All General and System Limitations apply.

Base Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft^2
ACFoam II, E'NRG'Y-3, PSI-25, H-Shield Minimum 1.3" thick	**Any Approved Fasteners**	**1:1.33**

Note: Base layer shall be mechanically attached with fasteners and density described above. Insulation panels listed are minimum sizes and dimensions; if larger panels are used the number of fasteners per board shall be increased maintaining the same fastener density. See Roofing Application Standard RAS 117 for fastening details.

Top Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft^2
High Density Wood Fiberboard Minimum ½" thick	**N/A**	**N/A**

Note: Apply top layer of insulation in a full mopping of any approved mopping hot asphalt within the EVT range and at a rate of 20-40 lbs./100 ft^2. Please refer to Roofing Application Standard RAS 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 side facing down.

Base Sheet: (Optional) Install one ply of Type 43 coated base sheet, Glass-Base, Tam-Ply IV, Tam-Glass Premium® 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.

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 method of installation).

Surfacing: (Required if no cap sheet is used) Install one of the following:

1. 400 lb./sq. gravel or 300 lb./sq. slag in a flood coat of approved mopping asphalt at an application rate of 60 lb./sq..
2. Tam-Pro FR Aluminum Coating applied at 1½ gal./sq. or Tam-Pro Fibered Emulsion at 3 gal./sq.

Maximum Design Pressure: **-75 psf** (See General Limitation #7.)

Deck Type 3I: Concrete Decks, Insulated

Deck Description: 2500 psi structural concrete or concrete plank

System Type C: Optional base sheet adhered with approved asphalt; one or more layers of insulation simultaneously fastened.

All General and System Limitations apply.

Base Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft^2
AC-Foam II, Isotherm R, H-Shield Minimum 1.3" thick	**N/A**	**N/A**
E'NRG'Y 3, Iso 95+, Iso 95+ Composite Minimum: 1.4" thick	**N/A**	**N/A**
ISO Roc, Fesco Foam, AC Foam Composite, E'NRG'Y 3 Plus, Multi-Max FA Minimum: 1.5" thick	**N/A**	**N/A**
E'NRG'Y 3 Composite Minimum: 1.25" thick	**N/A**	**N/A**
Fesco Board, High Density Wood Fiber Minimum: ½" thick	**N/A**	**N/A**

Note: Both layers shall be simultaneously attached; see top layer below for fasteners and density.

Top Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft^2
UltraGard Gold, ISORoc, Isotherm 'R' Minimum 1.3" thick	**Any Approved Fasteners**	**1:2.67**
E'NRG'Y 3, Iso 95 + Minimum 1.4" thick	**Any Approved Fasteners**	**1:3**
E'NRG'Y 3 Plus Minimum 1.5" thick	**Any Approved Fasteners**	**1:4**
Multi-Max Minimum 1.5" thick	**Any Approved Fasteners**	**1:2.9**
High Density Wood Fiber Minimum ½" thick	**Any Approved Fasteners**	**1:4**
Fiberglas Minimum ¾" thick	**Any Approved Fasteners**	**1:2.67**
Fesco Board Minimum ½" thick	**Any Approved Fasteners**	**1:2**

Note: All layers of insulation shall be mechanically attached using the fastener density listed above. 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 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, Tam-Ply IV, Tam-Glass Premium® 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.

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 method of installation).

Surfacing: (Required if no cap sheet is used) Install one of the following:

1. 400 lb./sq. gravel or 300 lb./sq. slag in a flood coat of approved mopping asphalt at an application rate of 60 lb./sq..
2. Tam-Pro FR Aluminum Coating applied at 1½ gal./sq. or Tam-Pro Fibered Emulsion at 3 gal./sq.

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

Deck Type 3I: Concrete Decks, Insulated

Deck Description: 2500 psi structural concrete or concrete plank

System Type D: Base sheet attached over insulation.

All General and System Limitations apply.
One or more layers of any of the following insulations adhered to deck:

Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft^2
ACFoam II, H-Shield Minimum: 1.2" thick	**N/A**	**N/A**
UltraGard Gold Minimum: 1.3" thick	**N/A**	**N/A**
E"NRG"Y-3, PSI-25 Minimum: 1.4" thick	**N/A**	**N/A**
Fesco Board Minimum: ¾" thick	**N/A**	**N/A**
Fiberboard, Structodek Minimum: ½ thick	**N/A**	**N/A**

Note: Top layer shall have preliminary attachment, prior to the installation of the base/anchor sheet, at an 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 or Base-N-Ply fastened to the deck as described in Option #1 or #2, below, or One ply of Tamko Awaplan Versa-Smooth fastened to the deck as described in Option #3, below.

Fastening: **(Option #1)** Attach anchor sheet using CF #14 OR #15 Dekfast Fasteners with CF Hex Plates spaced 12" o.c. in a 4" lap and 12" o.c. in two staggered rows in the center of the sheet.
(Option #2) Attach anchor sheet using, or OMG #14 OR #15 Roofgrip Fasteners and 3" Square Plates spaced 12" o.c. in a 4" lap and 12" o.c. in two staggered rows in the center of the sheet.
(Option #3 Awaplan Versa-Smooth only) Attach anchor sheet using OMG #14 or #15 Roofgrip Fasteners and 3" Square Plates spaced 12" o.c. in a 4" lap and 12" o.c. in two staggered rows in the center of the sheet.

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.

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 method of installation).

Surfacing: (Required if no cap sheet is used) Install one of the following:
1. 400 lb./sq. gravel or 300 lb./sq. slag in a flood coat of approved mopping asphalt at an application rate of 60 lb./sq..
2. Tam-Pro FR Aluminum Coating applied at 1½ gal./sq. or Tam-Pro Fibered Emulsion at 3 gal./sq.

Maximum Design Pressure: **-120 psf** (See General Limitation #7.)

Deck Type 3: Concrete Decks, Non-Insulated

Deck Description: 2500 psi structural concrete or concrete plank

System Type F(1): Base sheet adhered with approved asphalt.

All General and System Limitations apply.

Note: Concrete deck shall be primed with ASTM D 41 asphalt primer and allowed to dry prior to application of base sheet.

Base Sheet: Install one ply of Vapor-Chan® venting base sheet directly to the concrete substrate. Adhere in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 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.

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 method of installation).

Surfacing: (Required if no cap sheet is used) Install one of the following:

1. 400 lb./sq. gravel or 300 lb./sq. slag in a flood coat of approved mopping asphalt at an application rate of 60 lb./sq.
2. Tam-Pro FR Aluminum Coating applied at 1½ gal./sq. or Tam-Pro Fibered Emulsion at 3 gal./sq.

Maximum Design Pressure: -232 psf (See General Limitation #9.)

Deck Type 3: Concrete Decks, Non-Insulated

Deck Description: 2500 psi structural concrete or concrete plank

System Type F(2): Base sheet spot adhered with approved asphalt.

All General and System Limitations apply.

Note: Concrete deck shall be primed with ASTM D 41 asphalt primer and allowed to dry prior to application of base sheet.

Base Sheet: One ply of one of Vapor-Chan® venting base sheet adhered directly to the deck in a spot mopping of ASTM D 312, type III or type IV asphalt, 12" diameter circles, 24" o.c. 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.

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 method of installation).

Surfacing: (Required if no cap sheet is used) Install one of the following:

1. 400 lb./sq. gravel or 300 lb./sq. slag in a flood coat of approved mopping asphalt at an application rate of 60 lb./sq.
2. Tam-Pro FR Aluminum Coating applied at 1½ gal./sq. or Tam-Pro Fibered Emulsion at 3 gal./sq.

Maximum Design Pressure: -45 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 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 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 membranes or packaging shall bear the imprint or identifiable marking of the manufacturer's name or logo and the following statement: "Miami-Dade County Product Control Approved" or the Miami-Dade County Product Control Seal as shown below.

MIAMI-DADE COUNTY APPROVED

11. 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