



**BUILDING AND NEIGHBORHOOD COMPLIANCE  
DEPARTMENT (BNC)**  
BOARD AND CODE ADMINISTRATION DIVISION

**MIAMI-DADE COUNTY  
PRODUCT CONTROL SECTION**

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## **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 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: TAMKO Modified Bitumen Roof System Over Lightweight 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 and revises NOA No. 08-0512.11 and consists of pages 1 through 14.  
The submitted documentation was reviewed by Jorge I. Acebo



**NOA No: 11-0510.03**  
**Expiration Date: 09/06/12**  
**Approval Date: 09/01/11**  
**Page 1 of 14**

## ROOFING SYSTEM APPROVAL

**Category:** Roofing  
**Sub-Category:** Modified Bitumen  
**Material:** SBS  
**Deck Type:** Lightweight Concrete  
**Maximum Design Pressure:** -75 psf

### TRADE NAMES OF PRODUCTS MANUFACTURED OR LABELED BY APPLICANT:

TABLE 1

| <b><u>Product</u></b> | <b><u>Dimensions</u></b>                                          | <b><u>Test Specification</u></b> | <b><u>Product Description</u></b>                                                                                                                                                     |
|-----------------------|-------------------------------------------------------------------|----------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Awaplan 170 FR        | Roll weight: 98 lbs.; 33' 11" x 39 <sup>3</sup> / <sub>8</sub> "  | ASTM D 6164 Type I               | A 180 g/m <sup>2</sup> 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 <sup>3</sup> / <sub>8</sub> "  | ASTM D 6164 Type I               | A 180 g/m <sup>2</sup> polyester reinforced SBS modified bitumen membrane surfaced with granules. Applied in hot asphalt or cold adhesive.                                            |
| Awaplan Premium FR™   | Roll weight: 101 lbs.; 33' 11" x 39 <sup>3</sup> / <sub>8</sub> " | ASTM D 6164 Type II              | A 250 g/m <sup>2</sup> polyester reinforced SBS 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 <sup>3</sup> / <sub>8</sub> " | ASTM D 6164 Type II              | A 250 g/m <sup>2</sup> polyester reinforced SBS modified bitumen membrane surfaced with granules. Applied in hot asphalt or cold adhesive, and also used as a walkway material.       |
| Awaplan Versa-Smooth  | Roll weight: 100 lbs. 33' 11" x 39 <sup>3</sup> / <sub>8</sub> "  | ASTM D 6164 Type I               | A 180 g/m <sup>2</sup> polyester reinforced SBS modified bitumen membrane. Applied in hot asphalt, by torch, or mechanically fastened, as a base ply in 2 ply modified systems.       |
| Awaplan Versa-Flex    | Roll weight: 76 lbs.; 33' 11" x 39-3/8"                           | ASTM D 6164 Type I               | A 190 g/m <sup>2</sup> 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.                                                          |



| <b><u>Product</u></b>               | <b><u>Dimensions</u></b>          | <b><u>Test Specification</u></b> | <b><u>Product Description</u></b>                                                                                                                                                                                         |
|-------------------------------------|-----------------------------------|----------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 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™                         | 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.                                                                                                      |
| Tam-Pro Fibered Emulsion Coating    | 5 gallon                          | ASTM D 1227, type II             | Protective coating.                                                                                                                                                                                                       |
| Tam-Pro Quick Dry Primer            | 5 gallon                          | ASTM D 41                        | Asphalt based primer                                                                                                                                                                                                      |
| Tam-Pro FR Fibered Aluminum Coating | 5 gallons                         | ASTM D2824, type III             | Flame retardant protective coating                                                                                                                                                                                        |

## APPROVED INSULATIONS:

TABLE 2

| Product Name                    | Product Description              | Manufacturer<br>(With Current NOA) |
|---------------------------------|----------------------------------|------------------------------------|
| ACFoam II                       | Polyisocyanurate foam insulation | Atlas Energy Products              |
| High Density Wood Fiberboard    | Wood fiber insulation board      | Generic                            |
| UltraGard Gold, ENRGY 3, PSI-25 | Polyisocyanurate foam insulation | Johns Manville Corp.               |
| Fesco Board                     | Expanded mineral fiber           | Johns Manville Corp.               |
| Structodek FS                   | Wood fiber board                 | Masonitec                          |
| H-Shield                        | Polyisocyanurate foam insulation | Hunter Panels                      |

## APPROVED FASTENERS:

TABLE 3

| Fastener Number | Product Name                         | Product Description                        | Dimensions      | Manufacturer<br>(With Current NOA) |
|-----------------|--------------------------------------|--------------------------------------------|-----------------|------------------------------------|
| 1.              | FM-90 Fasteners                      | Base sheet fastener with integrated Plate. | 2.7" dia. plate | ES Products, Inc.                  |
| 2.              | Twin Loc-Nail                        | Base sheet fastener with integrated Plate. | 2.7" dia. plate | ES Products, Inc.                  |
| 3.              | Lite Weight Concrete Fastener        | Base sheet fastener.                       |                 | OMG.                               |
| 4.              | Lite Weight Concrete Fastener Plate  | Round galvalume stress plates.             | 2.7" dia. plate | OMG.                               |
| 5.              | OMG CR Base Sheet Fastener and Plate | Base sheet fastening assembly.             |                 | OMG.                               |
| 6.              | Base-Lok                             | Base sheet fastener with integrated Plate. | 3" dia. plate   | Simplex Nails                      |



**EVIDENCE SUBMITTED:**

| <u>Test Agency/Identifier</u>   | <u>Name</u>       | <u>Report</u> | <u>Date</u>           |
|---------------------------------|-------------------|---------------|-----------------------|
| Underwriters Laboratories, Inc. | UL 790            | R3225         | Published<br>Annually |
| Factory Mutual Research Corp.   | Class 4470        | J.I. 4D0A7.AM | 10/21/98              |
|                                 | Class 4470        | J.I. 0Z4A3.AM | 08/27/97              |
|                                 |                   | J.I. 0Q8A7.AM | 10/04/90              |
|                                 |                   | J.I. 0Z4A4.AM | 08/19/99              |
|                                 | Class 4470        | J.I.1D4A7.AM  | 10/20/97              |
|                                 | Class 4470        | J.I. 3B5A9.AM | 08/27/98              |
|                                 | Class 4470        | 3027787       | 08/14/06              |
|                                 | Class 4470        | 3027789       | 08/14/06              |
|                                 | Class 4470        | 3027790       | 08/14/06              |
|                                 | Class 4470        | 3027791       | 08/14/06              |
| Dynatech Engineering Corp.      | 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              |
|                                 |                   | 4446.01.00-1  | 12/16/99              |
|                                 |                   | #4446         | 04/29/98              |
|                                 |                   | 4674.11.01-1  | 10/18/01              |
| IRT & Consulting of S. FL, Inc. | TAS 114           | 990029        | 09/30/99              |
| Trinity ERD                     | TAS 117           | C8500SC.00.07 | 11/30/07              |
|                                 | TAS 117 & TAS 114 | C12410.08.09  | 08/14/09              |



## APPROVED ASSEMBLIES:

|                          |                                                                                                                                 |
|--------------------------|---------------------------------------------------------------------------------------------------------------------------------|
| <b>Membrane Type:</b>    | SBS                                                                                                                             |
| <b>Deck Type 4I:</b>     | Lightweight Concrete, Insulated                                                                                                 |
| <b>Deck Description:</b> | Cellular or aggregate Lightweight Concrete                                                                                      |
| <b>System Type A(1):</b> | Anchor sheet mechanically fastened; one or more layers of insulation adhered with approved asphalt.                             |
| <b>Deck:</b>             | 18-22 ga steel deck shall be secured 6" o.c. to structural supports spaced a maximum of 5 ft on centers with 5/8" puddle welds. |

### All General and System Limitations apply.

|                      |                                                                                                                                                                                                                                                                                                                                                                                                                                         |
|----------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Anchor Sheet:</b> | One ply of Tamko Vapor-Chan or Versa-Base fastened to the steel deck as described below:                                                                                                                                                                                                                                                                                                                                                |
| <b>Fastening:</b>    | <i>(Option #1)</i> Attach anchor sheet using OMG CR Base Ply Fasteners, ES Products FM-90 Fasteners or Buildex Lite Weight Concrete Fasteners spaced 7" o.c. in a 4" lap and 7" o.c. in two staggered rows in the center of the sheet.<br><br><i>(Option #2)</i> Attach anchor sheet using Simplex Base-Lok or SFS Stadler Base-Lok Fasteners spaced 9" o.c. in a 4" lap and 12" o.c. in two staggered rows in the center of the sheet. |

One or more layers of any of the following insulations:

| <b>Base Insulation Layer</b>                       | <b>Insulation Fasteners<br/>(Table 3)</b> | <b>Fastener<br/>Density/ft<sup>2</sup></b> |
|----------------------------------------------------|-------------------------------------------|--------------------------------------------|
| <b>ACFoam II</b>                                   |                                           |                                            |
| <b>Minimum 1.2" thick</b>                          | N/A                                       | N/A                                        |
| <b>UltraGard Gold</b>                              |                                           |                                            |
| <b>Minimum 1.3" thick</b>                          | N/A                                       | N/A                                        |
| <b>ENRGY-3, PSI-25, H-Shield</b>                   |                                           |                                            |
| <b>Minimum 1.4" thick</b>                          | N/A                                       | N/A                                        |
| <b>Base or Top Insulation Layer</b>                | <b>Insulation Fasteners<br/>(Table 3)</b> | <b>Fastener<br/>Density/ft<sup>2</sup></b> |
| <b>Fesco Board</b>                                 |                                           |                                            |
| <b>Minimum ¾" thick</b>                            | N/A                                       | N/A                                        |
| <b>High Density Wood Fiberboard, Structodek FS</b> |                                           |                                            |
| <b>Minimum ½" thick</b>                            | 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 ft<sup>2</sup>. 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.



|                                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
|---------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Base Sheet:</b>              | One ply of Tam-Ply IV, Tam-Glass Premium, Glass-Base, Base-N-Ply, Versa-Base, Versa-Smooth, Awaplan VersaFlex, or Vapor-Chan adhered to the substrate with a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs./sq.                                                                                                                                                                                                                                                                           |
| <b>Ply Sheet:</b>               | (Optional) One or more plies of Tam-Glass Premium, Tam-Ply IV, Base-N-Ply, Awaplan VersaFlex, or Versa-Base adhered with a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs./sq.                                                                                                                                                                                                                                                                                                             |
| <b>Membrane:</b>                | Awaplan Premium, Awaplan Premium FR, Awaplan 170, Awaplan 170 FR, Awaplan Versa-Smooth or Awaplan VersaFlex adhered with a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs./sq.; or Awaplan Premium, Awaplan Premium FR or Versa-Smooth adhered by torch.                                                                                                                                                                                                                                   |
| <b>Surfacing:</b>               | Optional for mineral surfaced Membranes. Required for smooth surfaced membranes. Any coating, listed below, used as a surfacing, must be listed within a current NOA. <ol style="list-style-type: none"> <li>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..</li> <li>2. Tam-Pro FR Fibered Aluminum Coating, Henry 520, or Karnak 97AF applied at 1½ gal./sq., or Grundy Fibered Asphalt Emulsion, or Tam-Pro Fibered Emulsion at 3 gal./sq.</li> </ol> |
| <b>Maximum Design Pressure:</b> | -52.5 psf (See General Limitation #7.)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |

**Membrane Type:** SBS

**Deck Type 4I:** Lightweight Concrete, Insulated

**Deck Description:** Elastizell Cellular Lightweight Concrete (Min. 250 psi)

**System Type A(2):** Base/Anchor sheet mechanically fastened; one or more layers of insulation adhered with approved asphalt.

**Deck :** 18-22 ga steel deck shall be secured 6" o.c. to structural supports spaced a maximum of 5 ft on centers with 5/8" puddle welds. Deck side laps were also secured at 15 inches o.c. with #10 TEK screws. Followed by rigid insulation panels shall be placed in a minimum 1/8" slurry-coat of Range II Elastizell lightweight insulating concrete. The same working day the minimum 2" rigid insulation shall be covered with a minimum 2" topcoat cast of Range II Elastizell/Vermiculite Hybrid mixture (EVM).

**All General and System Limitations apply.**

**Anchor Sheet:** One ply of Versa-Base, Vapor-Chan, or Glass Base fastened to the deck as described below:

**Fastening:** Attach anchor sheet using OMG CR Base Ply Fasteners, ES Products FM-90 Fasteners or Buildex Lite Weight Concrete Fasteners spaced 7" o.c. in a 4" lap and 7" o.c. in two staggered rows in the center of the sheet.

One or more layers of any of the following insulations:

| <b>Base Insulation Layer</b>                       | <b>Insulation Fasteners<br/>(Table 3)</b> | <b>Fastener<br/>Density/ft<sup>2</sup></b> |
|----------------------------------------------------|-------------------------------------------|--------------------------------------------|
| <b>ACFoam II</b>                                   |                                           |                                            |
| <b>Minimum 1.2" thick</b>                          | N/A                                       | N/A                                        |
| <b>UltraGard Gold</b>                              |                                           |                                            |
| <b>Minimum 1.3" thick</b>                          | N/A                                       | N/A                                        |
| <b>ENRGY-3, PSI-25, H-Shield</b>                   |                                           |                                            |
| <b>Minimum 1.4" thick</b>                          | N/A                                       | N/A                                        |
| <b>Fesco Board</b>                                 |                                           |                                            |
| <b>Minimum ¾" thick</b>                            | N/A                                       | N/A                                        |
| <b>High Density Wood Fiberboard, Structodek FS</b> |                                           |                                            |
| <b>Minimum ½" thick</b>                            | 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 ft<sup>2</sup>. 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.



- Ply Sheet:** (Optional) One or more plies of Tam-Glass Premium, Tam-Ply IV, Base-N-Ply, Glass-Base, Awaplan VersaFlex, Versa-Smooth or Versa-Base adhered with a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs./sq.
- Membrane:** Awaplan Premium, Awaplan Premium FR, Awaplan 170, Awaplan 170 FR, Awaplan Versa-Smooth or Awaplan VersaFlex adhered with a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs./sq., or Awaplan Premium, Awaplan Premium FR or Versa-Smooth adhered by torch. If Membrane torch applied, minimum one ply sheet required.
- Surfacing:** Optional for mineral surfaced Membranes. Required for smooth surfaced membranes. Any coating, listed below, used as a surfacing, must be listed within a current NOA.
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 Fibered Aluminum Coating, Henry 520, or Karnak 97AF applied at 1½ gal./sq., or Grundy Fibered Asphalt Emulsion, or Tam-Pro Fibered Emulsion at 3 gal./sq.
- Maximum Design Pressure:** -45 psf (See General Limitation #7.)

|                                                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
|--------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Membrane Type:</b>                            | SBS                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| <b>Deck Type 4:</b>                              | Lightweight Concrete, Non-insulated                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| <b>Deck Description:</b>                         | Cellular or Aggregate Lightweight Concrete                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| <b>System Type E(1):</b>                         | Base sheet mechanically fastened.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| <b>Deck:</b>                                     | 18-22 ga steel deck shall be secured 6" o.c. to structural supports spaced a maximum of 5 ft on centers with 5/8" puddle welds.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| <b>All General and System Limitations apply.</b> |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| <b>Base Sheet:</b>                               | One ply of Tamko Vapor-Chan or Versa-Base fastened to the steel deck as described below:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| <b>Fastening:</b>                                | <p><b>(Option #1)</b> Attach base sheet using OMG CR Base Ply Fasteners, ES Products FM-90 Fasteners or Buildex Lite Weight Concrete Fasteners spaced 7" o.c. in a 4" lap and 7" o.c. in two staggered rows in the center of the sheet.<br/> <b>(Maximum Design Pressure -52.5 psf, See General Limitation #7)</b></p> <p><b>(Option #2)</b> Attach base sheet using Simplex Base-Lok or SFS Stadler Base-Lok Fasteners spaced 9" o.c. in a 4" lap and 12" o.c. in two staggered rows in the center of the sheet.<br/> <b>(Maximum Design Pressure -52.5 psf, See General Limitation #7)</b></p> <p><b>(Option #3)</b> Attach base sheet using ES Products Twin Loc-Nail at a fastener spacing of 9" o.c. at the 4" wide sidelaps and 9" o.c. in two equally spaced rows in the field of the base sheet.<br/> <b>(Maximum Design Pressure -60 psf, See General Limitation #7)</b></p> <p><b>(Option #4)</b> Attach Tamko Vapor-Chan fastened to the steel with ES Products steel deck fasteners a fastener spacing of 9" o.c. at the 4" wide sidelaps and 9" o.c. in two equally spaced rows in the field of the base sheet.<br/> <b>(Maximum Design Pressure -75 psf, See General Limitation #7)</b></p> |
| <b>Ply Sheet:</b>                                | (Optional, required for Fastening Option #4) One or more plies of Tam-Glass Premium, Tam-Ply IV, Base-N-Ply, Glass-Base, Awaplan VersaFlex, Versa-Smooth or Versa-Base adhered with a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs./sq.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| <b>Membrane:</b>                                 | Awaplan Premium, Awaplan Premium FR, Awaplan 170, Awaplan 170 FR, Awaplan Versa-Smooth or Awaplan VersaFlex adhered with a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs./sq.; or Awaplan Premium, Awaplan Premium FR or Versa-Smooth adhered by torch. If Membrane torch applied, minimum one ply sheet required.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| <b>Surfacing:</b>                                | <p>Optional for mineral surfaced Membranes. Required for smooth surfaced membranes. Any coating, listed below, used as a surfacing, must be listed within a current NOA.</p> <ol style="list-style-type: none"> <li>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..</li> <li>2. Tam-Pro FR Fibered Aluminum Coating, Henry 520, or Karnak 97AF applied at 1½ gal./sq., or Grundy Fibered Asphalt Emulsion, or Tam-Pro Fibered Emulsion at 3 gal./sq.</li> </ol>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| <b>Maximum Design Pressure:</b>                  | See Fastening Options Above                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |



**Membrane Type:** SBS

**Deck Type 4:** Lightweight Concrete, Non-Insulated

**Deck Description:** Celcore Cellular Lightweight Concrete

**System Type E(2):** Base sheet mechanically fastened.

**Deck :** 18-22 ga steel deck shall be secured 6" o.c. to structural supports spaced a maximum of 5 ft on centers with 1/2" puddle welds. Followed by rigid insulation panels shall be placed in a minimum 1/8" slurry-coat of insulating concrete and allowed to cure overnight. The following day the minimum 1" rigid insulation shall be covered with a minimum 2" topcoat cast of Celcore. After setting to support foot traffic, Celcore PVA Curing Compound is applied at a rate of 300 sq. ft/gal.

**All General and System Limitations apply.**

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

**Fastening:** Attach base sheet using OMG CR Base Ply Fasteners, ES Products FM-90 Fasteners or Buildex Lite Weight Concrete Fasteners spaced 7" o.c. in a 4" lap and 7" o.c. in two evenly spaced between laps in the center of the sheet.

**Ply Sheet:** Two or more plies of Tam-Glass Premium, Tam-Ply IV, Base-N-Ply, Glass-Base, Awaplan VersaFlex, Versa-Smooth or Versa-Base adhered with a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs./sq..

**Membrane:** Awaplan Premium, Awaplan Premium FR, Awaplan 170, Awaplan 170 FR, Awaplan Versa-Smooth or Awaplan VersaFlex adhered with a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs./sq.; or Awaplan Premium, Awaplan Premium FR or Versa-Smooth adhered by torch. If Membrane torch applied, minimum one ply sheet required.

**Surfacing:** Optional for mineral surfaced Membranes. Required for smooth surfaced membranes. Any coating, listed below, used as a surfacing, must be listed within a current NOA.

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 Fibered Aluminum Coating, Henry 520, or Karnak 97AF applied at 1 1/2 gal./sq., or Grundy Fibered Asphalt Emulsion, or Tam-Pro Fibered Emulsion at 3 gal./sq.

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



|                                                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
|--------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Membrane Type:</b>                            | SBS                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| <b>Deck Type 4:</b>                              | Lightweight Concrete, Non-Insulated                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| <b>Deck Description:</b>                         | Strong Company Lightweight Concrete                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| <b>System Type E(3):</b>                         | Base sheet mechanically fastened.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| <b>Deck :</b>                                    | 18-22 ga steel deck shall be secured 6" o.c. to structural supports spaced a maximum of 5 ft on centers with 1/2" puddle welds. Followed by rigid insulation panels shall be placed in a minimum 1/4" slurry-coat of insulating concrete and allowed to cure overnight. The following day the minimum 1" rigid insulation shall be covered with a minimum 3" topcoat cast of Strong Seal Roof Fill.                                                                                                                                     |
| <b>All General and System Limitations apply.</b> |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| <b>Base Sheet:</b>                               | One ply of Tamko Vapor-Chan, Glass-Base, Base-N-Ply or Versa-Base fastened to the deck as described below:                                                                                                                                                                                                                                                                                                                                                                                                                              |
| <b>Fastening:</b>                                | Attach base sheet using OMG CR Base Ply Fasteners, ES Products FM-90 Fasteners or Buildex Lite Weight Concrete Fasteners spaced 7" o.c. in a 4" lap and 7" o.c. in two evenly spaced between laps in the center of the sheet.                                                                                                                                                                                                                                                                                                           |
| <b>Ply Sheet:</b>                                | Two or more plies of Tam-Glass Premium, Tam-Ply IV, Base-N-Ply, Glass-Base, Awaplan VersaFlex, Versa-Smooth or Versa-Base adhered with a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs./sq..                                                                                                                                                                                                                                                                                                 |
| <b>Membrane:</b>                                 | Awaplan Premium, Awaplan Premium FR, Awaplan 170, Awaplan 170 FR, Awaplan Versa-Smooth or Awaplan VersaFlex adhered with a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs./sq.; or Awaplan Premium, Awaplan Premium FR or Versa-Smooth adhered by torch. If Membrane torch applied, minimum one ply sheet required.                                                                                                                                                                           |
| <b>Surfacing:</b>                                | Optional for mineral surfaced Membranes. Required for smooth surfaced membranes. Any coating, listed below, used as a surfacing, must be listed within a current NOA. <ol style="list-style-type: none"> <li>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..</li> <li>2. Tam-Pro FR Fibered Aluminum Coating, Henry 520, or Karnak 97AF applied at 1 1/2 gal./sq., or Grundy Fibered Asphalt Emulsion, or Tam-Pro Fibered Emulsion at 3 gal./sq.</li> </ol> |
| <b>Maximum Design Pressure:</b>                  | -60 psf (See General Limitation #7.)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |



**Membrane Type:** SBS

**Deck Type 4:** Lightweight Concrete, Non-Insulated

**Deck Description:** Mearlcrete Cellular Lightweight Concrete

**System Type E(4):** Base sheet mechanically fastened.

**Deck :** 18-22 ga steel deck shall be secured 6" o.c. to structural supports spaced a maximum of 5 ft on centers with 1/2" puddle welds. Followed by rigid insulation panels shall be placed in a minimum 1/8" slurry-coat of insulating concrete and allowed to cure overnight. The following day the minimum 1" rigid insulation shall be covered with a minimum 2" topcoat cast of Mearlcrete.

**All General and System Limitations apply.**

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

**Fastening:** Attach base sheet using OMG CR Base Ply Fasteners, ES Products FM-90 Fasteners or Buildex Lite Weight Concrete Fasteners spaced 7" o.c. in a 4" lap and 7" o.c. in two evenly spaced between laps in the center of the sheet.

**Ply Sheet:** Three or more plies of Tam-Glass Premium, Tam-Ply IV, Base-N-Ply, Glass-Base, Awaplan VersaFlex, Versa-Smooth or Versa-Base adhered with a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs./sq..

**Membrane:** Awaplan Premium, Awaplan Premium FR, Awaplan 170, Awaplan 170 FR, Awaplan Versa-Smooth or Awaplan VersaFlex adhered with a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs./sq.; or Awaplan Premium, Awaplan Premium FR or Versa-Smooth adhered by torch. If Membrane torch applied, minimum one ply sheet required.

**Surfacing:** Optional for mineral surfaced Membranes. Required for smooth surfaced membranes. Any coating, listed below, used as a surfacing, must be listed within a current NOA.

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 Fibered Aluminum Coating, Henry 520, or Karnak 97AF applied at 1 1/2 gal./sq., or Grundy Fibered Asphalt Emulsion, or Tam-Pro Fibered Emulsion at 3 gal./sq.

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



## LIGHTWEIGHT INSULATING CONCRETE SYSTEM LIMITATIONS:

1. If mechanical attachment to the structural deck through the lightweight insulating concrete is proposed, a field withdrawal resistance testing shall be performed to determine equivalent or enhanced fastener patterns and density. All testing and fastening design shall be in compliance with Testing Application Standard TAS 105 and Roofing Application Standard RAS 117, calculations shall be signed and sealed by a Florida registered Professional Engineer, Registered Architect, or Registered Roof Consultant.
2. For steel deck application where specific deck construction is not referenced: The deck shall be a minimum 22 gage attached with 5/8" puddle welds with weld washers at every flute with maximum deck spans of 5 ft. o.c.
3. For systems where specific lightweight insulating concrete is not referenced, the minimum design mix shall be a minimum of 300 psi.

## GENERAL LIMITATIONS:

1. Fire classification is not part of this acceptance; refer to a current Approved Roofing Materials Directory for fire ratings of this product.
2. Insulation may be installed in multiple layers. The first layer shall be attached in compliance with Product Control Approval guidelines. All other layers shall be adhered in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs./sq., or mechanically attached using the fastening pattern of the top layer
3. All standard panel sizes are acceptable for mechanical attachment. When applied in approved asphalt, panel size shall be 4' x 4' maximum.
4. An overlay and/or recovery board insulation panel is required on all applications over closed cell foam insulations when the base sheet is fully mopped. If no recovery board is used the base sheet shall be applied using spot mopping with approved asphalt, 12" diameter circles, 24" o.c.; or strip mopped 8" ribbons in three rows, one at each side lap and one down the center of the sheet allowing a continuous area of ventilation. Encircling of the strips is not acceptable. A 6" break shall be placed every 12' in each ribbon to allow cross ventilation. Asphalt application of either system shall be at a minimum rate of 12 lbs./sq. **Note: Spot attached systems shall be limited to a maximum design pressure of -45 psf.**
5. Fastener spacing for insulation attachment is based on a Minimum Characteristic Force (F') value of 275 lbf., as tested in compliance with Testing Application Standard TAS 105. If the fastener value, as field-tested, are below 275 lbf. Insulation attachment shall not be acceptable.
6. Fastener spacing for mechanical attachment of anchor/base sheet or membrane attachment is based on a minimum fastener resistance value in conjunction with the maximum design value listed within a specific system. Should the fastener resistance be less than that required, as determined by the Building Official, a revised fastener spacing, prepared, signed and sealed by a Florida registered 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 9B-72 of the Florida Administrative Code.

## END OF THIS ACCEPTANCE



NOA No: 11-0510.03  
Expiration Date: 09/06/12  
Approval Date: 09/01/11  
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