

1/2 m = 50 cm = 19-11/16 inches  
1 m = 100 cm = 39-3/8 inches

#### Material Requirements

TAMKO BASE-N-PLY® Fiberglass Sheet	1 ply
TAMKO AWAPLAN 170 (Granule Surfaced)	1 ply
Asphalt (Per 100 sq. ft.)	Approx. 23 lbs
M <sup>3</sup> Adhesive (Per 100 sq. ft.)	Approx. 1-1/2 to 2-1/2 gal.

**Slope:** Positive drainage up to 3 in. per linear ft. For slopes above 3/4 in. per linear ft., fastening of the AWAPLAN 170 is required.

**Deck:** The deck should conform to TAMKO general requirements.

**Insulation:** The insulation should be installed according to the manufacturer's specification in the thickness required. The insulation should conform to TAMKO requirements. Polyisocyanurate and expanded polystyrene must have an overlay of a minimum 1/2 in. fiberboard, perlite, or fiberglass roof insulation.

**Asphalt:** The asphalt should be certified by the manufacturer to meet ASTM D-312, **Type III for slopes up to 1/4 in.** and **Type IV for slopes up to 3 in.**

**Adhesive:** The adhesive **must** be TAM-PRO® M<sup>3</sup> Adhesive.

**BASE-N-PLY:** Starting at the low point of the roof, install 1 layer of TAMKO BASE-N-PLY beginning with a 1/2 m width, then a full 1 m width, side lapped 2 in. and end lapped 4 in. Apply at a right angle to the slope of the roof. Solid mop to the insulation with approximately 23 lbs. (±15%) of specification asphalt per 100 sq. ft.

**AWAPLAN 170:** Starting at the low point of the roof, install 1 layer of TAMKO AWAPLAN 170 granule surfaced sheet, side lapped 4 in. and end lapped 6 in. The AWAPLAN 170 should be solidly adhered to the base ply with an application of M<sup>3</sup> Adhesive at a rate not to exceed 1-1/2 to 2 gal. per sq. for squeegee application and 1-1/2 to 2-1/2 gal. per sq. for spray application. Side laps and end laps shall be heat welded together. **Use care when applying heat as damage can occur to the product by overheating.**

Using a 3/16" serrated edge squeegee will achieve an application rate of 1-1/2 gal. per sq. For spray application, the M<sup>3</sup> Adhesive must be a minimum of 100°F at the spray tip. M<sup>3</sup> Adhesive should not be heated above 180°F.

**Caution should be used when exposing M<sup>3</sup> Adhesive to an open flame.**

**Flashing:** The flashing material **must** be a TAMKO polyester reinforced modified asphalt flashing material.

#### U. L. Requirements:

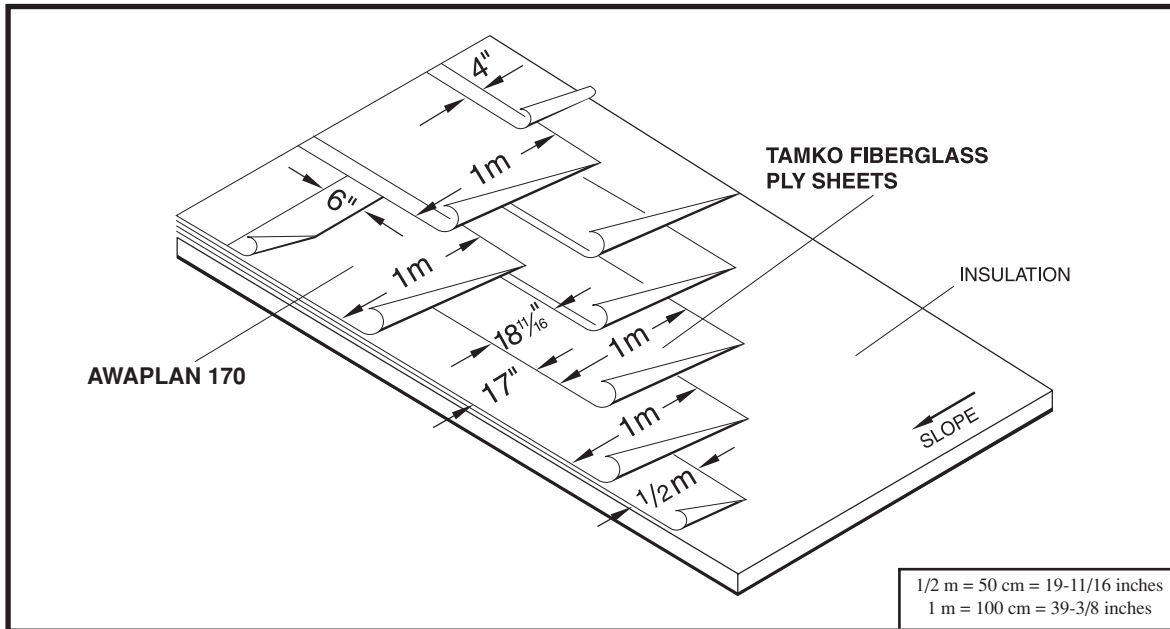
Contact TAMKO for information on U.L. systems requirements.

**Caution:** A product(s) in this specification contains crystalline silica and formaldehyde. Crystalline silica and formaldehyde have been classified as "known" human carcinogens by the International Agency for Research on Cancer (IARC) and the National Toxicology Program. A product(s) in this specification also contains oxidized asphalt. Occupational exposures to oxidized asphalt and its emissions during roofing have been classified by IARC as a "probable human carcinogen". Oxidized asphalt also contains Polycyclic Aromatic Hydrocarbons some of which have been classified by

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IARC as known or probable human carcinogens. The physical nature of the product(s) in this specification may help limit any inhalation or dermal hazard during application and/or removal. However, physical forces such as sawing, grinding or drilling during demolition work and heating or burning may increase the inhalation or dermal exposure hazard of the product(s) in this specification. Take precautions to prevent breathing and contact with skin.

Application of product(s) in this specification using “torch applied” or “hot mopped” applications may expose workers and others in the work area to oxidized asphalt and its emissions. The International Agency for Research on Cancer has classified occupational exposures to oxidized asphalt and its emissions during roofing as a “probable human carcinogen.” During installation and removal of the product(s) in this specification, including “torch applied” or “hot mopped” application, workers must take precautions to assure adequate ventilation and use effective personal protective equipment to prevent exposures to dusts, fumes, vapors and mists. It is the responsibility of the contractor and workers to protect themselves and others in the work area from exposure to oxidized asphalt and its emissions when applying the product(s) in this specification.



#### Material Requirements

**TAMKO TAM-GLASS PREMIUM® or TAM-PLY IV®  
Fiberglass Ply Sheet** **2 plies**

**TAMKO AWAPLAN 170  
(Granule Surfaced)** **1 ply**

**Asphalt (Per 100 sq. ft.)** **Approx. 46 lbs.**

**M<sup>3</sup> Adhesive (Per 100 sq. ft.)** **Approx. 1-1/2 to 2-1/2 gal.**

**Slope:** Positive drainage up to 3 in. per linear ft. For slopes above 3/4 in. per linear ft., fastening of the AWAPLAN 170 is required.

**Deck:** The deck should conform to TAMKO general requirements.

**Insulation:** The insulation should be installed according to the manufacturer's specification in the thickness required. The insulation should conform to TAMKO requirements. Polyisocyanurate and expanded polystyrene must have an overlay of a minimum 1/2 in. fiberboard, perlite, or fiberglass roof insulation.

**Asphalt:** The asphalt should be certified by the manufacturer to meet ASTM D-312, **Type III for slopes up to 1/4 in.** and **Type IV for slopes up to 3 in.**

**Adhesive:** The adhesive **must** be TAM-PRO® M<sup>3</sup> Adhesive.

**Fiberglass Ply Sheet 2 Ply Installation:** Over the insulation, install 2 plies of TAM-GLASS PREMIUM or TAM-PLY IV in specification asphalt. Starting from the low point of the roof, apply a 1/2 m width, then a full 1 m width. Follow with full 1 m widths, shingle fashion, lapping each ply 20-11/16 in. in such a manner so that at least 2 plies cover the insulation at any one point. Approximately 23 lbs. (+15%) of specification asphalt per 100 sq. ft. should be used to embed each ply.

such a manner so that at least 2 plies cover the insulation at any one point. Approximately 23 lbs. (+15%) of specification asphalt per 100 sq. ft. should be used to embed each ply.

**AWAPLAN 170:** Starting at the low point of the roof, install 1 layer of TAMKO AWAPLAN 170 granule surfaced sheet, side lapped 4 in. and end lapped 6 in. The AWAPLAN 170 should be solidly adhered to the ply sheet with an application of M<sup>3</sup> Adhesive at a rate not to exceed 1-1/2 to 2 gal. per sq. for squeegee application and 1-1/2 to 2-1/2 gal. per sq. for spray application. Side laps and end laps shall be heat welded together. **Use care when applying heat as damage can occur to the product by overheating.**

Using a 3/16" serrated edge squeegee will achieve an application rate of 1-1/2 gal. per sq. For spray application, the M<sup>3</sup> Adhesive must be a minimum of 100°F at the spray tip. M<sup>3</sup> Adhesive should not be heated above 180°F.

**Caution should be used when exposing M<sup>3</sup> Adhesive to an open flame.**

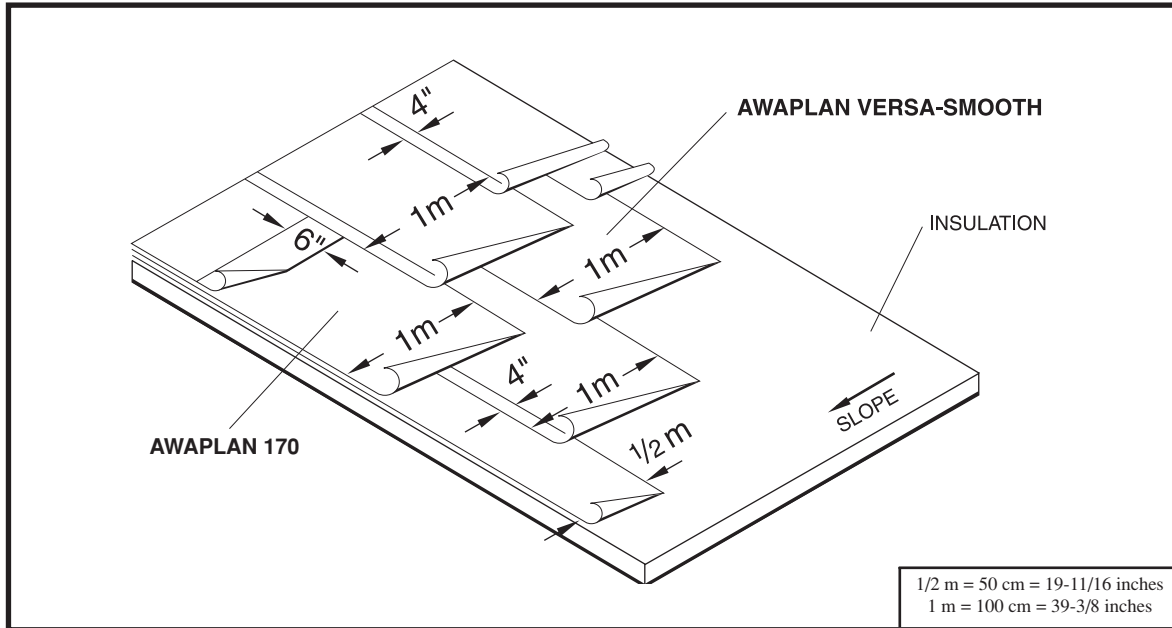
**Flashing:** The flashing material **must** be a TAMKO polyester reinforced modified asphalt flashing material.

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#### Material Requirements

TAMKO AWAPLAN VERSA-SMOOTH	1 ply
TAMKO AWAPLAN 170 (Granule Surfaced)	1 ply
M <sup>3</sup> Adhesive (Per 100 sq. ft.)	Approx. 1-1/2 to 2-1/2 gal.

**Slope:** Positive drainage up to 3 in. per linear ft. **For slopes above 3/4 in. per linear ft.,** fastening of the AWAPLAN 170 is required.

**Deck:** The deck should conform to TAMKO general requirements.

**Insulation:** The insulation should be installed according to the manufacturer's specification in the thickness required. The insulation should conform to TAMKO requirements. Polyisocyanurate and expanded polystyrene must have an overlay of a minimum 1/2 in. fiberboard, perlite, or fiberglass roof insulation.

**Adhesive:** The adhesive **must** be TAM-PRO<sup>®</sup> M<sup>3</sup> Adhesive.

**AWAPLAN VERSA-SMOOTH:** Starting at the low point of the roof, install 1 ply of TAMKO AWAPLAN VERSA-SMOOTH, beginning with a 1/2 m width, then a full 1 m width, side lapped 4 in. and end lapped 6 in. Apply at a right angle to the slope of the roof. The AWAPLAN VERSA-SMOOTH should be solidly adhered to the insulation with an application of M<sup>3</sup> Adhesive at a rate not to exceed 1-1/2 to 2 gal per sq. for squeegee application and 1-1/2 to 2-1/2 gal. per sq. for spray application. Side laps and end laps shall be heat welded together.

Alternately, the AWAPLAN VERSA-SMOOTH may be solidly adhered to the insulation (pressed into the hot asphalt) with approximately 23 lbs. (±15%) of specification asphalt per 100 sq. ft. The asphalt should be above 400° F at the point of application and mopped no more than 4 ft. in front of the roll.

**AWAPLAN 170:** Starting at the low point of the roof, install 1 layer of TAMKO AWAPLAN 170 granule surfaced sheet, side lapped 4 in. and end lapped 6 in. The AWAPLAN 170 should be solidly adhered to the base ply with an application of M<sup>3</sup> Adhesive at a rate not to exceed 1-1/2 to 2 gal. per sq. for squeegee application and 1-1/2 to 2-1/2 gal. per sq. for spray application. Side laps and end laps shall be heat welded together. **Use care when applying heat as damage can occur to the product by overheating.**

Using a 3/16" serrated edge squeegee will achieve an application rate of 1-1/2 gal. per sq. For spray application, the M<sup>3</sup> Adhesive must be a minimum of 100°F at the spray tip. M<sup>3</sup> Adhesive should not be heated above 180°F.

**Caution should be used when exposing M<sup>3</sup> Adhesive to an open flame.**

**Flashing:** The flashing material **must** be a TAMKO polyester reinforced modified asphalt flashing material.

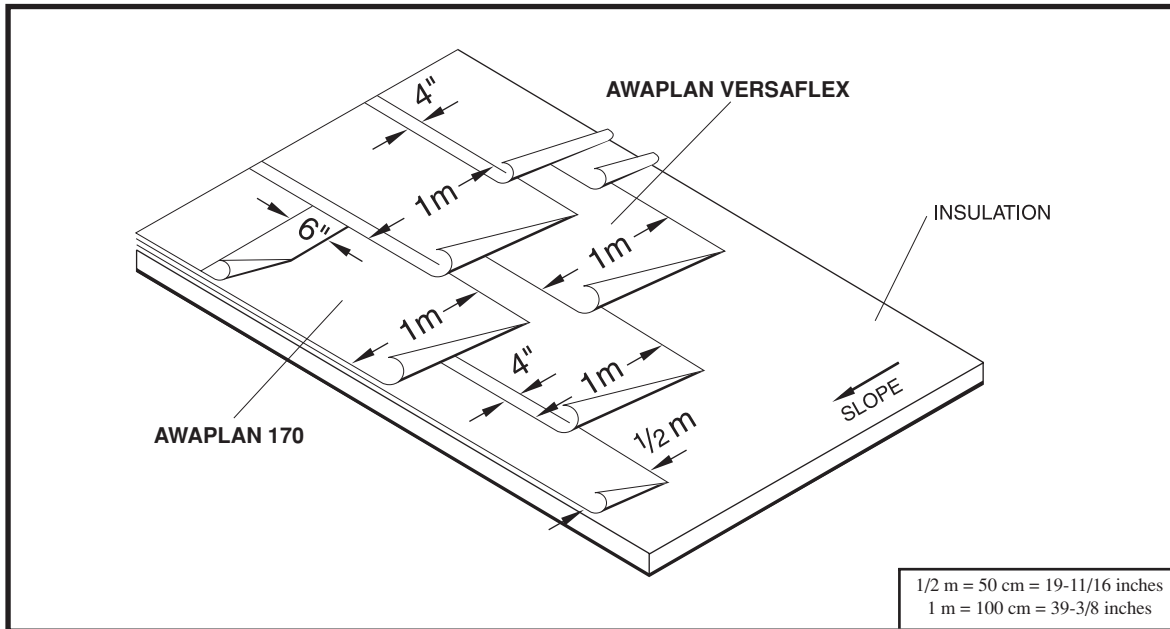
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#### Material Requirements

TAMKO AWAPLAN VERSAFLEX	1 ply
TAMKO AWAPLAN 170 (Granule Surfaced)	1 ply
M <sup>3</sup> Adhesive (Per 100 sq. ft.)	Approx. 1-1/2 to 2-1/2 gal.

**Slope:** Positive drainage up to 3 in. per linear ft. For slopes above 3/4 in. per linear ft., fastening of the AWAPLAN 170 is required.

**Deck:** The deck should conform to TAMKO general requirements.

**Insulation:** The insulation should be installed according to the manufacturer's specification in the thickness required. The insulation should conform to TAMKO requirements. Polyisocyanurate and expanded polystyrene must have an overlay of a minimum 1/2 in. fiberboard, perlite, or fiberglass roof insulation.

**Adhesive:** The adhesive **must** be TAM-PRO® M<sup>3</sup> Adhesive.

**AWAPLAN VERSAFLEX:** Starting at the low point of the roof, install 1 ply of TAMKO AWAPLAN VERSAFLEX, beginning with a 1/2 m width, then a full 1 m width, side lapped 4 in. and end lapped 6 in. Apply at a right angle to the slope of the roof. The AWAPLAN VERSAFLEX should be solidly adhered to the insulation with an application of M<sup>3</sup> Adhesive at a rate not to exceed 1-1/2 to 2 gal per sq. for squeegee application and 1-1/2 to 2-1/2 gal. per sq. for spray application. Side laps and end laps shall be set in M<sup>3</sup> Adhesive. Care should be taken to prevent damage to the system from water or wind prior to the cured adhesive sealing the laps.

Alternately, the AWAPLAN VERSAFLEX may be solidly adhered to the insulation (pressed into the hot asphalt) with approximately 23 lbs. (±15%) of specification asphalt per 100 sq. ft. The asphalt should be above 400°F at the point of application and mopped no more than 4 ft. in front of the roll.

**AWAPLAN 170:** Starting at the low point of the roof, install 1 layer of TAMKO AWAPLAN 170 granule surfaced sheet, side lapped 4 in. and end lapped 6 in. The AWAPLAN 170 should be solidly adhered to the base ply with an application of M<sup>3</sup> Adhesive at a rate not to exceed 1-1/2 to 2 gal. per sq. for squeegee application and 1-1/2 to 2-1/2 gal. per sq. for spray application. Side laps and end laps shall be heat welded together. **Use care when applying heat as damage can occur to the product by overheating.**

Using a 3/16" serrated edge squeegee will achieve an application rate of 1-1/2 gal. per sq. For spray application, the M<sup>3</sup> Adhesive must be a minimum of 100°F at the spray tip. M<sup>3</sup> Adhesive should not be heated above 180°F.

**Caution should be used when exposing M<sup>3</sup> Adhesive to an open flame.**

**Flashing:** The flashing material **must** be a TAMKO polyester reinforced modified asphalt flashing material.

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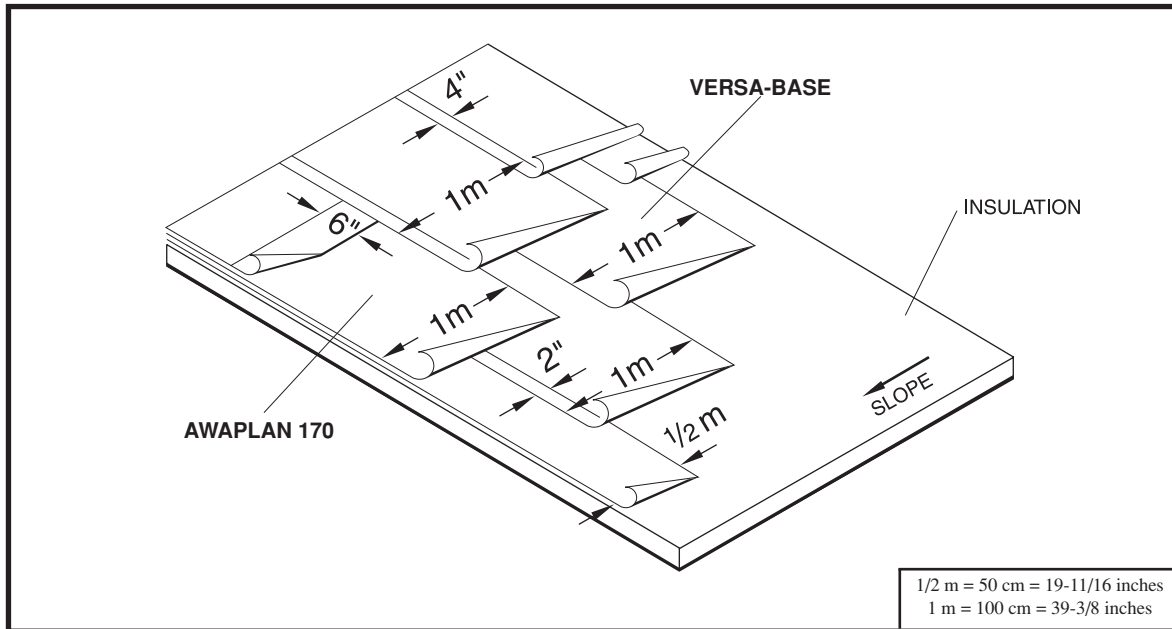




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**Material Requirements**

TAMKO VERSA-BASE <sup>®</sup>	1 ply
TAMKO AWAPLAN 170 (Granule Surfaced)	1 ply
M <sup>3</sup> Adhesive (Per 100 sq. ft.)	Approx. 1-1/2 to 2-1/2 gal.

**Slope:** Positive drainage up to 3 in. per linear ft. **For slopes above 3/4 in. per linear ft.,** fastening of the AWAPLAN 170 is required.

**Deck:** The deck should conform to TAMKO general requirements.

**Insulation:** The insulation should be installed according to the manufacturer's specification in the thickness required. The insulation should conform to TAMKO requirements. Polyisocyanurate and expanded polystyrene must have an overlay of a minimum 1/2 in. fiberboard, perlite, or fiberglass roof insulation.

**Adhesive:** The adhesive **must** be TAM-PRO<sup>®</sup> M<sup>3</sup> Adhesive.

**VERSA-BASE:** Starting at the low point of the roof, install 1 ply of TAMKO VERSA-BASE, beginning with a 1/2 m width, then a full 1 m width, side lapped 2 in. and end lapped 4 in. Apply at a right angle to the slope of the roof. The VERSA-BASE should be solidly adhered to the insulation with an application of M<sup>3</sup> Adhesive at a rate not to exceed 1-1/2 to 2 gal. per sq. for squeegee application and 1-1/2 to 2-1/2 gal. per sq. for spray application. Side laps and end laps shall be set in M<sup>3</sup> Adhesive. Care should be taken to prevent damage to the system from water or wind prior to the cured adhesive sealing the laps.

Alternately, the VERSA-BASE may be solidly adhered to the insulation (pressed into hot asphalt) with approximately 23 lbs. (±15%) of specification asphalt per 100 sq. ft. The asphalt should be above 400°F at the point of application and mopped no more than 4 ft. in front of the roll.

**AWAPLAN 170:** Starting at the low point of the roof, install 1 layer of TAMKO AWAPLAN 170 granule surfaced sheet, side lapped 4 in. and end lapped 6 in. The AWAPLAN 170 should be solidly adhered to the base ply with an application of M<sup>3</sup> Adhesive at a rate not to exceed 1-1/2 to 2 gal. per sq. for squeegee application and 1-1/2 to 2-1/2 gal. per sq. for spray application. Side laps and end laps shall be heat welded together. **Use care when applying heat as damage can occur to the product by overheating.**

Using a 3/16" serrated edge squeegee will achieve an application rate of 1-1/2 gal. per sq. For spray application, the M<sup>3</sup> Adhesive must be a minimum of 100°F at the spray tip. M<sup>3</sup> Adhesive should not be heated above 180°F.

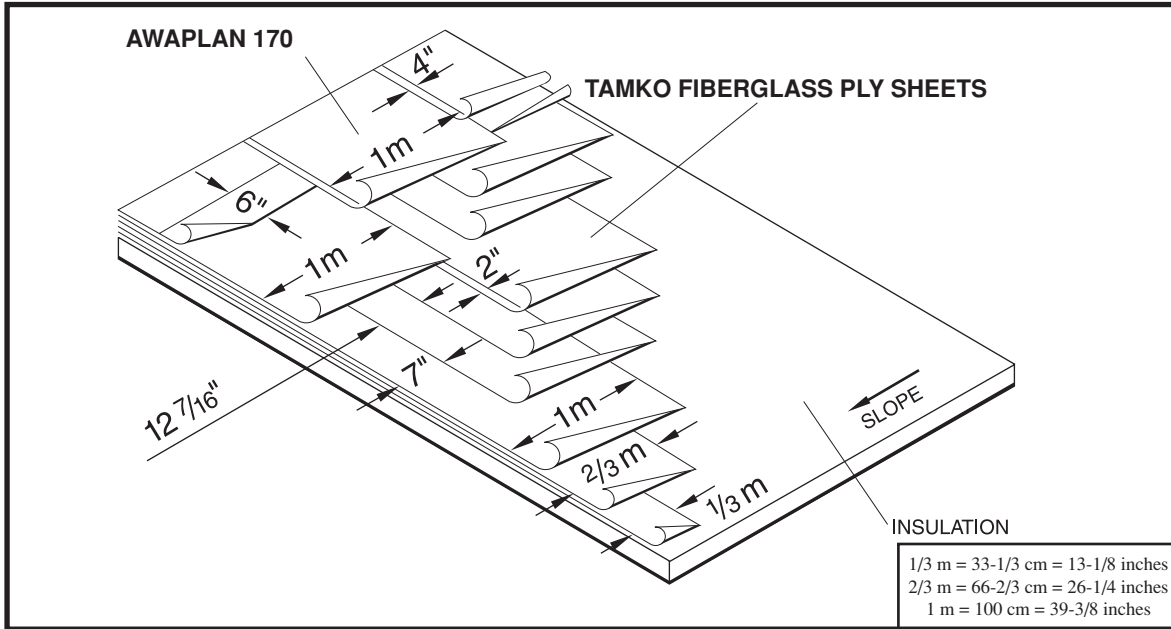
**Caution should be used when exposing M<sup>3</sup> Adhesive to an open flame.**

**Flashing:** The flashing material **must** be a TAMKO polyester reinforced modified asphalt flashing material.

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#### Material Requirements

TAMKO TAM-PLY IV® Fiberglass Ply Sheet	3 plies
TAMKO AWAPLAN 170 (Granule Surfaced)	1 ply
Asphalt (Per 100 sq. ft.)	Approx. 69 lbs.
M <sup>3</sup> Adhesive (Per 100 sq. ft.)	Approx. 1-1/2 to 2-1/2 gal.

**Slope:** Positive drainage up to 3 in. per linear ft. For slopes above 3/4 in. per linear ft., fastening of the AWAPLAN 170 is required.

**Deck:** The deck should conform to TAMKO general requirements.

**Insulation:** The insulation should be installed according to the manufacturer's specification in the thickness required. The insulation should conform to TAMKO requirements. Polyisocyanurate and expanded polystyrene must have an overlay of a minimum 1/2 in. fiberboard, perlite, or fiberglass roof insulation.

**Asphalt:** The asphalt should be certified by the manufacturer to meet ASTM D-312, **Type III for slopes up to 1/4 in.** and **Type IV for slopes up to 3 in.**

**Adhesive:** The adhesive **must** be TAM-PRO® M<sup>3</sup> Adhesive.

**Fiberglass Ply Sheets:** Over the insulation, install 3 plies of TAMKO TAM-PLY IV in specification asphalt. Starting from the low point of the roof, apply a 1/3 m width, then a 2/3 m width. Follow with full 1 m widths, shingle fashion, lapping each ply 26-15/16 in. in such a manner so that at least 3 plies of ply sheet cover the insulation at any point. Approximately 23 lbs. (±15%) of specification asphalt per 100 sq. ft. should be used to embed each ply.

**AWAPLAN 170:** Starting at the low point of the roof, install 1 layer of TAMKO AWAPLAN 170 granule surfaced sheet, side lapped 4 in. and end lapped 6 in. The AWAPLAN 170 should be solidly adhered to the ply sheet with an application of M<sup>3</sup> Adhesive at a rate not to exceed 1-1/2 to 2 gal. per sq. for squeegee application and 1-1/2 to 2-1/2 gal. per sq. for spray application. Side laps and end laps shall be heat welded together. **Use care when applying heat as damage can occur to the product by overheating.**

Using a 3/16" serrated edge squeegee will achieve an application rate of 1-1/2 gal. per sq. For spray application, the M<sup>3</sup> Adhesive must be a minimum of 100°F at the spray tip. M<sup>3</sup> Adhesive should not be heated above 180°F.

**Caution should be used when exposing M<sup>3</sup> Adhesive to an open flame.**

**Flashing:** The flashing material **must** be a TAMKO polyester reinforced modified asphalt flashing material.

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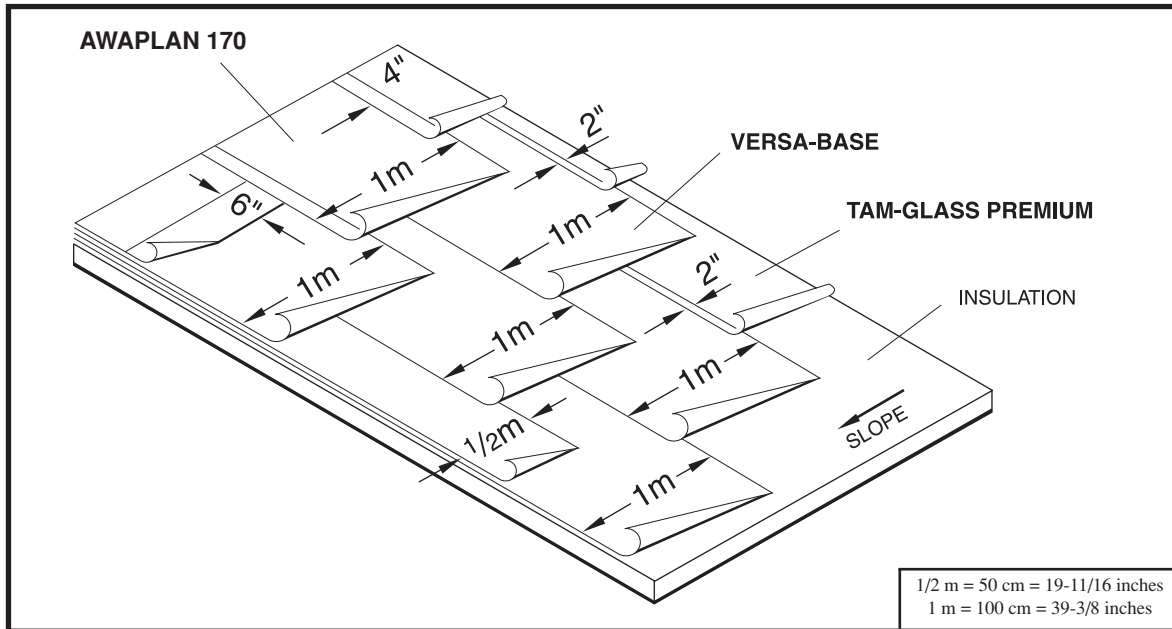
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#### Material Requirements

TAMKO TAM-GLASS PREMIUM® Fiberglass Ply Sheet	1 ply
TAMKO VERSA-BASE® Modified Asphalt Base Sheet	1 ply
TAMKO AWAPLAN 170 (Granule Surfaced)	1 ply
Asphalt (Per 100 sq. ft.)	Approx. 46 lbs.
M <sup>3</sup> Adhesive (Per 100 sq. ft.)	Approx. 1-1/2 to 2-1/2 gal.

**Slope:** Positive drainage up to 3 in. per linear ft. For slopes above 3/4 in. per linear ft., fastening of the AWAPLAN 170 is required.

**Deck:** The deck should conform to TAMKO general requirements.

**Insulation:** The insulation should be installed according to the manufacturer's specification in the thickness required. The insulation should conform to TAMKO requirements. Polyisocyanurate and expanded polystyrene must have an overlay of a minimum 1/2 in. fiberboard, perlite, or fiberglass roof insulation.

**Asphalt:** The asphalt should be certified by the manufacturer to meet ASTM D-312, Type III for slopes up to 1/4 in. and Type IV for slopes up to 3 in.

**Adhesive:** The adhesive must be TAM-PRO® M<sup>3</sup> Adhesive.

**TAM-GLASS PREMIUM:** Starting at the low point of the roof, install 1 ply of TAM-GLASS PREMIUM, side lapped 2 in. and end lapped 4 in. Apply at a right angle to the slope of the roof. Solid mop to the insulation with approximately 23 lbs. (±15%) of specification asphalt per 100 sq. ft.

**VERSA-BASE Sheet:** Starting at the low point of the roof, install a 1/2 m width, then a full 1 m width of TAMKO VERSA-BASE, side lapped 2 in. and end lapped 4 in. Apply at a right angle to the slope of the roof. Solid mop to the base ply with approximately 23 lbs. (±15%) of specification asphalt per 100 sq. ft. The asphalt should be above 400° F at the point of application and mopped no more than 4 ft. in front of the roll.

Note: It is acceptable to invert the TAM-GLASS PREMIUM and the VERSA-BASE.

**AWAPLAN 170:** Starting at the low point of the roof, install 1 layer of TAMKO AWAPLAN 170 granule surfaced sheet, side lapped 4 in. and end lapped 6 in. The AWAPLAN 170 should be solidly adhered to the ply sheet with an application of M<sup>3</sup> Adhesive at a rate not to exceed 1-1/2 to 2 gal. per sq. for squeegee application and 1-1/2 to 2-1/2 gal. per sq. for spray application. Side laps and end laps shall be heat welded together. **Use care when applying heat as damage can occur to the product by overheating.**

Using a 3/16" serrated edge squeegee will achieve an application rate of 1-1/2 gal. per sq. For spray application, the M<sup>3</sup> Adhesive must be a minimum of 100°F at the spray tip. M<sup>3</sup> Adhesive should not be heated above 180°F.

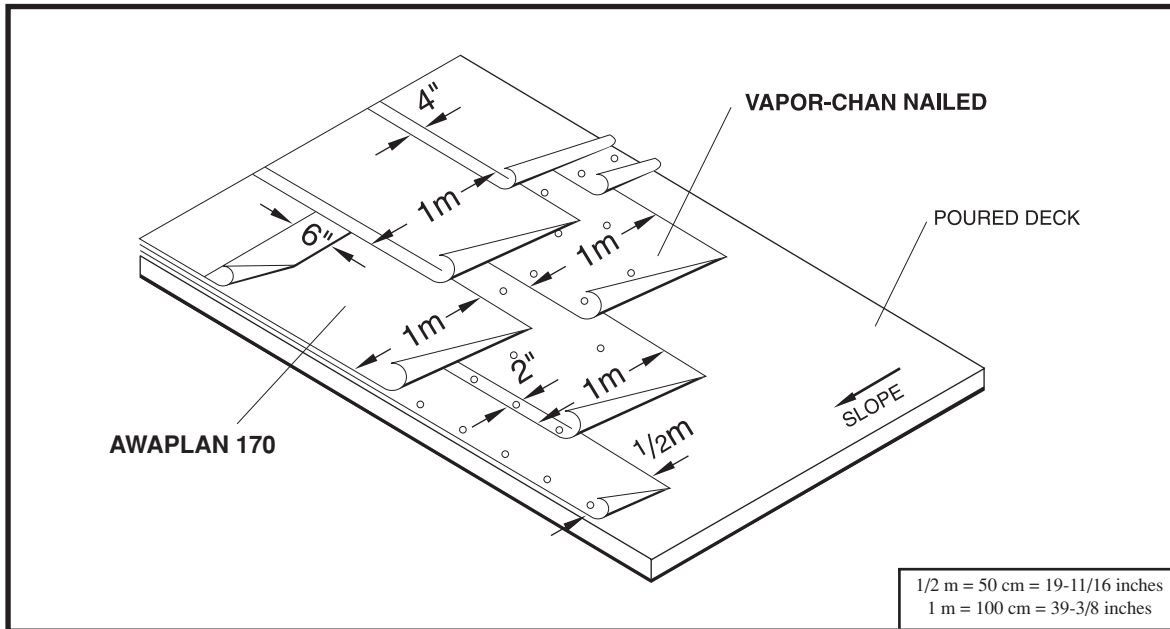
**Caution should be used when exposing M<sup>3</sup> Adhesive to an open flame.**

**Flashing:** The flashing material must be a TAMKO polyester reinforced modified asphalt flashing material.

**Caution:** A product(s) in this specification contains crystalline silica and formaldehyde. Crystalline silica and formaldehyde have been classified as "known" human carcinogens by the International Agency for Research on Cancer (IARC) and the National Toxicology Program. A product(s) in this specification also contains oxidized asphalt. Occupational exposures to oxidized asphalt and its emis-

sions during roofing have been classified by IARC as a “probable human carcinogen”. Oxidized asphalt also contains Polycyclic Aromatic Hydrocarbons some of which have been classified by IARC as known or probable human carcinogens. The physical nature of the product(s) in this specification may help limit any inhalation or dermal hazard during application and/or removal. However, physical forces such as sawing, grinding or drilling during demolition work and heating or burning may increase the inhalation or dermal exposure hazard of the product(s) in this specification. Take precautions to prevent breathing and contact with skin.

Application of product(s) in this specification using “torch applied” or “hot mopped” applications may expose workers and others in the work area to oxidized asphalt and its emissions. The International Agency for Research on Cancer has classified occupational exposures to oxidized asphalt and its emissions during roofing as a “probable human carcinogen.” During installation and removal of the product(s) in this specification, including “torch applied” or “hot mopped” application, workers must take precautions to assure adequate ventilation and use effective personal protective equipment to prevent exposures to dusts, fumes, vapors and mists. It is the responsibility of the contractor and workers to protect themselves and others in the work area from exposure to oxidized asphalt and its emissions when applying the product(s) in this specification.



**Material Requirements**

<b>TAMKO VAPOR-CHAN<sup>®</sup></b> Fiberglass Venting Asphalt Base Sheet	<b>1 ply</b>
<b>TAMKO AWAPLAN 170</b> (Granule Surfaced)	<b>1 ply</b>
<b>M<sup>3</sup> Adhesive (Per 100 sq. ft.)</b>	<b>Approx. 1-1/2 to 2-1/2 gal.</b>
<b>Clinch-type nails</b> for base sheet (per 100 sq ft.)	<b>Approx. 100 nails</b>

**Slope:** Positive drainage up to 3 in. per linear ft. For slopes above 3/4 in. per linear ft., fastening of the AWAPLAN 170 is required.

**Deck:** The deck should conform to TAMKO general requirements.

**Adhesive:** The adhesive **must** be TAM-PRO<sup>®</sup> M<sup>3</sup> Adhesive.

**VAPOR-CHAN:** Starting at the low point of the roof, install 1 ply of TAMKO VAPOR-CHAN, beginning with a 1/2 m width, then a full 1 m width, side lapped 2 in. and end lapped 4 in. Apply at a right angle to the slope of the roof. Nail the sheets along the lap at intervals of no more than 8 in. Stagger-nail down the center of the sheet on 16 in. centers along 2 lines located 13 in. from each edge of the base sheet.

**AWAPLAN 170:** Starting at the low point of the roof, install 1 layer of TAMKO AWAPLAN 170 granule surfaced sheet, side lapped 4 in. and end lapped 6 in. The field of the AWAPLAN 170 membrane should be solidly adhered to the base sheet with an application of M<sup>3</sup> Adhesive at a rate not to exceed 1-1/2 to 2 gal. per sq. for squeegee application and 1-1/2 to 2-1/2 gal. per sq. for spray application. Side laps and end laps shall be heat welded together. **Use care when applying heat as damage can occur to the product by overheating.**

Using a 3/16" serrated edge squeegee will achieve an application rate of 1-1/2 gal. per sq. For spray application, the M<sup>3</sup> Adhesive must be a minimum of 100°F at the spray tip. M<sup>3</sup> Adhesive should not be heated above 180°F.

**Caution should be used when exposing M<sup>3</sup> Adhesive to an open flame.**

**Flashing:** The flashing material **must** be a TAMKO polyester reinforced modified asphalt flashing material.

**U.L. Requirements:**  
 Contact TAMKO for information on U.L. systems requirements.

**Caution:** A product(s) in this specification contains crystalline silica and formaldehyde. Crystalline silica and formaldehyde have been classified as "known" human carcinogens by the International Agency for Research on Cancer (IARC) and the National Toxicology Program. A product(s) in this specification also contains oxidized asphalt. Occupational exposures to oxidized asphalt and its emis-





# SPECIFICATION SUBMITTAL

211 M<sup>3</sup> AWAPLAN 170

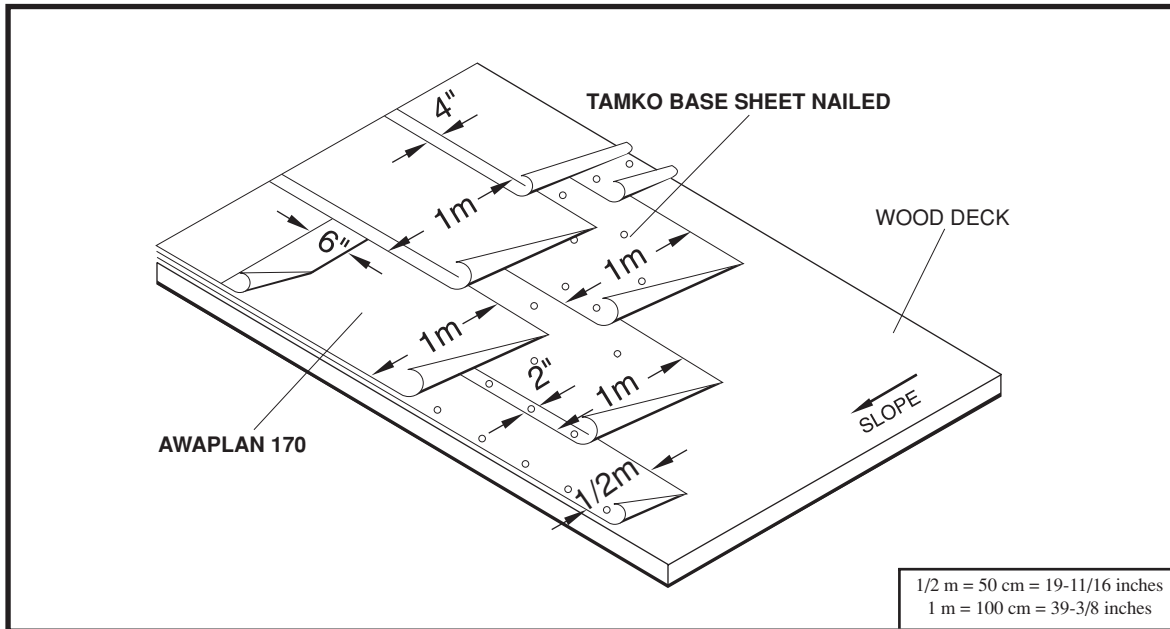
NAILABLE DECKS (GYPSUM AND LIGHTWEIGHT  
INSULATING CONCRETE)

sions during roofing have been classified by IARC as a “probable human carcinogen”. Oxidized asphalt also contains Polycyclic Aromatic Hydrocarbons some of which have been classified by IARC as known or probable human carcinogens. The physical nature of the product(s) in this specification may help limit any inhalation or dermal hazard during application and/or removal. However, physical forces such as sawing, grinding or drilling during demolition work and heating or burning may increase the inhalation or dermal exposure hazard of the product(s) in this specification. Take precautions to prevent breathing and contact with skin.

Application of product(s) in this specification using “torch applied” applications may expose workers and others in the work area to oxidized asphalt and its emissions. The International Agency for Research on Cancer has classified occupational exposures to oxidized asphalt and its emissions during roofing as a “probable human carcinogen.” During installation and removal of the product(s) in this specification, including “torch applied” application, workers must take precautions to assure adequate ventilation and use effective personal protective equipment to prevent exposures to dusts, fumes, vapors and mists. It is the responsibility of the contractor and workers to protect themselves and others in the work area from exposure to oxidized asphalt and its emissions when applying the product(s) in this specification.

For complete information on TAMKO’s recommendations and requirements, consult TAMKO’s web site at [www.tamko.com](http://www.tamko.com)  
TAMKO Building Products, Inc., P. O. Box 1404, Joplin, MO 64802 • 1-800-641-4691 • [www.tamko.com](http://www.tamko.com)

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#### Material Requirements

TAMKO TYPE 43 Coated Base Sheet, TAMKO GLASS-BASE® or BASE-N-PLY® Base Sheet	1 ply
TAMKO AWAPLAN 170 (Granule Surfaced)	1 ply
M <sup>3</sup> Adhesive (Per 100 sq. ft.)	Approx. 1-1/2 to 2-1/2 gal.
Clinch-type nails for base sheet (per 100 sq ft.)	Approx. 100 nails

**Slope:** Positive drainage up to 3 in. per linear ft. For slopes above 3/4 in. per linear ft., fastening of the AWAPLAN 170 is required.

**Deck:** The deck should conform to TAMKO general requirements.

**Adhesive:** The adhesive must be TAM-PRO® M<sup>3</sup> Adhesive.

**Base Ply:** Starting at the low point of the roof, install 1 ply of TAMKO TYPE 43 Coated Base Sheet, GLASS-BASE, or BASE-N-PLY, beginning with a 1/2 width, then a full width, side lapped 2 in. and end lapped 4 in. Apply at a right angle to the slope of the roof. Nail GLASS-BASE or BASE-N-PLY sheets along the lap at intervals of no more than 8 in. Stagger-nail on 16 in. centers along 2 lines located 13 in. from each edge of the base sheet. Nail TYPE 43 Coated Base Sheet along the lap at intervals of no more than 9 in. Stagger-nail on 18 in. centers along 2 lines located 12 in. from each edge of the base sheet. For specific fastening patterns for wind uplift listings, contact the Technical Services Department.

**AWAPLAN 170:** Starting at the low point of the roof, install 1 layer of TAMKO AWAPLAN 170 granule surfaced sheet, side lapped 4 in. and end lapped 6 in. The field of the AWAPLAN 170 membrane should be solidly adhered to the base sheet with an application of M<sup>3</sup> Adhesive at a rate not to exceed 1-1/2 to 2 gal. per sq. for squeegee application and 1-1/2 to 2-1/2 gal. per sq. for spray application. Side laps and end laps shall be heat welded together. Use care when applying heat as damage can occur to the product by overheating.

Using a 3/16" serrated edge squeegee will achieve an application rate of 1-1/2 gal. per sq. For spray application, the M<sup>3</sup> Adhesive must be a minimum of 100°F at the spray tip. M<sup>3</sup> Adhesive should not be heated above 180°F.

**Caution should be used when exposing M<sup>3</sup> Adhesive to an open flame.**

**Flashing:** The flashing material must be a TAMKO polyester reinforced modified asphalt flashing material.

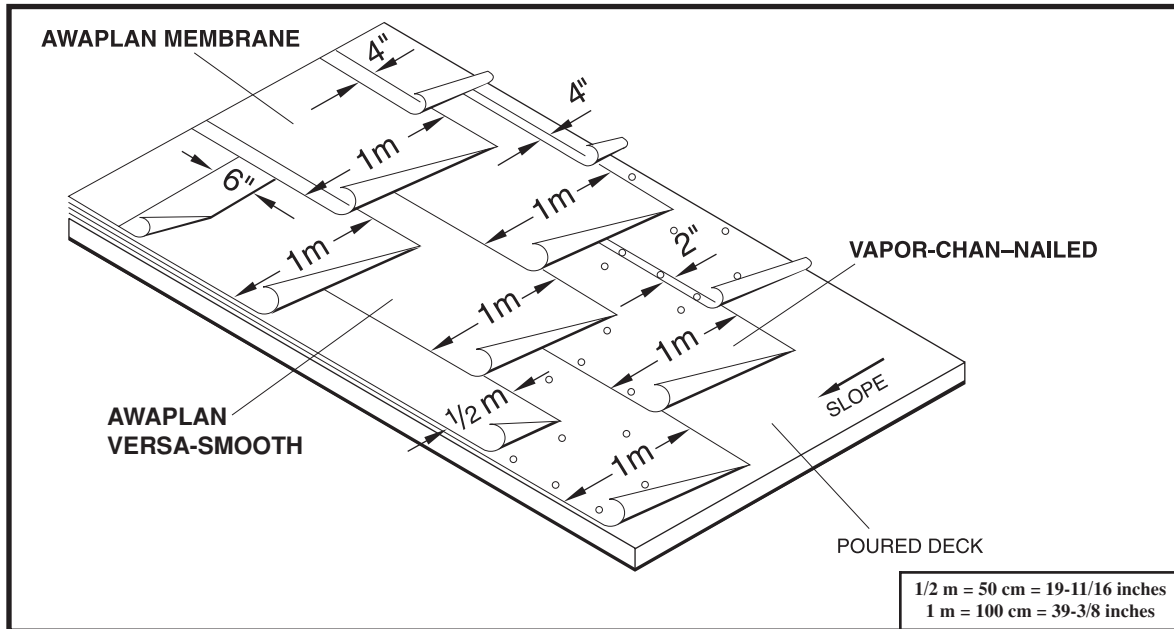
#### U.L. Requirements:

Contact TAMKO for information on U.L. systems requirements.

**Caution:** A product(s) in this specification contains crystalline silica, formaldehyde and wood dust. Crystalline silica, formaldehyde and wood dust have been classified as "known" human carcinogens by the International Agency for Research on Cancer (IARC) and the National Toxicology Program. A product(s) in this specification also contains oxidized asphalt. Occupational

exposures to oxidized asphalt and its emissions during roofing have been classified by IARC as a “probable human carcinogen”. Oxidized asphalt also contains Polycyclic Aromatic Hydrocarbons some of which have been classified by IARC as known or probable human carcinogens. The physical nature of the product(s) in this specification may help limit any inhalation or dermal hazard during application and/or removal. However, physical forces such as sawing, grinding or drilling during demolition work and heating or burning may increase the inhalation or dermal exposure hazard of the product(s) in this specification. Take precautions to prevent breathing and contact with skin.

Application of product(s) in this specification using “torch applied” applications may expose workers and others in the work area to oxidized asphalt and its emissions. The International Agency for Research on Cancer has classified occupational exposures to oxidized asphalt and its emissions during roofing as a “probable human carcinogen.” During installation and removal of the product(s) in this specification, including “torch applied” application, workers must take precautions to assure adequate ventilation and use effective personal protective equipment to prevent exposures to dusts, fumes, vapors and mists. It is the responsibility of the contractor and workers to protect themselves and others in the work area from exposure to oxidized asphalt and its emissions when applying the product(s) in this specification.



### Material Requirements

TAMKO VAPOR-CHAN® Fiberglass Venting Asphalt Base Sheet	1 ply
TAMKO AWAPLAN VERSA-SMOOTH Modified Base Sheet	1 ply
TAMKO AWAPLAN 170 (Granule Surfaced)	1 ply
M <sup>3</sup> Adhesive (Per 100 sq. ft.)	Approx. 1-1/2 to 2-1/2 gal.

**Slope:** Positive drainage up to 3 in. per linear ft. For slopes above 3/4 in. per linear ft., fastening of the AWAPLAN HEAT WELDING is required.

**Deck:** The deck should conform to TAMKO general requirements.

**Asphalt:** The asphalt should be certified by the manufacturer to meet ASTM D-312, Type III for slopes up to 1/4 in. and Type IV for slopes up to 3 in.

**VAPOR-CHAN:** Starting at the low point of the roof, install 1 ply of TAMKO VAPOR-CHAN, side lapped 2 in. and end lapped 4 in. Apply at a right angle to the slope of the roof. Nail the sheets along the lap at intervals of no more than 8 in. Stagger-nail down the center of the sheet on 16 in. centers along 2 lines located 13 in. from each edge of the base sheet. For specific fastening patterns for wind uplift listings, contact the Technical Services Department.

**AWAPLAN VERSA-SMOOTH:** Starting at the low point of the roof, install 1 ply of TAMKO AWAPLAN VERSA-SMOOTH, beginning with a 1/2 m width, then a full 1 m width, side lapped 4 in. and end lapped 6 in. Apply at a right angle to the slope of the roof. The AWAPLAN VERSA-SMOOTH should be solidly adhered to the base sheet with an application of M<sup>3</sup> Adhesive at a rate not to exceed 1-1/2 to 2 gal per sq. for squeegee application and 1-1/2

to 2-1/2 gal. per sq. for spray application. Side laps and end laps shall be heat welded together.

Alternately, the AWAPLAN VERSA-SMOOTH may be solidly adhered to the base sheet (pressed into the hot asphalt) with approximately 23 lbs. (±15%) of specification asphalt per 100 sq. ft. The asphalt should be above 400°F at the point of application and mopped no more than 4 ft. in front of the roll.

**AWAPLAN 170:** Starting at the low point of the roof, install 1 layer of TAMKO AWAPLAN 170 granule surfaced sheet, side lapped 4 in. and end lapped 6 in. The AWAPLAN 170 should be solidly adhered to the AWAPLAN VERSA-SMOOTH with an application of M<sup>3</sup> Adhesive at a rate not to exceed 1-1/2 to 2 gal. per sq. for squeegee application and 1-1/2 to 2-1/2 gal. per sq. for spray application. Side laps and end laps shall be heat welded together. Use care when applying heat as damage can occur to the product by overheating.

Using a 3/16" serrated edge squeegee will achieve an application rate of 1-1/2 gal. per sq. For spray application, the M<sup>3</sup> Adhesive must be a minimum of 100°F at the spray tip. M<sup>3</sup> Adhesive should not be heated above 180°F.

**Caution should be used when exposing M<sup>3</sup> Adhesive to an open flame.**

**Flashing:** The flashing material must be a TAMKO polyester reinforced modified asphalt flashing material.

### U.L. Requirements:

Contact TAMKO for information on U.L. systems requirements.

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