**Material Requirements**

<table>
<thead>
<tr>
<th>Item</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>TAMKO GLASS-BASE®, TAM-GLASS PREMIUM®, TAM-PLY IV®, or BASE-N-PLY®</td>
<td>Fiberglass Sheet 1 ply</td>
</tr>
<tr>
<td>TAMKO AWAPLAN PREMIUM FR (Granule Surfaced)</td>
<td>1 ply</td>
</tr>
<tr>
<td>Asphalt (Per 100 sq. ft.)</td>
<td>Approx. 46 lbs.</td>
</tr>
</tbody>
</table>

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

**Base Ply:** Starting at the low point of the roof, install 1 layer of TAMKO GLASS-BASE, TAM-GLASS PREMIUM, TAM-PLY IV, or 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 PREMIUM FR:** Starting at the low point of the roof, install 1 layer of TAMKO AWAPLAN PREMIUM FR granule surfaced sheet, side lapped 4 in. and end lapped 6 in. The AWAPLAN PREMIUM FR should be solidly adhered to the base ply (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.

Alternately, the AWAPLAN PREMIUM FR can be heat welded and should be solidly adhered to the base ply by sufficiently heating the back side with a torch at the juncture of the base ply and the AWAPLAN PREMIUM FR roll to form a bead of melted asphalt as the AWAPLAN PREMIUM FR is rolled out. Use care when applying heat as damage can occur to the product by overheating.

**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 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 PREMIUM FR
(Granule Surfaced) 1 ply
Asphalt (Per 100 sq. ft.) Approx. 69 lbs.

Slope: Positive drainage up to 3 in. per linear ft. For slopes above 3/4 in. per linear ft., fastening of the AWAPLAN PREMIUM FR 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. Polysisocyanurate 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.

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 point. Approximately 23 lbs. (+15%) of specification asphalt per 100 sq. ft. should be used to embed each ply.

AWAPLAN PREMIUM FR: Starting at the low point of the roof, install 1 layer of TAMKO AWAPLAN PREMIUM FR granule surfaced sheet, side lapped 4 in. and end lapped 6 in. The AWAPLAN PREMIUM FR should be solidly adhered to the ply 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. Alternately, the AWAPLAN PREMIUM FR can be heat welded and should be solidly adhered to the ply sheet by sufficiently heating the back side with a torch at the juncture of the ply sheet and the AWAPLAN PREMIUM FR roll to form a bead of melted asphalt as the AWAPLAN PREMIUM FR is rolled out. Use care when applying heat as damage can occur to the product by overheating.

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 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.

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Material Requirements

TAMKO AWAPLAN VERSA-SMOOTH 1 ply
TAMKO AWAPLAN PREMIUM FR (Granule Surfaced) 1 ply
Asphalt (Per 100 sq. ft.) Approx. 46 lbs.

Slope: Positive drainage up to 3 in. per linear ft. For slopes above 3/4 in. per linear ft., fastening of the AWAPLAN PREMIUM FR 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. fiberglass, 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.

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, than 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 (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.

Alternately, the AWAPLAN VERSA-SMOOTH can be heat welded and should be solidly adhered to the base ply by sufficiently heating the back side with a torch at the juncture of the base ply and the AWAPLAN VERSA-SMOOTH roll to form a bead of melted asphalt as the AWAPLAN VERSA-SMOOTH is rolled out. Use care when applying heat as damage can occur to the product by overheating.

AWAPLAN PREMIUM FR: Starting at the low point of the roof, install 1 layer of TAMKO AWAPLAN PREMIUM FR granule surfaced sheet, side lapped 4 in. and end lapped 6 in. The AWAPLAN PREMIUM FR should be solidly adhered to the base ply (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.

Alternately, the AWAPLAN PREMIUM FR can be heat welded and should be solidly adhered to the base ply by sufficiently heating the back side with a torch at the juncture of the base ply and the AWAPLAN PREMIUM FR roll to form a bead of melted asphalt as the AWAPLAN PREMIUM FR is rolled out. Use care when applying heat as damage can occur to the product by overheating.

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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Material Requirements

TAMKO AWAPLAN VERSAFLEX 1 ply
TAMKO AWAPLAN PREMIUM FR (Granule Surfaced) 1 ply
Asphalt (Per 100 sq. ft.) Approx. 46 lbs.

Slope: Positive drainage up to 3 in. per linear ft. For slopes above 3/4 in. per linear ft., fastening of the AWAPLAN PREMIUM FR 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.

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 (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 PREMIUM FR: Starting at the low point of the roof, install 1 layer of TAMKO AWAPLAN PREMIUM FR granule surfaced sheet, side lapped 4 in. and end lapped 6 in. The AWAPLAN PREMIUM FR should be solidly adhered to the base ply (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.

Alternatively, the AWAPLAN PREMIUM FR can be heat welded and should be solidly adhered to the base ply by sufficiently heating the back side with a torch at the juncture of the base ply and the AWAPLAN PREMIUM FR roll to form a bead of melted asphalt as the AWAPLAN PREMIUM FR is rolled out. Use care when applying heat as damage can occur to the product by overheating.

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. Crystalline silica has been classified as a “known” human carcinogen 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” or “hot mopped” applications may expose workers and others in the work area to oxidized asphalt and its emissions. The Interna-
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For complete information on TAMKO’s recommendations and requirements, consult TAMKO’s web site at www.tamko.com

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Material Requirements

TAMKO VERSA-BASE®
Modified Asphalt Base Sheet 1 ply

TAMKO AWAPLAN PREMIUM FR
(Granule Surfaced) 1 ply

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

Slope: Positive drainage up to 3 in. per linear ft. For slopes above 3/4 in. per linear ft., fastening of the AWAPLAN PREMIUM FR 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.

VERSA-BASE Sheet: 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. Solid mop to the insulation 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.

Alternately, the AWAPLAN PREMIUM FR can be heat welded and should be solidly adhered to the base ply by sufficiently heating the back side with a torch at the juncture of the base ply and the AWAPLAN PREMIUM FR roll to form a bead of melted asphalt as the AWAPLAN PREMIUM FR is rolled out. Use care when applying heat as damage can occur to the product by overheating.

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 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.

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Material Requirements

TAMKO TAM-PLY IV®
Fiberglass Ply Sheet 3 plies
TAMKO AWAPLAN PREMIUM FR (Granule Surfaced) 1 ply
Asphalt (Per 100 sq. ft.) Approx. 92 lbs.

Slope: Positive drainage up to 3 in. per linear ft. For slopes above 3/4 in. per linear ft., fastening of the AWAPLAN PREMIUM FR 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.

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 PREMIUM FR: Starting at the low point of the roof, install 1 layer of TAMKO AWAPLAN PREMIUM FR granule surfaced sheet, side lapped 4 in. and end lapped 6 in. The AWAPLAN PREMIUM FR should be solidly adhered to the ply 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.

Alternately, the AWAPLAN PREMIUM FR can be heat welded and should be solidly adhered to the ply sheet by sufficiently heating the back side with a torch at the juncture of the ply sheet and the AWAPLAN PREMIUM FR roll to form a bead of melted asphalt as the AWAPLAN PREMIUM FR is rolled out. Use care when applying heat as damage can occur to the product by overheating.

Flash: 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 formaldehyde. Formaldehyde has been classified as a “known” human carcinogen 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.

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Material Requirements

TAMKO TAM-GLASS PREMIUM®
Fiberglass Ply Sheet       1 ply

TAMKO VERSA-BASE®
Base Sheet                  1 ply

TAMKO AWAPLAN PREMIUM FR
(Granule Surfaced)         1 ply

Asphalt (Per 100 sq. ft.)   Approx. 69 lbs.

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

Deck: The deck should conform to TAMKO general require-
ments.

Insulation: The insulation should be installed according to the
manufacturer’s specification in the thickness required. The insula-
tion 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.

TAM-GLASS PREMIUM: Starting at the low point of the roof,
install one 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.

VERSÁ-BASE Sheet: Starting at the low point of the roof, install
1 ply of TAMKO VERSÁ-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. 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 VERSÁ-BASE.

AWAPLAN PREMIUM FR: Starting at the low point of the roof,
install 1 layer of TAMKO AWAPLAN PREMIUM FR granule
surfaced sheet, side lapped 4 in. and end lapped 6 in. The AWA-
PLAN PREMIUM FR should be solidly adhered to the ply sheet
(placed 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.

Alternately, the AWAPLAN PREMIUM FR can be heat welded
and should be solidly adhered to the ply sheet by sufficiently
heating the back side with a torch at the juncture of the ply sheet
and the AWAPLAN PREMIUM FR roll to form a bead of melted
asphalt as the AWAPLAN PREMIUM FR is rolled out. Use care
when applying heat as damage can occur to the product by
overheating.

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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asphalt. Occupational exposures to oxidized asphalt and its emis-
sions during roofing have been classified by IARC as a “probable
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For complete information on TAMKO’s recommendations and requirements, consult TAMKO’s web site at www.tamko.com
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TAMKO®, Tam-Glass Premium®, and Versa-Base® are registered trademarks of TAMKO Building Products, Inc.
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Material Requirements

<table>
<thead>
<tr>
<th>Material</th>
<th>Requirement</th>
</tr>
</thead>
<tbody>
<tr>
<td>TAMKO VAPOR-CHAN®</td>
<td>Fiberglass Venting Asphalt Base Sheet 1 ply</td>
</tr>
<tr>
<td>TAMKO AWAPLAN PREMIUM FR</td>
<td>(Granule Surfaced)</td>
</tr>
<tr>
<td>(Per 100 sq. ft.)</td>
<td>Approx. 23 lbs.</td>
</tr>
<tr>
<td>Clinch-type nails</td>
<td>for base sheet (per 100 sq ft.)</td>
</tr>
<tr>
<td>(per 100 sq ft.)</td>
<td>Approx. 100 nails</td>
</tr>
</tbody>
</table>

Slope: Positive drainage up to 3 in. per linear ft. For slopes above 3/4 in. per linear ft., fastening of the AWAPLAN PREMIUM FR 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, 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 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 PREMIUM FR: Starting at the low point of the roof, install 1 layer of TAMKO AWAPLAN PREMIUM FR granule surfaced sheet, side lapped 4 in. and end lapped 6 in. The AWAPLAN PREMIUM FR should be solidly adhered to the base ply (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.

Alternately, the AWAPLAN PREMIUM FR can be heat welded and should be solidly adhered to the base ply by sufficiently heating the back side with a torch at the juncture of the base ply and the AWAPLAN PREMIUM FR roll to form a bead of melted asphalt as the AWAPLAN PREMIUM FR is rolled out. Use care when applying heat as damage can occur to the product by overheating.

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 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**

<table>
<thead>
<tr>
<th>TAMKO TYPE 43 Coated Base Sheet, TAMKO-GLASS-BASE® or BASE-N-PLY® Base Sheet</th>
<th>1 ply</th>
</tr>
</thead>
<tbody>
<tr>
<td>TAMKO AWAPLAN PREMIUM FR (Granule Surfaced)</td>
<td>1 ply</td>
</tr>
<tr>
<td>Asphalt (Per 100 sq. ft.)</td>
<td>Approx. 23 lbs.</td>
</tr>
<tr>
<td>Clinch-type nails for base sheet (per 100 sq ft.)</td>
<td>Approx. 100 nails</td>
</tr>
</tbody>
</table>

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

**Base Sheet:** 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 1 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 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 PREMIUM FR:** Starting at the low point of the roof, install 1 layer of TAMKO AWAPLAN PREMIUM FR granule surfaced sheet, side lapped 4 in. and end lapped 6 in. The AWAPLAN PREMIUM FR should be solidly adhered to the base ply (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.

Alternately, the AWAPLAN PREMIUM FR can be heat welded and should be solidly adhered to the base ply by sufficiently heating the back side with a torch at the juncture of the base ply and the AWAPLAN PREMIUM FR roll to form a bead of melted asphalt as the AWAPLAN PREMIUM FR is rolled out. Use care when applying heat as damage can occur to the product by overheating.

**SAFETY IS OF MAJOR IMPORTANCE WHEN HEAT WELDING MODIFIED BITUMENS ON A WOOD DECK. THERE SHOULD BE A SUFFICIENT NUMBER OF FIRE EXTINGUISHERS ON THE ROOF TO HANDLE ANY CONTINGENCY WHICH MIGHT DEVELOP.**

**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...
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Material Requirements

TAMKO VAPOR-CHAN®
Fiberglass Venting Asphalt Base Sheet 1 ply
TAMKO TAM-GLASS PREMIUM® or TAM-PLY IV®
Fiberglass Ply Sheet 1 ply
TAMKO AWAPLAN PREMIUM FR (Granule Surfaced) 1 ply
Asphalt (Per 100 sq. ft.) Approx. 46 lbs.
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 PREMIUM FR
is required.

Deck: The deck should conform to TAMKO general require-
ments.

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 on 16
in. centers along 2 lines located 13 in. from each edge of the base
sheet. For specific patterns for wind uplift listings, contact the
Technical Services Department.

Fiberglass Ply Sheet: Starting at the low point of the roof, install
a 1/2 m width, then a full 1 m width of TAM-GLASS PREMIUM
or TAM-PLY IV, 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.

AWAPLAN PREMIUM FR: Starting at the low point of the roof,
install 1 layer of TAMKO AWAPLAN PREMIUM FR granule
surfaced sheet, side lapped 4 in. and end lapped 6 in. The AWA-
PLAN PREMIUM FR should be solidly adhered to the ply 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.

Alternately, the AWAPLAN PREMIUM FR can be heat welded
and should be solidly adhered to the ply sheet by sufficiently
heating the back side with a torch at the juncture of the ply sheet
and the AWAPLAN PREMIUM FR roll to form a bead of melted
asphalt as the AWAPLAN PREMIUM FR is rolled out. Use care
when applying heat as damage can occur to the product by
overheating.

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

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

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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.

*Precast Concrete Decks: This specification may be utilized over a precast concrete deck when joints are taped and the VAPOR-CHAN is installed in spot moppings of specification asphalt spaced on (not to exceed) 24 in. centers.
Material Requirements

TAMKO TYPE 43 Coated Base Sheet, TAMKO-GLASS-BASE® or BASE-N-PLY® Base Sheet 1 ply
TAMKO TAM-GLASS PREMIUM® or TAM-PLY IV® Fiberglass Ply Sheet 1 ply
TAMKO AWAPLAN PREMIUM FR (Granule Surfaced) 1 ply
Asphalt (Per 100 sq. ft.)  Approx. 46 lbs.
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 PREMIUM FR 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.

Base Sheet: Starting at the low point of the roof, install 1 ply of TAMKO TYPE 43 Coated Base Sheet, GLASS-BASE, or BASE-N-PLY, 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 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.

Fiberglass Ply Sheet: Starting at the low point of the roof, install a 1/2 m width, then a full 1 m width of TAM-GLASS PREMIUM or TAM-PLY IV, 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.

AWAPLAN PREMIUM FR: Starting at the low point of the roof, install 1 layer of TAMKO AWAPLAN PREMIUM FR granule surfaced sheet, side lapped 4 in. and end lapped 6 in. The AWAPLAN PREMIUM FR should be solidly adhered to the ply 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.

Alternately, the AWAPLAN PREMIUM FR can be heat welded and should be solidly adhered to the ply sheet by sufficiently heating the back side with a torch at the juncture of the ply sheet and the AWAPLAN PREMIUM FR roll to form a bead of melted asphalt as the AWAPLAN PREMIUM FR is rolled out. Use care when applying heat as damage can occur to the product by overheating.

SAFETY IS OF MAJOR IMPORTANCE WHEN HEAT WELDING MODIFIED BITUMENS ON A WOOD DECK. THERE SHOULD BE A SUFFICIENT NUMBER OF FIRE EXTINGUISHERS ON THE ROOF TO HANDLE ANY CONTINGENCY WHICH MIGHT DEVELOP.

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
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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 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 VAPOR-CHAN®
Fiberglass Venting Asphalt Base Sheet 1 ply
TAMKO AWAPLAN VERSA-SMOOTH 1 ply
TAMKO AWAPLAN PREMIUM FR (Granule Surfaced) 1 ply
Asphalt (Per 100 sq. ft.) Approx. 46 lbs.
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 PREMIUM FR 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 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 ply (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.

Alternately, the AWAPLAN VERSA-SMOOTH can be heat welded and should be solidly adhered to the base ply by sufficiently heating the back side with a torch at the juncture of the base ply and the AWAPLAN VERSA-SMOOTH roll to form a bead of melted asphalt as the AWAPLAN VERSA-SMOOTH is rolled out.

AWAPLAN PREMIUM FR: Starting at the low point of the roof, install 1 layer of TAMKO AWAPLAN PREMIUM FR, granule surfaced sheet, side lapped 4 in. and end lapped 6 in. The AWAPLAN PREMIUM FR should be solidly adhered to the ply 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.

Alternately, the AWAPLAN PREMIUM FR can be heat welded and should be solidly adhered to the ply sheet by sufficiently heating the back side with a torch at the juncture of the ply sheet and the AWAPLAN PREMIUM FR roll to form a bead of melted asphalt as the AWAPLAN PREMIUM FR is rolled out. Use care when applying heat as damage can occur to the product by overheating.

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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*Precast Concrete Decks: This specification may be utilized over a precast concrete deck when joints are taped and the VAPOR-CHAN is installed in spot moppings of specification asphalt spaced on (not to exceed) 24 in. centers.
**SPECIFICATION SUBMITTAL**

**135FR AWAPLAN PREMIUM FR**

**RECOVER OVER EXISTING GRAVEL SURFACED MEMBRANE OR SMOOTH SURFACED MEMBRANE**

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**Material Requirements**

**TAMKO VAPOR-CHAN®**
- Fiberglass Venting Base Sheet: 1 ply

**TAMKO TAM-PLY IV®**
- Fiberglass Ply Sheet: 1 ply

**TAMKO AWAPLAN PREMIUM FR**
- 1 ply

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

**Concrete Primer (Per 100 sq. ft.)**
- Approx. 3/4 gal.

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

**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.

**Preparation:**
Spud the membrane surface and remove all loose roofing gravel and debris. Make random cuts or breaks in the old membrane 4 ft. o.c. to allow vapor pressure to vent. All wet or deteriorated insulation or membrane must be removed and replaced prior to the application of new roofing materials. The surface should be primed with concrete primer at a rate of approximately 3/4 gal. per 100 sq. ft. prior to the application of new roofing materials.

**VAPOR-CHAN:**
Over the old membrane and starting at the low point of the roof, install 1 ply of TAMKO VAPOR-CHAN Base Sheet. The VAPOR-CHAN should be side lapped 2 in. and end lapped 4 in. The base ply should be secured to the old membrane with spots of Type III, Steep Asphalt spaced on (not to exceed) 24 in. centers.

**TAM-PLY IV:**
Starting at the low point of the roof, install 1 ply of TAM-PLY IV, 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 base ply with approximately 23 lbs. (±15%) of specification asphalt per 100 sq. ft.

**AWAPLAN PREMIUM FR:**
Starting at the low point of the roof, install 1 ply of TAMKO AWAPLAN PREMIUM FR granule surfaced sheet, side lapped 4 in. and end lapped 6 in. The AWAPLAN PREMIUM FR should be solidly adhered to the ply 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.

Alternately, the AWAPLAN PREMIUM FR can be heat welded and should be solidly adhered to the ply sheet by sufficiently heating the back side with a torch at the juncture of the ply sheet and the AWAPLAN PREMIUM FR roll to form a bead of melted asphalt as the AWAPLAN PREMIUM FR is rolled out. Use care when applying heat as damage can occur to the product by overheating.

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

**Venting:**
One-way roof vents may be placed at a minimum of 1 vent for each 10 squares of roof area.

**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 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.

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For complete information on TAMKO’s recommendations and requirements, consult TAMKO’s web site at www.tamko.com

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Take precautions to prevent breathing and contact with skin.

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Material Requirements

**TAMKO VAPOR-CHAN®**
Fiberglass Venting Asphalt Base Sheet 1 ply

**TAMKO TAM-PLY IV®**
Fiberglass Ply Sheet 1 ply

**TAMKO AWAPLAN PREMIUM FR**
1 ply

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

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

**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.

**Preparation:** Broom the membrane surface and remove all loose roofing gravel and debris. Make random cuts or breaks in the old membrane 4 ft. o.c. to allow vapor pressure to vent from the old system and any existing insulation materials. All wet or deteriorated insulation or membrane must be removed and replaced prior to the application of new roofing materials. DO NOT USE ANY PRIMERS.

**VAPOR-CHAN:** Over the old membrane and starting at the low point of the roof, install 1 ply of TAMKO VAPOR-CHAN Base Sheet. The VAPOR-CHAN should be side lapped 2 in. and end lapped 4 in. The base ply should be secured to the old membrane with spots of Type III, Steep Asphalt spaced on (not to exceed) 24 in. centers.

**TAM-PLY IV:** Starting at the low point of the roof, install 1 ply of TAM-PLY IV, 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 base ply with approximately 23 lbs. (+15%) of specification asphalt per 100 sq. ft.

**AWAPLAN PREMIUM FR:** Starting at the low point of the roof, install 1 ply of TAMKO AWAPLAN PREMIUM FR granule surfaced sheet, side lapped 4 in. and end lapped 6 in. The AWAPLAN PREMIUM FR should be solidly adhered to the ply 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.

Alternately, the AWAPLAN PREMIUM FR can be heat welded and should be solidly adhered to the ply sheet by sufficiently heating the back side with a torch at the juncture of the ply sheet and the AWAPLAN PREMIUM FR roll to form a bead of melted asphalt as the AWAPLAN PREMIUM FR is rolled out. Use care when applying heat as damage can occur to the product by overheating.

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

**Venting:** One-way roof vents may be placed at a minimum of 1 vent for each 10 squares of roof area.

**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 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 hazard.
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 AWAPLAN VERSA SMOOTH**

**TAMKO TAM-PLY® OR TAM-GLASS PREMIUM®**

Fiberglass Ply Sheet 2 plies

**TAMKO AWAPLAN PREMIUM FR**

(Granule Surfaced) 1 ply

Interply Asphalt (per 100 sq ft.) Approx. 92 lbs.

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

**Insulation:** The insulation should be installed according to the manufacturer’s specification in the thickness required. The insulation should conform to TAKO requirements. Polysisocyanurate 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.

**AWAPLAN VERSA-SMOOTH:** Starting at the low point of the roof, install 1 ply of TAMKO AWAPLAN VERSA-SMOOTH, beginning with 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 (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.

Alternately, the AWAPLAN VERSA-SMOOTH can be heat welded and should be solidly adhered to the insulation by sufficiently heating the back side with a torch at the juncture of the insulation and the AWAPLAN VERSA-SMOOTH roll to form a bead of melted asphalt as the AWAPLAN VERSA-SMOOTH is rolled out.

**Fiberglass Ply Sheets:** Over the base ply, install 2 plies of TAM-PLY IV or TAM-GLASS PREMIUM Fiberglass Ply Sheet in specification asphalt. Start with an 1/2 m wide sheet followed by full 1 m widths, shingle fashion, lapping each ply 20-11/16 in. over the preceding ply so that at least 2 plies cover the base ply at any point. Approximately 23 lbs. (+15%) of specification asphalt per 100 sq. ft. should be used to embed each ply.

**AWAPLAN PREMIUM FR:** Starting at the low point of the roof, install 1 layer of TAMKO AWAPLAN PREMIUM FR granule surfaced sheet, side lapped 4 in. and end lapped 6 in. The AWAPLAN PREMIUM FR should be solidly adhered to the ply 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.

Alternately, the AWAPLAN PREMIUM FR can be heat welded and should be solidly adhered to the ply sheet by sufficiently heating the back side with a torch at the juncture of the ply sheet and the AWAPLAN PREMIUM FR roll to form a bead of melted asphalt as the AWAPLAN PREMIUM FR is rolled out. Use care when applying heat as damage can occur to the product by overheating.

**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
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Material Requirements

TAMKO GLASS-BASE®, TAM-GLASS PREMIUM®, TAM-PLY IV®, or BASE-N-PLY®
Fiberglass Sheet  1 ply
TAMKO AWAPLAN PREMIUM FR (Granule Surfaced)  1 ply
TAM-PRO® 856
Premium SBS Adhesive (Per 100 sq. ft.)  1-1/2 gal.
Fasteners as required for Base Sheet and Insulation

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

Deck: The deck must conform to TAMKO general requirements and Metal Deck Requirements.

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

Adhesive: The cold process adhesive must be TAM-PRO 856 Premium SBS Adhesive.

Base Ply: Starting at the low point of the roof, install 1 ply of TAMKO GLASS-BASE, TAM-GLASS PREMIUM, TAM-PLY IV or 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. Mechanically fasten through the base ply and insulation, penetrating through the deck with appropriate fasteners as recommended by the insulation manufacturer. For specific patterns for wind uplift listings, contact the Technical Services Department.

Alternately, the TAMKO GLASS-BASE, TAM-GLASS PREMIUM, or TAM-PLY IV may be solidly mopped to the insulation with approximately 23 lbs. (+15%) of specification asphalt per 100 sq. ft.

AWAPLAN PREMIUM FR: Starting at the low point of the roof, install 1 ply of TAMKO AWAPLAN PREMIUM FR granule surfaced sheet, side lapped 4 in. and end lapped 6 in. The field of the AWAPLAN PREMIUM FR membrane should be solidly adhered to the base sheet with an application of TAM-PRO 856 Premium SBS Adhesive at a rate not to exceed 1-1/2 gallons per square, and the side laps and the end laps set in adhesive or hot air welded together. Use care when applying heat as damage can occur to the product by overheating.

Caution should be used when exposing cold 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 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
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Material Requirements

<table>
<thead>
<tr>
<th>Material</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>TAMKO VERSA-BASE®</td>
<td>Modified Asphalt Base Sheet 1 ply</td>
</tr>
<tr>
<td>TAMKO AWAPLAN PREMIUM FR</td>
<td>(Granule Surfaced) 1 ply</td>
</tr>
<tr>
<td>TAM-PRO® 856</td>
<td>Premium SBS Adhesive (Per 100 sq. ft.) 1-1/2 gal.</td>
</tr>
<tr>
<td>Fasteners</td>
<td>as required for Base Sheet and Insulation</td>
</tr>
</tbody>
</table>

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

Deck: The deck must conform to TAMKO general requirements and Metal Deck 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 or phenolic insulation must have an overlay of a minimum 1/2 in. fiberboard, perlite, or fiberglass roof insulation.

Adhesive: The cold process adhesive must be TAM-PRO 856 Premium SBS Adhesive.

VERSA-BASE Sheet: 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. Mechanically fasten through the base ply and insulation, penetrating through the deck with appropriate fasteners as recommended by the insulation manufacturer. For specific fastening patterns for wind uplift listings, contact the Technical Services Department.

Alternately, the VERSA-BASE may be solidly mopped to the insulation with approximately 23 lbs. (±15%) of specification asphalt per 100 sq. ft.

AWAPLAN PREMIUM FR: Starting at the low point of the roof, install 1 ply of TAMKO AWAPLAN PREMIUM FR granule surfaced sheet, side lapped 4 in. and end lapped 6 in. The field of the AWAPLAN PREMIUM FR membrane should be solidly adhered to the base sheet with an application of TAM-PRO 856 Premium SBS Adhesive at a rate not to exceed 1-1/2 gallons per square, and the side laps and the end laps set in adhesive or hot air welded together. Use care when applying heat as damage can occur to the product by overheating.

Caution should be used when exposing cold 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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Material Requirements

**TAMKO VAPOR-CHAN®**
Fiberglass Venting Asphalt Base Sheet 1 ply

**TAMKO AWAPLAN PREMIUM FR**
(Granule Surfaced) 1 ply

**TAM-PRO® 856**
Premium SBS Adhesive (per 100 sq. ft) 1-1/2 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 PREMIUM FR is required.

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

**Adhesive:** The cold process adhesive must be TAM-PRO 856 Premium SBS Adhesive.

**VAPOR-CHAN:** Starting at the low point of the roof, install 1 ply of TAMKO VAPOR-CHAN, beginning with a full 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. For specific fastening patterns for wind uplift, contact the Technical Services Department.

**AWAPLAN PREMIUM FR:** Starting at the low point of the roof, install 1 layer of TAMKO AWAPLAN PREMIUM FR granule surfaced sheet, side lapped 4 in. and end lapped 6 in. The field of the AWAPLAN PREMIUM FR membrane should be solidly adhered to the base sheet with an application of TAM-PRO 856 Premium SBS Adhesive at a rate not to exceed 1-1/2 gallons per square, and the side laps and the end laps set in adhesive or heat welded together. Use care when applying heat as damage can occur to the product by over-heating.

Caution should be used when exposing cold 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 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.
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For complete information on TAMKO’s recommendations and requirements, consult TAMKO’s web site at www.tamko.com

TAMKO Building Products, Inc., P. O. Box 1404, Joplin, MO 64802 • 1-800-641-4691 • www.tamko.com

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Material Requirements

<table>
<thead>
<tr>
<th>Material</th>
<th>Quantity</th>
</tr>
</thead>
<tbody>
<tr>
<td>TAMKO TYPE 43 Coated Base Sheet, or BASE-N-PLY® Base Sheet</td>
<td>1 ply</td>
</tr>
<tr>
<td>TAMKO AWAPLAN PREMIUM FR (Granule Surfaced)</td>
<td>1 ply</td>
</tr>
<tr>
<td>TAM-PRO® 856 Premium SBS Adhesive (per 100 sq. ft)</td>
<td>1-1/2 gal.</td>
</tr>
</tbody>
</table>

**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 PREMIUM FR is required.

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

**Adhesive:** The cold process adhesive must be TAM-PRO 856 Premium SBS Adhesive.

**Base Ply:** Starting at the low point of the roof, install 1 ply of TAMKO TYPE 43 Coated Base Sheet, 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 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 PREMIUM FR:** Starting at the low point of the roof, install 1 layer of TAMKO AWAPLAN PREMIUM FR granule surfaced sheet, side lapped 4 in. and end lapped 6 in. The field of the AWAPLAN PREMIUM FR membrane should be solidly adhered to the base sheet with an application of TAM-PRO 856 Premium SBS Adhesive at a rate not to exceed 1-1/2 gallons per square, and the side laps and the end laps set in adhesive or heat welded together. Use care when applying heat as damage can occur to the product by overheating.

Caution should be used when exposing cold 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.

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Material Requirements

<table>
<thead>
<tr>
<th>Material</th>
<th>Specification</th>
<th>Quantity</th>
</tr>
</thead>
<tbody>
<tr>
<td>TAMKO BASE-N-PLY®</td>
<td>Fiberglass Sheet</td>
<td>1 ply</td>
</tr>
<tr>
<td>TAMKO AWAPLAN PREMIUM FR (Granule Surfaced)</td>
<td>1 ply</td>
<td></td>
</tr>
<tr>
<td>Asphalt (Per 100 sq. ft.)</td>
<td>Approx. 23 lbs</td>
<td></td>
</tr>
<tr>
<td>M³ Adhesive (Per 100 sq. ft.)</td>
<td>Approx. 1-1/2 to 2-1/2 gal.</td>
<td></td>
</tr>
</tbody>
</table>

Slope: Positive drainage up to 3 in. per linear ft. For slopes above 3/4 in. per linear ft., fastening of the AWAPLAN PREMIUM FR 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® M³ 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 PREMIUM FR: Starting at the low point of the roof, install 1 layer of TAMKO AWAPLAN PREMIUM FR granule surfaced sheet, side lapped 4 in. and end lapped 6 in. The AWAPLAN PREMIUM FR should be solidly adhered to the base ply with an application of M³ 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 M³ Adhesive must be a minimum of 100°F at the spray tip. M³ Adhesive should not be heated above 180°F.

Caution should be used when exposing M³ Adhesive to an open flame.

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

U. L. Requirements:
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Material Requirements

TAMKO TAM-GLASS PREMIUM® or TAM-PLY IV®
Fiberglass Ply Sheet  2 plies
TAMKO AWAPLAN PREMIUM FR
(Granule Surfaced)  1 ply
Asphalt (Per 100 sq. ft.) Approx. 46 lbs.
M³ 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 PREMIUM FR 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® M³ Adhesive.

Fiberglass Ply Sheet 2 Ply Installation: Over the insulation, install 2 plies of TAM-GLASS PREMIUM or TAM-PLY IV inspecification 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.

AWAPLAN PREMIUM FR: Starting at the low point of the roof, install 1 layer of TAMKO AWAPLAN PREMIUM FR granule surfaced sheet, side lapped 4 in. and end lapped 6 in. The AWAPLAN PREMIUM FR should be solidly adhered to the ply sheet with an application of M³ 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 M³ Adhesive must be a minimum of 100°F at the spray tip. M³ Adhesive should not be heated above 180°F.

Caution should be used when exposing M³ 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 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 AWAPLAN VERSA-SMOOTH**  
1 ply

**TAMKO AWAPLAN PREMIUM FR**  
(Granule Surfaced)  
1 ply

**M³ 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 PREMIUM FR 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® M³ 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 M³ 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 PREMIUM FR:** Starting at the low point of the roof, install 1 layer of TAMKO AWAPLAN PREMIUM FR granule surfaced sheet, side lapped 4 in. and end lapped 6 in. The AWAPLAN PREMIUM FR should be solidly adhered to the base ply with an application of M³ 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 M³ Adhesive must be a minimum of 100°F at the spray tip. M³ Adhesive should not be heated above 180°F.

**Caution should be used when exposing M³ 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. Crystalline silica has been classified as a “known” human carcinogen 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” 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 AWAPLAN VERSAFLEX** 1 ply

**TAMKO AWAPLAN PREMIUM FR**
(Granule Surfaced) 1 ply

M³ 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 PREMIUM FR 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. Polysiocyanurate 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® M³ 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 M³ 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 M³ Adhesive. Care should 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 PREMIUM FR:** Starting at the low point of the roof, install 1 layer of TAMKO AWAPLAN PREMIUM FR granule surfaced sheet, side lapped 4 in. and end lapped 6 in. The AWAPLAN PREMIUM FR should be solidly adhered to the base ply with an application of M³ 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 M³ Adhesive must be a minimum of 100°F at the spray tip. M³ Adhesive should not be heated above 180°F.

Caution should be used when exposing M³ Adhesive to an open flame.

**Flash:** 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. Crystalline silica has been classified as a “known” human carcinogen 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” 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 VERSA-BASE®

1 ply

TAMKO AWAPLAN PREMIUM FR (Granule Surfaced)

1 ply

M³ 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 PREMIUM FR 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® M³ 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 M³ 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 M³ 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 PREMIUM FR: Starting at the low point of the roof, install 1 layer of TAMKO AWAPLAN PREMIUM FR granule surfaced sheet, side lapped 4 in. and end lapped 6 in. The AWAPLAN PREMIUM FR should be solidly adhered to the base ply with an application of M³ 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 M³ Adhesive must be a minimum of 100°F at the spray tip. M³ Adhesive should not be heated above 180°F.

Caution should be used when exposing M³ 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-
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

**TAMKO TAM-PLY IV®**
Fiberglass Ply Sheet 3 plies

**TAMKO AWAPLAN PREMIUM FR**
(Granule Surfaced) 1 ply

Asphalt (Per 100 sq. ft.) Approx. 69 lbs.
M3 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 PREMIUM FR is required.

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

**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.

**Adhesive:** The adhesive must be TAM-PRO® M3 Adhesive.

**Fiberglass Ply Sheets:** Over the insulation, install 3 plies of TAMKOTAM-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 2615/16 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 PREMIUM FR:** Starting at the low point of the roof, install 1 layer of TAMKO AWAPLAN PREMIUM FR granule surfaced sheet, side lapped 4 in. and end lapped 6 in. The AWAPLAN PREMIUM FR should be solidly adhered to the ply sheet with an application of M3 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 M3 Adhesive must be a minimum of 100°F at the spray tip. M3 Adhesive should not be heated above 180°F.

Caution should be used when exposing M3 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 formaldehyde. Formaldehyde has been classified as a “known” human carcinogen 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 in-
crease 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®**
Fiberglass Ply Sheet  
1 ply

**TAMKO VERSA-BASE®**
Modified Asphalt Base Sheet  
1 ply

**TAMKO AWAPLAN PREMIUM FR**
(Granule Surfaced)  
1 ply

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

M³ 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 PREMIUM FR 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. Polysiocyanurate 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® M³ 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.

**VERSABASE 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 PREMIUM FR:** Starting at the low point of the roof, install 1 layer of TAMKO AWAPLAN PREMIUM FR granule surfaced sheet, side lapped 4 in. and end lapped 6 in. The AWAPLAN PREMIUM FR should be solidly adhered to the ply sheet with an application of M³ 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 M³ Adhesive must be a minimum of 100°F at the spray tip. M³ Adhesive should not be heated above 180°F.

Caution should be used when exposing M³ 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.

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Material Requirements

TAMKO VAPOR-CHAN®
Fiberglass Venting Asphalt Base Sheet 1 ply

TAMKO AWAPLAN PREMIUM FR (Granule Surfaced) 1 ply
M³ 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 PREMIUM FR is required.

Deck: The deck should conform to TAMKO general requirements.

Adhesive: The adhesive must be TAM-PRO® M³ 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 PREMIUM FR: Starting at the low point of the roof, install 1 layer of TAMKO AWAPLAN PREMIUM FR granule surfaced sheet, side lapped 4 in. and end lapped 6 in. The field of the AWAPLAN PREMIUM FR membrane should be solidly adhered to the base sheet with an application of M³ 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 M³ Adhesive must be a minimum of 100°F at the spray tip. M³ Adhesive should not be heated above 180°F.

Caution should be used when exposing M³ 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-
sions during roofing have been classified by IARC as a “probable human carcinogen”. Oxidized asphalt also containsPolycyclic 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 TYPE 43 Coated Base Sheet, TAMKO GLASS-BASE® or BASE-N-PLY® Base Sheet  1 ply
TAMKO AWAPLAN PREMIUM FR (Granule Surfaced)  1 ply
M³ 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 PREMIUM FR is required.

Deck: The deck should conform to TAMKO general requirements.

Adhesive: The adhesive must be TAM-PRO® M³ 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 PREMIUM FR: Starting at the low point of the roof, install 1 layer of TAMKO AWAPLAN PREMIUM FR granule surfaced sheet, side lapped 4 in. and end lapped 6 in. The field of the AWAPLAN PREMIUM FR membrane should be solidly adhered to the base sheet with an application of M³ 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 M³ Adhesive must be a minimum of 100°F at the spray tip. M³ Adhesive should not be heated above 180°F.

Caution should be used when exposing M³ 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**

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<tr>
<th>Material/Specification</th>
<th>Notes</th>
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<tr>
<td>TAMKO VAPOR-CHAN® Fiberglass Venting Asphalt Base Sheet</td>
<td>1 ply</td>
</tr>
<tr>
<td>TAMKO AWAPLAN VERSA-SMOOTH</td>
<td>1 ply</td>
</tr>
<tr>
<td>TAMKO AWAPLAN PREMIUM FR (Granule Surfaced)</td>
<td>1 ply</td>
</tr>
<tr>
<td>M³ Adhesive (Per 100 sq. ft.)</td>
<td>Approx. 1-1/2 to 2-1/2 gal.</td>
</tr>
<tr>
<td>Clinch-type nails for base sheet (per 100 sq ft.)</td>
<td>Approx. 100 nails</td>
</tr>
</tbody>
</table>

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

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

**Adhesive:** The adhesive must be TAM-PRO® M³ Adhesive.

**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 M³ 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. Sides 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 PREMIUM FR:** Starting at the low point of the roof, install 1 layer of TAMKO AWAPLAN PREMIUM FR granule surfaced sheet, side lapped 4 in. and end lapped 6 in. The AWAPLAN PREMIUM FR should be solidly adhered to the base ply with an application of M³ 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 M³ Adhesive must be a minimum of 100°F at the spray tip. M³ Adhesive should not be heated above 180°F.

**Caution:** When exposing M³ Adhesive to an open flame.

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

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

**TAMKO GLASS-BASE®, TAM-GLASS PREMIUM®, TAM-PLY IV®, or BASE-N-PLY®**

<table>
<thead>
<tr>
<th>Material Type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Fiberglass Sheet</strong></td>
<td>1 ply</td>
</tr>
<tr>
<td><strong>TAMKO AWAPLAN PREMIUM</strong></td>
<td>(Granule Surfaced) 1 ply</td>
</tr>
<tr>
<td><strong>Asphalt (Per 100 sq. ft.)</strong></td>
<td>Approx. 46 lbs.</td>
</tr>
</tbody>
</table>

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

**Base Ply:** Starting at the low point of the roof, install 1 layer of TAMKO GLASS-BASE, TAM-GLASS PREMIUM, TAM-PLY IV, or 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 PREMIUM:** Starting at the low point of the roof, install 1 layer of TAMKO AWAPLAN PREMIUM granule surfaced sheet, side lapped 4 in. and end lapped 6 in. The AWAPLAN PREMIUM should be solidly adhered to the base ply (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.

Alternately, the AWAPLAN PREMIUM can be heat welded and should be solidly adhered to the base ply by sufficiently heating the back side with a torch at the juncture of the base ply and the AWAPLAN PREMIUM roll to form a bead of melted asphalt as the AWAPLAN PREMIUM is rolled out. Use care when applying heat as damage can occur to the product by overheating.

**Flashings:** 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 roof installation have been classified by IARC as “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 roof installation 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

For complete information on TAMKO’s recommendations and requirements, consult TAMKO’s web site at www.tamko.com

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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 PREMIUM
(Granule Surfaced) 1 ply
Asphalt (Per 100 sq. ft.) Approx. 69 lbs.

Slope: Positive drainage up to 3 in. per linear ft. For slopes above 3/4 in. per linear ft., fastening of the AWAPLAN PREMIUM 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. Polysiocyanurate 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.

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.

AWAPLAN PREMIUM: Starting at the low point of the roof, install 1 layer of TAMKO AWAPLAN PREMIUM granule surfaced sheet, side lapped 4 in. and end lapped 6 in. The AWAPLAN PREMIUM should be solidly adhered to the ply 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.

Alternately, the AWAPLAN PREMIUM can be heat welded and should be solidly adhered to the ply sheet by sufficiently heating the back side with a torch at the juncture of the ply sheet and the AWAPLAN PREMIUM roll to form a bead of melted asphalt as the AWAPLAN PREMIUM is rolled out. Use care when applying heat as damage can occur to the product by overheating.

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 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. 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

For complete information on TAMKO’s recommendations and requirements, consult TAMKO’s web site at www.tamko.com
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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 AWAPLAN VERSA-SMOOTH 1 ply
TAMKO AWAPLAN PREMIUM (Granule Surfaced) 1 ply
Asphalt (Per 100 sq. ft.) Approx. 46 lbs.

Slope: Positive drainage up to 3 in. per linear ft. For slopes above 3/4 in. per linear ft., fastening of the AWAPLAN PREMIUM 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. Polysisocyanurate 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.

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 (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.

Alternately, the AWAPLAN VERSA-SMOOTH can be heat welded and should be solidly adhered to the base ply by sufficiently heating the back side with a torch at the juncture of the base ply and the AWAPLAN PREMIUM roll to form a bead of melted asphalt as the AWAPLAN PREMIUM is rolled out. Use care when applying heat as damage can occur to the product by overheating.

AWAPLAN PREMIUM: Starting at the low point of the roof, install 1 layer of TAMKO AWAPLAN PREMIUM granule surfaced sheet, side lapped 4 in. and end lapped 6 in. The AWAPLAN PREMIUM should be solidly adhered to the base ply (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.

Alternately, the AWAPLAN PREMIUM can be heat welded and should be solidly adhered to the base ply by sufficiently heating the back side with a torch at the juncture of the base ply and the AWAPLAN PREMIUM roll to form a bead of melted asphalt as the AWAPLAN PREMIUM is rolled out. Use care when applying heat as damage can occur to the product by overheating.

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. Crystalline silica has been classified as a “known” human carcinogen by the International Agency for Research on Cancer (IARC) and the National Toxicology Program. A product(s) in this specification may contain oxidized asphalt. Occupational exposures to oxidized asphalt and its emissions during roofing have been classified by IARC as a “probable human carcinogen”. 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 Interna-
tional Agency for Research on Cancer has classified occupational
exposures to oxidized asphalt and its emissions during roofing as
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and others in the work area from exposure to oxidized asphalt and
its emissions when applying the product(s) in this specification.
Material Requirements

<table>
<thead>
<tr>
<th>Material Requirement</th>
<th>Thickness</th>
</tr>
</thead>
<tbody>
<tr>
<td>TAMKO AWAPLAN VERSAFLEX</td>
<td>1 ply</td>
</tr>
<tr>
<td>TAMKO AWAPLAN PREMIUM (Granule Surfaced)</td>
<td>1 ply</td>
</tr>
<tr>
<td>Asphalt (Per 100 sq. ft.)</td>
<td>Approx. 46 lbs.</td>
</tr>
</tbody>
</table>

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

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 (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 PREMIUM: Starting at the low point of the roof, install 1 layer of TAMKO AWAPLAN PREMIUM granule surfaced sheet, side lapped 4 in. and end lapped 6 in. The AWAPLAN PREMIUM should be solidly adhered to the base ply (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. Alternatively, the AWAPLAN PREMIUM can be heat welded and should be solidly adhered to the base ply by sufficiently heating the back side with a torch at the juncture of the base ply and the AWAPLAN PREMIUM roll to form a bead of melted asphalt as the AWAPLAN PREMIUM is rolled out. Use care when applying heat as damage can occur to the product by overheating.

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. Crystalline silica has been classified as a “known” human carcinogen 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 “torched 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 “torched applied” or
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Material Requirements

<table>
<thead>
<tr>
<th>Product</th>
<th>Requirement</th>
</tr>
</thead>
<tbody>
<tr>
<td>TAMKO VERSA-BASE®</td>
<td>1 ply</td>
</tr>
<tr>
<td>Modified Asphalt Base Sheet</td>
<td></td>
</tr>
<tr>
<td>TAMKO AWAPLAN PREMIUM</td>
<td>1 ply</td>
</tr>
<tr>
<td>(Granule Surfaced)</td>
<td></td>
</tr>
<tr>
<td>Asphalt (Per 100 sq. ft.)</td>
<td>Approx. 46 lbs.</td>
</tr>
</tbody>
</table>

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

VERSA-BASE Sheet: 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. Solid mop to the insulation 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 PREMIUM: Starting at the low point of the roof, install 1 layer of TAMKO AWAPLAN PREMIUM granule surfaced sheet, side lapped 4 in. and end lapped 6 in. The AWAPLAN PREMIUM should be solidly adhered to the base ply (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.

Alternately, the AWAPLAN PREMIUM can be heat welded and should be solidly adhered to the base ply by sufficiently heating the back side with a torch at the juncture of the base ply and the AWAPLAN PREMIUM roll to form a bead of melted asphalt as the AWAPLAN PREMIUM is rolled out. Use care when applying heat as damage can occur to the product by overheating.

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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**Material Requirements**

**TAMKO TAM-PLY IV®**
Fiberglass Ply Sheet 3 plies

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

Asphalt (Per 100 sq. ft.) Approx. 92 lbs.

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

**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 25-15/16 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 PREMIUM:** Starting at the low point of the roof, install 1 layer of TAMKO AWAPLAN PREMIUM granule surfaced sheet, side lapped 4 in. and end lapped 6 in. The AWAPLAN PREMIUM should be solidly adhered to the ply 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.

Alternately, the AWAPLAN PREMIUM can be heat welded and should be solidly adhered to the ply sheet by sufficiently heating the back side with a torch at the juncture of the ply sheet and the AWAPLAN PREMIUM roll to form a bead of melted asphalt as the AWAPLAN PREMIUM is rolled out. **Use care when applying heat as damage can occur to the product by overheating.**

**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 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...
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## Material Requirements

<table>
<thead>
<tr>
<th>Material Requirement</th>
<th>Quantity</th>
</tr>
</thead>
<tbody>
<tr>
<td>TAMKO TAM-GLASS PREMIUM® Fiberglass Ply Sheet</td>
<td>1 ply</td>
</tr>
<tr>
<td>TAMKO VERSA-BASE® Modified Asphalt Base Sheet</td>
<td>1 ply</td>
</tr>
<tr>
<td>TAMKO AWAPLAN PREMIUM (Granule Surfaced)</td>
<td>1 ply</td>
</tr>
<tr>
<td>Asphalt (Per 100 sq. ft.)</td>
<td>Approx. 69 lbs.</td>
</tr>
</tbody>
</table>

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

**TAM-GLASS PREMIUM:** Starting at the low point of the roof, install one 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 one 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. 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.

**AWAPLAN PREMIUM:** Starting at the low point of the roof, install one layer of TAMKO AWAPLAN PREMIUM granule surfaced sheet, side lapped 4 in. and end lapped 6 in. The AWAPLAN PREMIUM should be solidly adhered to the ply 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. Alternately, the AWAPLAN PREMIUM can be heat welded and should be solidly adhered to the ply sheet by sufficiently heating the back side with a torch at the juncture of the ply sheet and the AWAPLAN PREMIUM roll to form a bead of melted asphalt as the AWAPLAN PREMIUM is rolled out. Use care when applying heat as damage can occur to the product by overheating.

**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 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 hazard.
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 VAPOR-CHAN®**  
Fiberglass Venting Asphalt Base Sheet 1 ply  
**TAMKO AWAPLAN PREMIUM**  
(Granule Surfaced) 1 ply  
Asphalt (Per 100 sq. ft.) Approx. 23 lbs.  
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 PREMIUM 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, 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. For specific fastening patterns for wind uplift listings, contact the Technical Services Department.

AWAPLAN PREMIUM: Starting at the low point of the roof, install 1 layer of TAMKO AWAPLAN PREMIUM granule surfaced sheet, side lapped 4 in. and end lapped 6 in. The AWAPLAN PREMIUM should be solidly adhered to the base ply (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. Alternately, the AWAPLAN PREMIUM can be heat welded and should be solidly adhered to the base ply by sufficiently heating the back side with a torch at the juncture of the base ply and the AWAPLAN PREMIUM roll to form a bead of melted asphalt as the AWAPLAN PREMIUM is rolled out. Use care when applying heat as damage can occur to the product by overheating.

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 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 TYPE 43 Coated Base Sheet, TAMKO GLASS-BASE®, or BASE-N-PLY® Base Sheet 1 ply

TAMKO AWAPLAN PREMIUM (Granule Surfed) 1 ply

Asphalt (Per 100 sq. ft.) Approx. 23 lbs.

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 PREMIUM 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.

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 PREMIUM: Starting at the low point of the roof, install 1 layer of TAMKO AWAPLAN PREMIUM granule surfaced sheet, side lapped 4 in. and end lapped 6 in. The AWAPLAN PREMIUM should be solidly adhered to the base ply (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.

Alternately, the AWAPLAN PREMIUM can be heat welded and should be solidly adhered to the base ply by sufficiently heating the back side with a torch at the juncture of the base ply and the AWAPLAN PREMIUM roll to form a bead of melted asphalt as the AWAPLAN PREMIUM is rolled out. Use care when applying heat as damage can occur to the product by overheating.

SAFETY IS OF MAJOR IMPORTANCE WHEN HEAT WELDING MODIFIED BITUMENS ON A WOOD DECK. THERE SHOULD BE A SUFFICIENT NUMBER OF FIRE EXTINGUISHERS ON THE ROOF TO HANDLE ANY CON-TINGENCY WHICH MIGHT DEVELOP.

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.

For complete information on TAMKO’s recommendations and requirements, consult TAMKO’s web site at www.tamko.com

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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 VAPOR-CHAN® Fiberglass Venting Asphalt Base Sheet 1 ply
TAMKO TAM-GLASS PREMIUM® or TAM-PLY IV® Fiberglass Ply Sheet 1 ply
TAMKO AWAPLAN PREMIUM (Granule Surfaced) 1 ply
Asphalt (Per 100 sq. ft.) Approx. 46 lbs.
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 PREMIUM 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.

Fiberglass Ply Sheet: Starting at the low point of the roof, install a 1/2 m width, then a full 1 m width of TAM-GLASS PREMIUM or TAM-PLY IV, 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.

AWAPLAN PREMIUM: Starting at the low point of the roof, install 1 layer of TAMKO AWAPLAN PREMIUM granule surfaced sheet, side lapped 4 in. and end lapped 6 in. The AWAPLAN PREMIUM should be solidly adhered to the ply 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. Alternately, the AWAPLAN PREMIUM can be heat welded and should be solidly adhered to the ply sheet by sufficiently heating the back side with a torch at the juncture of the ply sheet and the AWAPLAN PREMIUM roll to form a bead of melted asphalt as the AWAPLAN PREMIUM is rolled out. Use care when applying heat as damage can occur to the product by overheating.

Flush: 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 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.

*Precast Concrete Decks: This specification may be utilized over a precast concrete deck when joints are taped and the VAPOR-CHAN is installed in spot moppings of specification asphalt spaced on (not to exceed) 24 in. centers.
Material Requirements

TAMKO TYPE 43 Coated Base Sheet, TAMKO GLASS-BASE®, or BASE-N-PLY® Base Sheet — 1 ply

TAMKO TAM-GLASS PREMIUM® or TAM-PLY IV® Fiberglass Ply Sheet — 1 ply

TAMKO AWAPLAN PREMIUM (Granule Surfaced) — 1 ply

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

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 PREMIUM 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.

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, 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. Fiberglass Ply Sheet: Starting at the low point of the roof, install a 1/2 m width, then a full 1 m width of TAM-Glass PREMIUM or TAM-PLY IV, 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.

AWAPLAN PREMIUM: Starting at the low point of the roof, install 1 layer of TAMKO AWAPLAN PREMIUM granule surfaced sheet, side lapped 4 in. and end lapped 6 in. The AWAPLAN PREMIUM should be solidly adhered to the ply 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. Alternately, the AWAPLAN PREMIUM can be heat welded and should be solidly adhered to the ply sheet by sufficiently heating the back side with a torch at the juncture of the ply sheet and the AWAPLAN PREMIUM roll to form a bead of melted asphalt as the AWAPLAN PREMIUM is rolled out. Use care when applying heat as damage can occur to the product by overheating.

SAFETY IS OF MAJOR IMPORTANCE WHEN HEAT WELDING MODIFIED BITUMENS ON A WOOD DECK. THERE SHOULD BE A SUFFICIENT NUMBER OF FIRE EXTINGUISHERS ON THE ROOF TO HANDLE ANY CONTINGENCY WHICH MIGHT DEVELOP.

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.

For complete information on TAMKO’s recommendations and requirements, consult TAMKO’s website at www.tamko.com

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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

TAMKO VAPOR-CHAN®
Fiberglass Base Sheet 1 ply

TAMKO AWAPLAN VERSA-SMOOTH®
Modified Base Sheet 1 ply

TAMKO AWAPLAN PREMIUM
(Granule Surfaced) 1 ply

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

Slope: Positive drainage up to 3 in. per linear ft. For slopes above 3/4 in. per linear ft., fastening of the AWAPLAN PREMIUM 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 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 a 1/2 m width of TAMKO AWAPLAN VERSA-SMOOTH, side lapped 4 in. and end lapped 6 in. Apply at a right angle to the slope of the roof. Follow the half-width ply with full 1 m widths of AWAPLAN VERSA-SMOOTH. The AWAPLAN VERSA-SMOOTH should 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.

Alternately, the AWAPLAN VERSA-SMOOTH can be heat welded and should be solidly adhered to the base sheet by sufficiently heating the back side with a torch at the juncture of the base sheet and the AWAPLAN VERSA-SMOOTH roll to form a bead of melted asphalt as the AWAPLAN VERSA-SMOOTH is rolled out.

AWAPLAN PREMIUM: Starting at the low point of the roof, install 1 layer of TAMKO AWAPLAN PREMIUM side lapped 4 in. and end lapped 6 in. The AWAPLAN PREMIUM should be solidly adhered to the ply 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.

Alternately, the AWAPLAN PREMIUM can be heat welded and should be solidly adhered to the ply sheet by sufficiently heating the back side with a torch at the juncture of the ply sheet and the AWAPLAN PREMIUM roll to form a bead of melted asphalt as the AWAPLAN PREMIUM is rolled out. Use care when applying heat as damage can occur to the product by overheating.

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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For complete information on TAMKO’s recommendations and requirements, consult TAMKO’s web site at www.tamko.com

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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.

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*Precast Concrete Decks: This specification may be utilized over a precast concrete deck when joints are taped and the VAPOR-CHAN is installed in spot moppings of specification asphalt spaced on (not to exceed) 24 in. centers.
Material Requirements

<table>
<thead>
<tr>
<th>Material</th>
<th>Description</th>
<th>Specification</th>
</tr>
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<tbody>
<tr>
<td>TAMKO VAPOR-CHAN®</td>
<td>Fiberglass Venting Base Sheet, 1 ply</td>
<td></td>
</tr>
<tr>
<td>TAMKO TAM-PLY IV®</td>
<td>Fiberglass Ply Sheet, 1 ply</td>
<td></td>
</tr>
<tr>
<td>TAMKO AWAPLAN PREMIUM</td>
<td>1 ply</td>
<td></td>
</tr>
<tr>
<td>Interply Asphalt (Per 100 sq. ft.)</td>
<td>Approx. 46 lbs.</td>
<td></td>
</tr>
<tr>
<td>Concrete Primer (Per 100 sq. ft.)</td>
<td>Approx. 3/4 gal.</td>
<td></td>
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Slope: Positive drainage up to 3 in. per linear ft. For slopes above 3/4 in. per linear ft., fastening of the AWAPLAN membrane is required.

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.

Preparation: Spud the membrane surface and remove all loose roofing gravel and debris. Make random cuts or breaks in the old membrane 4 ft. o.c. to allow vapor pressure to vent. All wet or deteriorated insulation or membrane must be removed and replaced prior to the application of new roofing materials. The surface should be primed with concrete primer at a rate of approximately 3/4 gal. per 100 sq. ft. prior to the application of new roofing materials.

VAPOR-CHAN: Over the old membrane and starting at the low point of the roof, install 1 ply of TAMKO VAPOR-CHAN Base Sheet. The VAPOR-CHAN should be side lapped 2 in. and end lapped 4 in. The base ply should be secured to the old membrane with spots of Type III, Steep Asphalt spaced on (not to exceed) 24 in. centers.

TAM-PLY IV: Starting at the low point of the roof, install 1 ply of TAM-PLY IV, 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 base ply with approximately 23 lbs. (+15%) of specification asphalt per 100 sq. ft.

AWAPLAN PREMIUM: Starting at the low point of the roof, install 1 ply of TAMKO AWAPLAN PREMIUM granule surfaced sheet, side lapped 4 in. and end lapped 6 in. The AWAPLAN PREMIUM should be solidly adhered to the ply 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.

Alternately, the AWAPLAN PREMIUM can be heat welded and should be solidly adhered to the ply sheet by sufficiently heating the back side with a torch at the juncture of the ply sheet and the AWAPLAN PREMIUM roll to form a bead of melted asphalt as the AWAPLAN PREMIUM is rolled out. Use care when applying heat as damage can occur to the product by overheating.

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

Venting: One-way roof vents may be placed at a minimum of 1 vent for each 10 squares of roof area.

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 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 VAPOR-CHAN®
Fiberglass Venting Asphalt Base Sheet 1 ply

TAMKO TAM-PLY IV®
Fiberglass Ply Sheet 1 ply

TAMKO AWAPLAN PREMIUM 1 ply

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

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

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.

Preparation: Broom the membrane surface and remove all loose roofing gravel and debris. Make random cuts or breaks in the old membrane 4 ft. o.c. to allow vapor pressure to vent from the old system and any existing insulation materials. All wet or deteriorated insulation or membrane must be removed and replaced prior to the application of new roofing materials. DO NOT USE ANY PRIMERS.

VAPOR-CHAN: Over the old membrane and starting at the low point of the roof, install 1 ply of TAMKO VAPOR-CHAN Base Sheet. The VAPOR-CHAN should be side lapped 2 in. and end lapped 4 in. The base ply should be secured to the old membrane with spots of Type III, Steep Asphalt spaced on (not to exceed) 24 in. centers.

TAM-PLY IV: Starting at the low point of the roof, install 1 ply of TAM-PLY IV, 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 base ply with approximately 23 lbs. (±15%) of specification asphalt per 100 sq. ft.

AWAPLAN PREMIUM: Starting at the low point of the roof, install 1 ply of TAMKO AWAPLAN PREMIUM granule sur-faced sheet, side lapped 4 in. and end lapped 6 in. The AWAP-LAN PREMIUM should be solidly adhered to the ply 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.

Alternately, the AWAPLAN PREMIUM can be heat welded and should be solidly adhered to the ply sheet by sufficiently heating the back side with a torch at the juncture of the ply sheet and the AWAPLAN PREMIUM roll to form a bead of melted asphalt as the AWAPLAN PREMIUM is rolled out. Use care when applying heat as damage can occur to the product by overheating.

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

Venting: One-way roof vents may be placed at a minimum of 1 vent for each 10 squares of roof area.

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 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.
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Material Requirements

**TAMKO AWAPLAN VERSA-SMOOTH**
- 1 ply

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

**TAMKO AWAPLAN PREMIUM®**
- (Granule Surfaced)
- 1 ply

**Interply Asphalt (Per 100 sq. ft.)**
- Approx. 69 lbs.

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

**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.

**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 III for slopes up to 3 in.

**AWAPLAN VERSA-SMOOTH:** Starting at the low point of the roof, install 1 ply of TAMKO AWAPLAN VERSA-SMOOTH, 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 (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.

**Fiberglass Ply Sheets:** Over the base ply, install 2 plies of TAM-PLY IV or TAM-GLASS PREMIUM Fiberglass Ply Sheet in specification asphalt. Start with a 1/2 m wide sheet followed by full 1 m widths, single fashion, lapping each ply 20-11/16 in. over the preceding ply so that at least 2 plies cover the base ply at any point. Approximately 23 lbs. (+15%) of specification asphalt per 100 sq. ft. should be used to embed each ply.

**AWAPLAN PREMIUM:** Starting at the low point of the roof, install 1 ply of TAMKO AWAPLAN PREMIUM granule surfaced sheet, side lapped 4 in. and end lapped 6 in. The AWAPLAN PREMIUM should be solidly adhered to the ply 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.

**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 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.

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Material Requirements

- TAMKO GLASS-BASE®, TAM-GLASS PREMIUM®, TAM-PLY IV®, or BASE-N-PLY®
  Fiberglass Sheet  1 ply
- TAMKO AWAPLAN PREMIUM (Granule Surfaced) 1 ply
- TAM-PRO® 856 Premium SBS Adhesive (Per 100 sq. ft.) 1-1/2 gal.
- Fasteners as required for Base Sheet and Insulation

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

Deck: The deck must conform to TAMKO general requirements and Metal Deck Requirements.

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

Adhesive: The cold process adhesive must be TAM-PRO 856 Premium SBS Adhesive.

Base Ply: Starting at the low point of the roof, install 1 ply of TAMKO GLASS-BASE, TAM-GLASS PREMIUM, TAM-PLY IV or 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. Mechanically fasten through the base ply and insulation, penetrating through the deck with appropriate fasteners as recommended by the insulation manufacturer. For specific patterns for wind uplift listings, contact the Technical Services Department.

Alternately, the TAMKO GLASS-BASE, TAM-GLASS PREMIUM, or TAM-PLY IV may be solidly mopped to the insulation with approximately 23 lbs. (±15%) of specification asphalt per 100 sq. ft.

AWAPLAN PREMIUM: Starting at the low point of the roof, install 1 ply of TAMKO AWAPLAN PREMIUM granule surfaced sheet, side lapped 4 in. and end lapped 6 in. The field of the AWAPLAN PREMIUM membrane should be solidly adhered to the base sheet with an application of TAM-PRO 856 Premium SBS Adhesive at a rate not to exceed 1-1/2 gallons per square, and the side laps and the end laps set in adhesive or hot air welded together. Use care when applying heat as damage can occur to the product by overheating.

Caution should be used when exposing cold adhesive to an open flame.

Flashings: 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 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 hazard.
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Material Requirements

**TAMKO VERSA-BASE®**
Modified Asphalt Base Sheet 1 ply

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

**TAM-PRO® 856**
Premium SBS Adhesive (Per 100 sq. ft.) 1-1/2 gal.

Fasteners as required for Base Sheet and Insulation

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

Deck: The deck must conform to TAMKO general requirements and Metal Deck 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 insulation must have an overlay of a minimum 1/2 in. fiberboard, perlite, or fiberglass roof insulation.

Adhesive: The cold process adhesive must be TAM-PRO 856 Premium SBS Adhesive.

VERSA-BASE Sheet: 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. Mechanically fasten through the base ply and insulation, penetrating through the deck with appropriate fasteners as recommended by the insulation manufacturer. For specific fastening patterns for wind uplift listings, contact the Technical Services Department.

Alternately, the VERSA-BASE may be solidly mopped to the insulation with approximately 23 lbs. (+15%) of specification asphalt per 100 sq. ft.

AWAPLAN PREMIUM: Starting at the low point of the roof, install 1 ply of TAMKO AWAPLAN PREMIUM granule surfaced sheet, side lapped 4 in. and end lapped 6 in. The field of the AWAPLAN PREMIUM membrane should be solidly adhered to the base sheet with an application of TAM-PRO 856 Premium SBS Adhesive at a rate not to exceed 1-1/2 gallons per square, and the side laps and the end laps set in adhesive or heat welded together. Use care when applying heat as damage can occur to the product by overheating.

Caution should be used when exposing cold 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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Material Requirements

**TAMKO VAPOR-CHAN®**
Fiberglass Venting Asphalt Base Sheet  1 ply

**TAMKO AWAPLAN PREMIUM**
(Granule Surfacd)  1 ply

**TAM-PRO® 856**
Premium SBS Adhesive (per 100 sq. ft)  1-1/2 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 PREMIUM is required.

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

**Adhesive:** The cold process adhesive must be TAM-PRO 856 Premium SBS Adhesive.

**VAPOR-CHAN:** Starting at the low point of the roof, install 1 ply of TAMKO VAPOR-CHAN, beginning with a full 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. For specific fastening patterns for wind uplift, contact the Technical Services Department.

**AWAPLAN PREMIUM:** Starting at the low point of the roof, install 1 layer of TAMKO AWAPLAN PREMIUM granule surfaced sheet, side lapped 4 in. and end lapped 6 in. The field of the AWAPLAN PREMIUM membrane should be solidly adhered to the base sheet with an application of TAM-PRO 856 Premium SBS Adhesive at a rate not to exceed 1-1/2 gallons per square, and the side laps and the end laps set in adhesive or heat welded together. Use care when applying heat as damage can occur to the product by overheating.

Caution should be used when exposing cold 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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For complete information on TAMKO’s recommendations and requirements, consult TAMKO’s web site at www.tamko.com

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Material Requirements

<table>
<thead>
<tr>
<th>Item</th>
<th>Required Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>TAMKO TYPE 43 Coated Base Sheet, or BASE-N-PLY® Base Sheet</td>
<td>1 ply</td>
</tr>
<tr>
<td>TAMKO AWAPLAN PREMIUM (Granule Surfaced)</td>
<td>1 ply</td>
</tr>
<tr>
<td>TAM-PRO® 856 Premium SBS Adhesive (per 100 sq. ft)</td>
<td>1-1/2 gal.</td>
</tr>
</tbody>
</table>

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 PREMIUM is required.

Deck: The deck should conform to TAMKO general requirements.

Adhesive: The cold process adhesive must be TAM-PRO 856 Premium SBS Adhesive.

Base Ply: Starting at the low point of the roof, install 1 ply of TAMKO TYPE 43 Coated Base Sheet, 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 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 PREMIUM: Starting at the low point of the roof, install 1 layer of TAMKO AWAPLAN PREMIUM granule surfaced sheet, side lapped 4 in. and end lapped 6 in. The field of the AWAPLAN PREMIUM membrane should be solidly adhered to the base sheet with an application of TAM-PRO 856 Premium SBS Adhesive at a rate not to exceed 1-1/2 gallons per square, and the side laps and the end laps set in adhesive or heat welded together. Use care when applying heat as damage can occur to the product by overheating.

Caution should be used when exposing cold adhesive to an open flame.

Flash: 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.

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Material Requirements

TAMKO BASE-N-PLY®
Fiberglass Sheet  1 ply

TAMKO AWAPLAN PREMIUM
(Granule Surfaced)  1 ply

Asphalt (Per 100 sq. ft.)  Approx. 23 lbs

M3 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 PREMIUM 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. Polysisocyanurate 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® M3 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 PREMIUM: Starting at the low point of the roof, install 1 layer of TAMKO AWAPLAN PREMIUM granule surfaced sheet, side lapped 4 in. and end lapped 6 in. The AWAPLAN PREMIUM should be solidly adhered to the base ply with an application of M3 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 M3 Adhesive must be a minimum of 100°F at the spray tip. M3 Adhesive should not be heated above 180°F.

Caution should be used when exposing M3 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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Material Requirements

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

TAMKO AWAPLAN PREMIUM
(Granule Surfaced) 1 ply

Asphalt (Per 100 sq. ft.) Approx. 46 lbs.
M³ 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 PREMIUM 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® M³ 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 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.

AWAPLAN PREMIUM: Starting at the low point of the roof, install 1 layer of TAMKO AWAPLAN PREMIUM granule surfaced sheet, side lapped 4 in. and end lapped 6 in. The AWAPLAN PREMIUM should be solidly adhered to the ply sheet with an application of M³ 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 M³ Adhesive must be a minimum of 100°F at the spray tip. M³ Adhesive should not be heated above 180°F.

Caution should be used when exposing M³ 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
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 Interna-
tional 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 AWAPLAN VERSA-SMOOTH 1 ply
TAMKO AWAPLAN PREMIUM (Granule Surfaced) 1 ply

M³ 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 PREMIUM 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. Polysiocyanurate 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® M³ 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 M³ 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. Sides 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 PREMIUM: Starting at the low point of the roof, install 1 layer of TAMKO AWAPLAN PREMIUM granule surfaced sheet, side lapped 4 in. and end lapped 6 in. The AWAPLAN PREMIUM should be solidly adhered to the base ply with an application of M³ 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. When spraying M³ Adhesive the adhesive must be a minimum of 100°F at the spray tip. 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 M³ Adhesive must be a minimum of 100°F at the spray tip. M³ Adhesive should not be heated above 180°F.

Caution should be used when exposing M³ 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. Crystalline silica has been classified as a “known” human carcinogen 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”
or “hot mopped” applications may expose workers and others in
the work area to oxidized asphalt and its emissions. The Interna-
tional 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 protec-
tive 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 AWAPLAN VERSAFLEX  1 ply
TAMKO AWAPLAN PREMIUM  (Granule Surfaced)  1 ply
M³ 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 PREMIUM 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. Polysiocyanurate 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® M³ 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 M³ 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 M³ 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 PREMIUM: Starting at the low point of the roof, install 1 layer of TAMKO AWAPLAN PREMIUM granule surfaced sheet, side lapped 4 in. and end lapped 6 in. The AWAPLAN PREMIUM should be solidly adhered to the base ply with an application of M³ 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 M³ Adhesive must be a minimum of 100°F at the spray tip. M³ Adhesive should not be heated above 180°F. Caution should be used when exposing M³ 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. Crystalline silica has been classified as a “known” human carcinogen 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 is a registered trademark of TAMKO Building Products, Inc.
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 VERSA-BASE®** 1 ply

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

M³ 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 PREMIUM 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® M³ 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 M³ 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 M³ 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 PREMIUM:** Starting at the low point of the roof, install 1 layer of TAMKO AWAPLAN PREMIUM granule surfaced sheet, side lapped 4 in. and end lapped 6 in. The AWAPLAN PREMIUM should be solidly adhered to the base ply with an application of M³ 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 M³ Adhesive must be a minimum of 100°F at the spray tip. M³ Adhesive should not be heated above 180°F.

**Caution:** Should be used when exposing M³ 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-
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

TAMKO TAM-PLY IV®
Fiberglass Ply Sheet 3 plies

TAMKO AWAPLAN PREMIUM (Granule Surfaces) 1 ply
Asphalt (Per 100 sq. ft.) Approx. 69 lbs.
M³ 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 PREMIUM 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® M³ 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 PREMIUM: Starting at the low point of the roof, install 1 layer of TAMKO AWAPLAN PREMIUM granule surfaced sheet, side lapped 4 in. and end lapped 6 in. The AWAPLAN PREMIUM should be solidly adhered to the ply sheet with an application of M³ 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 M³ Adhesive must be a minimum of 100°F at the spray tip. M³ Adhesive should not be heated above 180°F.

Caution should be used when exposing M³ 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
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®**
- Fiberglass Ply Sheet: 1 ply

**TAMKO VERSA-BASE®**
- Modified Asphalt Base Sheet: 1 ply

**TAMKO AWAPLAN PREMIUM**
- (Granule Surfaced): 1 ply

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

**M³ 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 PREMIUM 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. Polysioecanurate 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.
- **Type IV** for slopes up to 3 in.

**Adhesive:** The adhesive must be TAM-PRO® M³ Adhesive.

**AWAPLAN PREMIUM:** Starting at the low point of the roof, install 1 layer of TAMKO AWAPLAN PREMIUM granule surfaced sheet, side lapped 4 in. and end lapped 6 in. The AWAPLAN PREMIUM should be solidly adhered to the ply sheet with an application of M³ Adhesive at a rate not to exceed 1-1/2 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 M³ Adhesive must be a minimum of 100°F at the spray tip. M³ Adhesive should not be heated above 180°F.

**Caution:** When exposing M³ 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

TAMKO VAPOR-CHAN®
Fiberglass Venting Asphalt Base Sheet 1 ply

TAMKO AWAPLAN PREMIUM
(Granule Surfaced) 1 ply

M3 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 PREMIUM is required.

Deck: The deck should conform to TAMKO general requirements.

Adhesive: The adhesive must be TAM-PRO® M3 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 PREMIUM: Starting at the low point of the roof, install 1 layer of TAMKO AWAPLAN PREMIUM granule surfaced sheet, side lapped 4 in. and end lapped 6 in. The field of the AWAPLAN PREMIUM membrane should be solidly adhered to the base sheet with an application of M3 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 M3 Adhesive must be a minimum of 100°F at the spray tip. M3 Adhesive should not be heated above 180°F.

Caution should be used when exposing M3 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-
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.
Material Requirements

TAMKO TYPE 43 Coated Base Sheet, TAMKO GLASS-BASE® or BASE-N-PLY® Base Sheet 1 ply
TAMKO AWAPLAN PREMIUM (Granule Surfaced) 1 ply
M³ 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 PREMIUM is required.

Deck: The deck should conform to TAMKO general requirements.

Adhesive: The adhesive must be TAM-PRO® M³ 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 PREMIUM: Starting at the low point of the roof, install 1 layer of TAMKO AWAPLAN PREMIUM granule surfaced sheet, side lapped 4 in. and end lapped 6 in. The field of the AWAPLAN PREMIUM membrane should be solidly adhered to the base sheet with an application of M³ 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 M³ Adhesive must be a minimum of 100°F at the spray tip. M³ Adhesive should not be heated above 180°F.

Caution should be used when exposing M³ 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 operations...
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 1 ply

TAMKO AWAPLAN PREMIUM FR (Granule Surfaced) 1 ply

M³ 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 HEAT WELDING is required.

Deck: The deck should conform to TAMKO general requirements.

Adhesive: The adhesive must be TAM-PRO® M³ Adhesive.

VAPOR-CHAN: Starting at the low point of the roof, install 1 ply of TAMKO VAPOR-CHAN. 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 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 M³ 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. Sides 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 PREMIUM FR: Starting at the low point of the roof, install 1 layer of TAMKO AWAPLAN PREMIUM FR granule surfaced sheet, side lapped 4 in. and end lapped 6 in. The AWAPLAN PREMIUM FR should be solidly adhered to the base ply with an application of M³ 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 M³ Adhesive must be a minimum of 100°F at the spray tip. M³ Adhesive should not be heated above 180°F.

Caution should be used when exposing M³ 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-
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**

**TAMKO GLASS-BASE®, TAM-GLASS PREMIUM®, TAM-PLY IV®, or BASE-N-PLY®**

**Fiberglass Sheet**

1 ply

**TAMKO AWAPLAN 170 FR**

(Granule Surfaced)

1 ply

**Asphalt (Per 100 sq. ft.)**

Approx. 46 lbs.

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

**Base Ply:** Starting at the low point of the roof, install 1 layer of TAMKO GLASS-BASE, TAM-GLASS PREMIUM, TAM-PLY IV, or 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 FR:** Starting at the low point of the roof, install 1 layer of TAMKO AWAPLAN 170 FR granule surfaced sheet, side lapped 4 in. and end lapped 6 in. The AWAPLAN 170 FR should be solidly adhered to the base ply (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.

**NOTE:** AWAPLAN 170 FR MUST NOT BE INSTALLED WITH A PROPANE TORCH OR OTHER HEAT WELDING EQUIPMENT.

**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-
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 “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 “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 FR**
(Granule Surfaced) 1 ply

Asphalt (Per 100 sq. ft.) Approx. 69 lbs.

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

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 point. Approximately 23 lbs. (±15%) of specification asphalt per 100 sq. ft. should be used to embed each ply.

**AWAPLAN 170 FR:** Starting at the low point of the roof, install 1 layer of TAMKO AWAPLAN 170 FR granule surfaced sheet, side lapped 4 in. and end lapped 6 in. The AWAPLAN 170 FR should be solidly adhered to the ply 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.

NOTE: AWAPLAN 170 FR MUST NOT BE INSTALLED WITH A PROPANE TORCH OR OTHER HEAT WELDING EQUIPMENT.

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 formaldehyde. Formaldehyde has been classified as a “known” human carcinogen 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.

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

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Application of product(s) in this specification using “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 “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

<table>
<thead>
<tr>
<th>Material</th>
<th>Description</th>
<th>Quantity</th>
</tr>
</thead>
<tbody>
<tr>
<td>TAMKO AWAPLAN VERSA-SMOOTH</td>
<td>1 ply</td>
<td></td>
</tr>
<tr>
<td>TAMKO AWAPLAN 170 FR (Granule Surfaced)</td>
<td>1 ply</td>
<td></td>
</tr>
<tr>
<td>Asphalt (Per 100 sq. ft.)</td>
<td>Approx. 46 lbs.</td>
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</tr>
</tbody>
</table>

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

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 (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.

Alternately, the AWAPLAN VERSA-SMOOTH can be heat welded and should be solidly adhered to the insulation by sufficiently heating the back side with a torch at the juncture of the base ply and the AWAPLAN VERSA-SMOOTH roll to form a bead of melted asphalt as the AWAPLAN VERSA-SMOOTH is rolled out. Use care when applying heat as damage can occur to the product by overheating.

AWAPLAN 170 FR: Starting at the low point of the roof, install 1 layer of TAMKO AWAPLAN 170 FR granule surfaced sheet, side lapped 4 in. and end lapped 6 in. The AWAPLAN 170 FR should be solidly adhered to the base ply (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.

NOTE: AWAPLAN 170 FR MUST NOT BE INSTALLED WITH A PROPANE TORCH OR OTHER HEAT WELDING EQUIPMENT.

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. Crystalline silica has been classified as a “known” human carcinogen 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.

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**Material Requirements**

**TAMKO AWAPLAN VERSAFLEX**  
1 ply

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

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

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

**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 (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 FR:** Starting at the low point of the roof, install 1 layer of TAMKO AWAPLAN 170 FR granule surfaced sheet, side lapped 4 in. and end lapped 6 in. The AWAPLAN 170 FR should be solidly adhered to the base ply (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.

**NOTE:** AWAPLAN 170 FR MUST NOT BE INSTALLED WITH A PROPANE TORCH OR OTHER HEAT WELDING EQUIPMENT.

**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. Crystalline silica has been classified as a “known” human carcinogen 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 “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 “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 VERSA-BASE®
Modified Asphalt Base Sheet 1 ply
TAMKO AWAPLAN 170 FR (Granule Surfaced) 1 ply
Asphalt (Per 100 sq. ft.) Approx. 46 lbs.

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

VERSA-BASE Sheet: 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. Solid mop to the insulation 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 FR: Starting at the low point of the roof, install 1 layer of TAMKO AWAPLAN 170 FR granule surfaced sheet, side lapped 4 in. and end lapped 6 in. The AWAPLAN 170 FR should be solidly adhered to the base ply (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.

NOTE: AWAPLAN 170 FR MUST NOT BE INSTALLED WITH A PROPANE TORCH OR OTHER HEAT WELDING EQUIPMENT.

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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For complete information on TAMKO’s recommendations and requirements, consult TAMKO’s web site at www.tamko.com
TAMKO® and Versa-Base® are registered trademarks of TAMKO Building Products, Inc.
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 “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 “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-PLY IV®**

Fiberglass Ply Sheet 3 plies

**TAMKO AWAPLAN 170 FR**

(Granule Surfaced) 1 ply

Asphalt (Per 100 sq. ft.) Approx. 92 lbs.

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

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 FR: Starting at the low point of the roof, install 1 layer of TAMKO AWAPLAN 170 FR granule surfaced sheet, side lapped 4 in. and end lapped 6 in. The AWAPLAN 170 FR should be solidly adhered to the ply 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.

NOTE: AWAPLAN 170 FR MUST NOT BE INSTALLED WITH A PROPANE TORCH OR OTHER HEAT WELDING EQUIPMENT.

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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Material Requirements

TAMKO TAM-GLASS PREMIUM®  
Fiberglass Ply Sheet  1 ply
TAMKO VERSA-BASE®  
Base Sheet  1 ply
TAMKO AWAPLAN 170 FR  
(Granule Surfaced)  1 ply
Asphalt (Per 100 sq. ft.)  Approx. 69 lbs.

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

TAM-GLASS PREMIUM:  Starting at the low point of the roof, install one 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 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.  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 FR:  Starting at the low point of the roof, install 1 layer of TAMKO AWAPLAN 170 FR granule surfaced sheet, side lapped 4 in. and end lapped 6 in.  The AWAPLAN 170 FR should be solidly adhered to the ply 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.

NOTE:  AWAPLAN 170 FR MUST NOT BE INSTALLED WITH A PROPANE TORCH OR OTHER HEAT WELDING EQUIPMENT.

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 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 “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 “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 VAPOR-CHAN®
Fiberglass Venting Asphalt Base Sheet  1 ply

TAMKO AWAPLAN 170 FR
(Granule Surfaced)  1 ply
Asphalt (Per 100 sq. ft.)  Approx. 23 lbs.
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 FR 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 layer 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 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 170 FR: Starting at the low point of the roof, install 1 layer of TAMKO AWAPLAN 170 FR granule surfaced sheet, side lapped 4 in. and end lapped 6 in. The AWAPLAN 170 FR should be solidly adhered to the base ply (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.

NOTE: AWAPLAN 170 FR MUST NOT BE INSTALLED WITH A PROPANE TORCH OR OTHER HEAT WELDING EQUIPMENT.

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 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 “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 “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**

<table>
<thead>
<tr>
<th>Item</th>
<th>Requirement</th>
</tr>
</thead>
<tbody>
<tr>
<td>TAMKO TYPE 43 Coated Base Sheet, TAMKO GLASS-BASE® or BASE-N-PLY® Base Sheet</td>
<td>1 ply</td>
</tr>
<tr>
<td>TAMKO AWPLAN 170 FR (Granule Surfaced)</td>
<td>1 ply</td>
</tr>
<tr>
<td>Asphalt (Per 100 sq. ft.)</td>
<td>Approx. 23 lbs.</td>
</tr>
<tr>
<td>Clinch-type nails for base sheet (per 100 sq ft.)</td>
<td>Approx. 100 nails</td>
</tr>
<tr>
<td><strong>Slope:</strong> Positive drainage up to 3 in. per linear ft. For slopes above 3/4 in. per linear ft., fastening of the AWPLAN 170 FR is required.</td>
<td></td>
</tr>
<tr>
<td><strong>Deck:</strong> The deck should conform to TAMKO general requirements.</td>
<td></td>
</tr>
<tr>
<td><strong>Asphalt:</strong> 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.</td>
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</tr>
<tr>
<td><strong>Base Sheet:</strong> 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.</td>
<td></td>
</tr>
<tr>
<td><strong>AWPLAN 170 FR:</strong> Starting at the low point of the roof, install 1 layer of TAMKO AWPLAN 170 FR granule surfaced sheet, side lapped 4 in. and end lapped 6 in. The AWPLAN 170 FR should be solidly adhered to the base ply (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.</td>
<td></td>
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<td><strong>NOTE:</strong> AWPLAN 170 FR MUST NOT BE INSTALLED WITH A PROPANE TORCH OR OTHER HEAT WELDING EQUIPMENT.</td>
<td></td>
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<td><strong>Flashing:</strong> The flashing material must be a TAMKO polyester reinforced modified asphalt flashing material.</td>
<td></td>
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<td><strong>Caution:</strong> 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.</td>
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</tbody>
</table>

**For complete information on TAMKO’s recommendations and requirements, consult TAMKO’s web site at www.tamko.com**

TAMKO Building Products, Inc., P. O. Box 1404, Joplin, MO  64802  •  1-800-641-4691  •  www.tamko.com

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of the product(s) in this specification. Take precautions to prevent breathing and contact with skin.

Application of product(s) in this specification using “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 “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 VAPOR-CHAN®
Fiberglass Venting Asphalt Base Sheet 1 ply

TAMKO TAM-GLASS PREMIUM® or TAM-PLY IV®
Fiberglass Ply Sheet 1 ply

TAMKO AWAPLAN 170FR
(Granule Surfaced) 1 ply

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

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 170FR 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.

Fiberglass Ply Sheet: Starting at the low point of the roof, install a 1/2 m width, then a full 1 m width of TAM-GLASS PREMIUM or TAM-PLY IV, 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.

AWAPLAN 170 FR: Starting at the low point of the roof, install 1 layer of TAMKO AWAPLAN 170 FR granule surfaced sheet, side-lapped 4 in. and end lapped 6 in. The AWAPLAN 170 FR should be solidly adhered to the ply 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.

NOTE: AWAPLAN 170 FR MUST NOT BE INSTALLED WITH A PROPANE TORCH OR OTHER HEAT WELDING EQUIPMENT.

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 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 “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 “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.

*Precast Concrete Decks: This specification may be utilized over a precast concrete deck when joints are taped and the VAPOR-CHAN is installed in spot moppings of specification asphalt spaced on (not to exceed) 24 in. centers.
**Material Requirements**

- **TAMKO TYPE 43 Coated Base Sheet, TAMKO GLASS-BASE® or BASE-N-PLY® Base Sheet** 1 ply
- **TAMKO TAM-GLASS PREMIUM® or TAM-PLY IV® Fiberglass Ply Sheet** 1 ply
- **TAMKO AWAPLAN 170 FR (Granule Surfaced)** 1 ply
- **Asphalt (Per 100 sq. ft.)** Approx. 46 lbs.
- **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 FR 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.

**Base Sheet:** 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.

**Fiberglass Ply Sheet:** Starting at the low point of the roof, install a 1/2 m width, then a full 1 m width of TAM-GLASS PREMIUM or TAM-PLY IV, 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.

**AWAPLAN 170 FR:** Starting at the low point of the roof, install 1 layer of TAMKO AWAPLAN 170 FR granule surfaced sheet, side lapped 4 in. and end lapped 6 in. The AWAPLAN 170 FR should be solidly adhered to the ply 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.

**NOTE:** AWAPLAN 170 FR MUST NOT BE INSTALLED WITH A PROPANE TORCH OR OTHER HEAT WELDING EQUIPMENT.

**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 “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 “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 VAPOR-CHAN®**
Fiberglass Venting Asphalt Base Sheet 1 ply

**TAMKO AWAPLAN VERSA-SMOOTH**
Modified Base Sheet 1 ply

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

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

**Slope:** Positive drainage up to 3 in. per linear ft. For slopes above 3/4 in. per linear ft., fastening of the AWAPLAN 107 FR 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 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 (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. Alternately, the AWAPLAN VERSA-SMOOTH can be heat welded and should be solidly adhered to the base sheet by sufficiently heating the back side with a torch at the juncture of the base sheet and the AWAPLAN VERSA-SMOOTH roll to form a bead of melted asphalt as the AWAPLAN VERSA-SMOOTH is rolled out. Use care when applying heat as damage can occur to the product by overheating.

**AWAPLAN 170 FR:** Starting at the low point of the roof, install 1 layer of TAMKO AWAPLAN 170 FR, side lapped 4 in. and end lapped 6 in. The AWAPLAN 170 FR should be solidly adhered to the base AWAPLAN VERSA-SMOOTH (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.

**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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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.

*Precast Concrete Decks: This specification may be utilized over a precast concrete deck when joints are taped and the VAPOR-CHAN is installed in spot moppings of specification asphalt spaced on (not to exceed) 24 in. centers.
Material Requirements

**TAMKO VAPOR-CHAN®**
Fiberglass Venting Base Sheet 1 ply

**TAMKO TAM-PLY IV®**
Fiberglass Ply Sheet 1 ply

**TAMKO AWAPLAN 170 FR**
Interply Asphalt (Per 100 sq. ft.) Approx. 46 lbs.
Concrete Primer (Per 100 sq. ft.) Approx. 3/4 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 FR membrane is required.

**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.

**Preparation:** Spud the membrane surface and remove all loose roofing gravel and debris. Make random cuts or breaks in the old membrane 4 ft. o.c. to allow vapor pressure to vent. All wet or deteriorated insulation or membrane must be removed and replaced prior to the application of new roofing materials. The surface should be primed with concrete primer at a rate of approximately 3/4 gal. per 100 sq. ft. prior to the application of new roofing materials.

**VAPOR-CHAN:** Over the old membrane and starting at the low point of the roof, install 1 ply of TAMKO VAPOR-CHAN Base Sheet. The VAPOR-CHAN should be side lapped 2 in. and end lapped 4 in. The base ply should be secured to the old membrane with spots of Type III, Steep Asphalt spaced on (not to exceed) 24 in. centers.

**TAM-PLY IV:** Starting at the low point of the roof, install 1 ply of TAM-PLY IV, 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 base ply with approximately 23 lbs. (+15%) of specification asphalt per 100 sq. ft.

**AWAPLAN 170 FR:** Starting at the low point of the roof, install 1 ply of TAMKO AWAPLAN 170 FR granule surfaced sheet, side lapped 4 in. and end lapped 6 in. The AWAPLAN 170 FR should be solidly adhered to the ply 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.

**NOTE:** AWAPLAN 170 FR MUST NOT BE INSTALLED WITH A PROPANE TORCH OR OTHER HEAT WELDING EQUIPMENT.

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

**Venting:** One-way roof vents may be placed at a minimum of 1 vent for each 10 squares of roof area.

**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

For complete information on TAMKO’s recommendations and requirements, consult TAMKO’s web site at www.tamko.com
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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 “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 “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 VAPOR-CHAN®
Fiberglass Venting Asphalt Base Sheet 1 ply
TAMKO TAM-PLY IV®
Fiberglass Ply Sheet 1 ply
TAMKO AWAPLAN 170 FR 1 ply
Interply Asphalt (Per 100 sq. ft.) Approx. 46 lbs.

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

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.

Preparation: Broom the membrane surface and remove all loose roofing gravel and debris. Make random cuts or breaks in the old membrane 4 ft. o.c. to allow vapor pressure to vent from the old system and any existing insulation materials. All wet or deteriorated insulation or membrane must be removed and replaced prior to the application of new roofing materials. DO NOT USE ANY PRIMERS.

VAPOR-CHAN: Over the old membrane and starting at the low point of the roof, install 1 ply of TAMKO VAPOR-CHAN Base Sheet. The VAPOR-CHAN should be side lapped 2 in. and end lapped 4 in. The base ply should be secured to the old membrane with spots of Type III, Steep Asphalt spaced on (not to exceed) 24 in. centers.

TAM-PLY IV: Starting at the low point of the roof, install 1 ply of TAM-PLY IV, 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 base ply with approximately 23 lbs. (±15%) of specification asphalt per 100 sq. ft.

AWAPLAN 170 FR: Starting at the low point of the roof, install 1 ply of TAMKO AWAPLAN 170 FR granule surfaced sheet, side lapped 4 in. and end lapped 6 in. The AWAPLAN 170 FR should be solidly adhered to the ply 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.

NOTE: AWAPLAN 170 FR MUST NOT BE INSTALLED WITH A PROPANE TORCH OR OTHER HEAT WELDING EQUIPMENT.

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

Venting: One-way roof vents may be placed at a minimum of 1 vent for each 10 squares of roof area.

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 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 “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 “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 AWAPLAN VERSA-SMOOTH**  
1 ply

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

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

**Interply Asphalt (Per 100 sq. ft.)**  
Approx. 92 lbs.

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

**AWAPLAN VERSA-SMOOTH:** Starting at the low point of the roof, install 1 ply of TAMKO AWAPLAN VERSA-SMOOTH, 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 (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.

**Fiberglass Ply Sheets:** Over the base ply, install 2 plies of TAM-PLY IV or TAM-GLASS PREMIUM Fiberglass Ply Sheet in specification asphalt. Start with a 1/2 m width followed by full 1 m widths, shingle fashion, lapping each ply 20-11/16 in. over the preceding ply so that at least 2 plies cover the base ply at any point. Approximately 23 lbs. (+15%) of specification asphalt per 100 sq. ft. should be used to embed each ply.

**AWAPLAN 170 FR:** Starting at the low point of the roof, install 1 ply of TAMKO AWAPLAN 170 FR granule surfaced sheet, side lapped 4 in. and end lapped 6 in. The AWAPLAN 170 FR should be solidly adhered to the ply 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.

**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 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 GLASS-BASE®, TAM-GLASS PREMIUM®, TAM-PLY IV®, or BASE-N-PLY®**

- Fiberglass Sheet  
  1 ply

- TAMKO AWAPLAN 170 FR  
  (Granule Surfaced)  
  1 ply

- TAM-PRO® 856  
  Premium SBS Adhesive (Per 100 sq. ft.)  
  1-1/2 gal

**Fasteners as required for Base Sheet and Insulation**

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

**Deck:** The deck must conform to TAMKO general requirements and Metal Deck 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 or EPS insulation must have an overlay of a minimum 1/2 in. fiberboard, perlite, or fiberglass roof insulation.

**Adhesive:** The cold process adhesive must be TAM-PRO 856 Premium SBS Adhesive.

**Base Ply:** Starting at the low point of the roof, install 1 ply of TAMKO GLASS-BASE, TAM-GLASS PREMIUM, TAM-PLY IV or 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. Mechanically fasten through the base ply and insulation, penetrating through the deck with appropriate fasteners as recommended by the insulation manufacturer. **For specific fastening patterns for wind uplift listings, contact the Technical Services Department.**

Alternately, the TAMKO GLASS-BASE, TAM-GLASS PREMIUM, or TAM-PLY IV may be solidly mopped to the insulation with approximately 23 lbs. (±15%) of specification asphalt per 100 sq. ft.

**AWAPLAN 170 FR:** Starting at the low point of the roof, install 1 ply of TAMKO AWAPLAN 170 FR granule surfaced sheet, side lapped 4 in. and end lapped 6 in. The field of the AWAPLAN 170 FR membrane should be solidly adhered to the base sheet with an application of TAM-PRO 856 Premium SBS Adhesive at a rate not to exceed 1-1/2 gallons per square, and the side laps and the end laps set in adhesive or heat welded together. **Use care when applying heat as damage can occur to the product by overheating.**

**Caution should be used when exposing cold 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 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

<table>
<thead>
<tr>
<th>Material Type</th>
<th>Quantity</th>
</tr>
</thead>
<tbody>
<tr>
<td>TAMKO VERSA-BASE®</td>
<td>1 ply</td>
</tr>
<tr>
<td>Modified Asphalt Base Sheet</td>
<td></td>
</tr>
<tr>
<td>TAMKO AWAPLAN 170 FR (Granule Surfaced)</td>
<td>1 ply</td>
</tr>
<tr>
<td>TAM-PRO® 856</td>
<td>1-1/2 gal</td>
</tr>
<tr>
<td>Premium SBS Adhesive (Per 100 sq. ft.)</td>
<td></td>
</tr>
<tr>
<td>Fasteners as required for Base Sheet and Insulation</td>
<td></td>
</tr>
</tbody>
</table>

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

Deck: The deck must conform to TAMKO general requirements and Metal Deck 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 or phenolic insulation must have an overlay of a minimum 1/2 in. fiberboard, perlite, or fiberglass roof insulation.

Adhesive: The cold process adhesive must be TAM-PRO 856 Premium SBS Adhesive.

VERSA-BASE Sheet: 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. Mechanically fasten through the base ply and insulation, penetrating through the deck with appropriate fasteners as recommended by the insulation manufacturer. For specific fastening patterns for wind uplift listings, contact the Technical Services Department.

Alternately, the VERSA-BASE may be solidly mopped to the insulation with approximately 23 lbs. (+15%) of specification asphalt per 100 sq. ft.

AWAPLAN 170 FR: Starting at the low point of the roof, install 1 ply of TAMKO AWAPLAN 170 FR granule surfaced sheet, side lapped 4 in. and end lapped 6 in. The field of the AWAPLAN 170 FR membrane should be solidly adhered to the base sheet with an application of TAM-PRO 856 Premium SBS Adhesive at a rate not to exceed 1-1/2 gallons per square, and the side laps and the end laps set in adhesive or heat welded together. Use care when applying heat as damage can occur to the product by overheating.

Caution should be used when exposing cold 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 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

<table>
<thead>
<tr>
<th>Item</th>
<th>Description</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>TAMKO VAPOR-CHAN® Fiberglass Venting Asphalt Base Sheet</td>
<td>1 ply</td>
<td></td>
</tr>
<tr>
<td>TAMKO AWAPLAN 170 FR (Granule Surfaced)</td>
<td>1 ply</td>
<td></td>
</tr>
<tr>
<td>TAM-PRO® 856 Premium SBS Adhesive (Per 100 sq. ft.)</td>
<td>1-1/2 gal</td>
<td></td>
</tr>
<tr>
<td>Clinch-type nails for base sheet (per 100 sq ft.)</td>
<td>Approx. 100 nails</td>
<td></td>
</tr>
</tbody>
</table>

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

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

**Adhesive:** The cold process adhesive must be TAM-PRO 856 Premium SBS Adhesive.

**VAPOR-CHAN:** Starting at the low point of the roof, install 1 layer 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. For specific fastening patterns for wind uplift listings, contact the Technical Services Department.

**AWAPLAN 170 FR:** Starting at the low point of the roof, install 1 layer of TAMKO AWAPLAN 170 FR granule surfaced sheet, side lapped 4 in. and end lapped 6 in. The field of the AWAPLAN 170 FR membrane should be solidly ad-hered to the base sheet with an application of TAM-PRO 856 Premium SBS Adhesive at a rate not to exceed 1-1/2 gallons per square, and the side laps and the end laps set in adhesive or heat welded together. Use care when applying heat as damage can occur to the product by overheating.

Caution should be used when exposing cold 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 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 TYPE 43 Coated Base Sheet, or BASE-N-PLY® Base Sheet 1 ply

TAMKO AWAPLAN 170 FR (Granule Surfaced) 1 ply

TAM-PRO® 856 Premium SBS Adhesive (Per 100 sq. ft.) 1-1/2 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 FR is required.

Deck: The deck should conform to TAMKO general requirements.

Adhesive: The cold process adhesive must be TAM-PRO 856 Premium SBS 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 FR: Starting at the low point of the roof, install 1 layer of TAMKO AWAPLAN 170 FR granule surfaced sheet, side lapped 4 in. and end lapped 6 in. The field of the AWAPLAN 170 FR membrane should be solidly adhered to the base sheet with an application of TAM-PRO 856 Premium SBS Adhesive at a rate not to exceed 1-1/2 gallons per square, and the side laps and the end laps set in adhesive or heat welded together. Use care when applying heat as damage can occur to the product by overheating.

Caution should be used when exposing cold 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” 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 BASE-N-PLY®
Fiberglass Sheet 1 ply

TAMKO AWAPLAN 170 FR (Granule Surfaced) 1 ply

Asphalt (Per 100 sq. ft.) Approx. 23 lbs
M3 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 FR 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® M3 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 FR: Starting at the low point of the roof, install 1 layer of TAMKO AWAPLAN 170 FR granule surfaced sheet, side lapped 4 in. and end lapped 6 in. The AWAPLAN 170 FR should be solidly adhered to the base ply with an application of M3 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 M3 Adhesive must be a minimum of 100°F at the spray tip. M3 Adhesive should not be heated above 180°F.

Caution should be used when exposing M3 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 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 FR
(Granule Surfaced)  1 ply

Asphalt (Per 100 sq. ft.)  Approx. 46 lbs.
M³ 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 FR 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® M³ 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 point. Approximately 23 lbs. (+15%) of specification asphalt per 100 sq. ft. should be used to embed each ply.

AWAPLAN 170 FR: Starting at the low point of the roof, install 1 layer of TAMKO AWAPLAN 170 FR granule surfaced sheet, side lapped 4 in. and end lapped 6 in. The AWAPLAN 170 FR should be solidly adhered to the ply sheet with an application of M³ 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 M³ Adhesive must be a minimum of 100°F at the spray tip. M³ Adhesive should not be heated above 180°F.

Caution should be used when exposing M³ 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 formaldehyde. Formaldehyde has been classified as a “known” human carcinogen 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 application.
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.

For complete information on TAMKO’s recommendations and requirements, consult TAMKO’s web site at www.tamko.com

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Material Requirements

TAMKO AWAPLAN VERSA-SMOOTH  1 ply
TAMKO AWAPLAN 170 FR (Granule Surfaced)  1 ply

M³ 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 FR 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® M³ 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 M³ 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.

AWAPLAN 170 FR:  Starting at the low point of the roof, install 1 layer of TAMKO AWAPLAN 170 FR granule surfaced sheet, side lapped 4 in. and end lapped 6 in. The AWAPLAN 170 FR should be solidly adhered to the base ply with an application of M³ 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 M³ Adhesive must be a minimum of 100°F at the spray tip. M³ Adhesive should not be heated above 180°F.

Caution should be used when exposing M³ 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. Crystalline silica has been classified as a “known” human carcinogen 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” 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 AWAPLAN VERSAFLEX 1 ply
TAMKO AWAPLAN 170 FR (Granule Surfaced) 1 ply
M³ 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 FR 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. Polysisocyanurate 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® M³ 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 M³ 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 M³ 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 FR: Starting at the low point of the roof, install 1 layer of TAMKO AWAPLAN 170 FR granule surfaced sheet, side lapped 4 in. and end lapped 6 in. The AWAPLAN 170 FR should be solidly adhered to the base ply with an application of M³ 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 M³ Adhesive must be a minimum of 100°F at the spray tip. M³ Adhesive should not be heated above 180°F.

Caution should be used when exposing M³ Adhesive to an open flame.

Flashings: 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. Crystalline silica has been classified as a “known” human carcinogen 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”.

For complete information on TAMKO’s recommendations and requirements, consult TAMKO’s web site at www.tamko.com
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TAMKO® is a registered trademark of TAMKO Building Products, Inc.
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

TAMKO VERSA-BASE®  
1 ply

TAMKO AWAPLAN 170 FR  
(Granule Surfaced)  
1 ply

M’ 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 FR 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’ 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’ 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’ 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 FR:  Starting at the low point of the roof, install 1 layer of TAMKO AWAPLAN 170 FR granule surfaced sheet, side lapped 4 in. and end lapped 6 in.  The AWAPLAN 170 FR should be solidly adhered to the base ply with an application of M’ 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’ Adhesive must be a minimum of 100°F at the spray tip.  M’ Adhesive should not be heated above 180°F.

Caution should be used when exposing M’ 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-
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

TAMKO TAM-PLY IV®
Fiberglass Ply Sheet 3 plies

TAMKO AWAPLAN 170 FR (Granule Surfaced) 1 ply

Asphalt (Per 100 sq. ft.) Approx. 69 lbs.

M3 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 FR 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® M3 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 FR: Starting at the low point of the roof, install 1 layer of TAMKO AWAPLAN 170 FR granule surfaced sheet, side lapped 4 in. and end lapped 6 in. The AWAPLAN 170 FR should be solidly adhered to the ply sheet with an application of M3 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 M3 Adhesive must be a minimum of 100°F at the spray tip. M3 Adhesive should not be heated above 180°F.

Caution should be used when exposing M3 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 formaldehyde. Formaldehyde has been classified as a “known” human carcinogen 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” 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®
Fiberglass Ply Sheet 1 ply
TAMKO VERSA-BASE®
Modified Asphalt Base Sheet 1 ply
TAMKO AWAPLAN 170 FR
(Granule Surfaced) 1 ply
Asphalt (Per 100 sq. ft.) Approx. 46 lbs.
M³ 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 FR 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. Polysiocyanurate 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® M³ 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 FR: Starting at the low point of the roof, install 1 layer of TAMKO AWAPLAN 170 FR granule surfaced sheet, side lapped 4 in. and end lapped 6 in. The AWAPLAN 170 FR should be solidly adhered to the ply sheet with an application of M³ 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 M³ Adhesive must be a minimum of 100°F at the spray tip. M³ Adhesive should not be heated above 180°F.

Caution should be used when exposing M³ 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

**TAMKO VAPOR-CHAN®**
Fiberglass Venting Asphalt Base Sheet 1 ply

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

M³ 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 FR is required.

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

**Adhesive:** The adhesive must be TAM-PRO® M³ 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 FR:** Starting at the low point of the roof, install 1 layer of TAMKO AWAPLAN 170 FR granule surfaced sheet, side lapped 4 in. and end lapped 6 in. The field of the AWAPLAN 170 FR membrane should be solidly adhered to the base sheet with an application of M³ 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 M³ Adhesive must be a minimum of 100°F at the spray tip. M³ Adhesive should not be heated above 180°F.

**Caution should be used when exposing M³ Adhesive to an open flame.**

**Flash:ing:** 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-
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.
Material Requirements

TAMKO TYPE 43 Coated Base Sheet, TAMKO GLASS-BASE® or BASE-N-PLY® Base Sheet  1 ply
TAMKO AWAPLAN 170 FR (Granule Surfaced)  1 ply
M³ 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 FR is required.

Deck: The deck should conform to TAMKO general requirements.

Adhesive: The adhesive must be TAM-PRO® M³ 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 FR: Starting at the low point of the roof, install 1 layer of TAMKO AWAPLAN 170 FR granule surfaced sheet, side lapped 4 in. and end lapped 6 in. The field of the AWAPLAN 170 FR membrane should be solidly adhered to the base sheet with an application of M³ 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 M³ Adhesive must be a minimum of 100°F at the spray tip. M³ Adhesive should not be heated above 180°F.

Caution should be used when exposing M³ 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 1 ply

TAMKO AWAPLAN PREMIUM FR (Granule Surfaced) 1 ply

M³ 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 PREMIUM FR is required.

Deck: The deck should conform to TAMKO general requirements.

Adhesive: The adhesive must be TAM-PRO® M³ Adhesive.

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 M³ 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. Sides 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 FR: Starting at the low point of the roof, install 1 layer of TAMKO AWAPLAN 170 FR granule surfaced sheet, side lapped 4 in. and end lapped 6 in. The field of the AWAPLAN 170 FR membrane should be solidly adhered to the base sheet with an application of M³ 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 M³ Adhesive must be a minimum of 100°F at the spray tip. M³ Adhesive should not be heated above 180°F.

Caution should be used when exposing M³ Adhesive to an open flame.

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 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 GLASS-BASE®, TAM-GLASS PREMIUM®, TAM-PLY IV®, or BASE-N-PLY®

Fiberglass Sheet  1 ply
TAMKO AWAPLAN 170 (Granule Surfaced)  1 ply
Asphalt (Per 100 sq. ft.) Approx. 46 lbs.

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.

Base Ply: Starting at the low point of the roof, install 1 layer of TAMKO GLASS-BASE, TAM-GLASS PREMIUM, TAM-PLY IV, or BASE-N-PLY beginning with a 1/2 in 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 (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.

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-
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 “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 “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. 69 lbs.

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. Polysisocyanurate 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.

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.

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 (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.

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 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 “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 “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 AWAPLAN VERSA-SMOOTH 1 ply
TAMKO AWAPLAN 170 (Granule Surfaced) 1 ply
Asphalt (Per 100 sq. ft.) Approx. 46 lbs.

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.

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 (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.

Alternately, the AWAPLAN VERSA-SMOOTH can be heat welded and should be solidly adhered to the insulation by sufficiently heating the back side with a torch at the juncture of the insulation and the AWAPLAN VERSA-SMOOTH roll to form a bead of melted asphalt as the AWAPLAN VERSA-SMOOTH is rolled out. Use care when applying heat as damage can occur to the product by overheating.

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 (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.

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. Crystalline silica has been classified as a “known” human carcinogen 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” 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

<table>
<thead>
<tr>
<th>Material</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>TAMKO AWAPLAN VERSAFLEX</td>
<td>1 ply</td>
</tr>
<tr>
<td>TAMKO AWAPLAN 170 (Granule Surfaced)</td>
<td>1 ply</td>
</tr>
<tr>
<td>Asphalt (Per 100 sq. ft.)</td>
<td>Approx. 46 lbs.</td>
</tr>
</tbody>
</table>

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. Polysioxyanurate 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.

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 (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 (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.

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. Crystalline silica has been classified as a “known” human carcinogen 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 “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 “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 VERSA-BASE®  Modified Asphalt Base Sheet  1 ply
TAMKO AWAPLAN 170  (Granule Surfaced)  1 ply
Asphalt (Per 100 sq. ft.)  Approx. 46 lbs.

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. Polysiocyanurate 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.

VERSA-BASE Sheet: 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. Solid mop to the insulation 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 (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.

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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Material Requirements

<table>
<thead>
<tr>
<th>Material</th>
<th>Requirement</th>
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<tbody>
<tr>
<td>TAMKO TAM-PLY IV®</td>
<td>Fiberglass Ply Sheet 3 plies</td>
</tr>
<tr>
<td>TAMKO AWAPLAN 170</td>
<td>(Granule Surfaced) 1 ply</td>
</tr>
<tr>
<td>Asphalt (Per 100 sq. ft.)</td>
<td>Approx. 92 lbs.</td>
</tr>
</tbody>
</table>

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. Polysisocyanurate 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.

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 base ply (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.

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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For complete information on TAMKO’s recommendations and requirements, consult TAMKO’s web site at www.tamko.com

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TAMKO® and Tam-Ply IV® are registered trademarks of TAMKO Building Products, Inc.
Application of product(s) in this specification using “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 “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®
Fiberglass Ply Sheet  1 ply
TAMKO VERSA-BASE®
Base Sheet  1 ply
TAMKO AWAPLAN 170
(Granule Surfaced)  1 ply
Asphalt (Per 100 sq. ft.)  Approx. 69 lbs.

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.

TAM-GLASS PREMIUM: Starting at the low point of the roof, install one 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 one 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. 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 (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.

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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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 “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 “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 VAPOR-CHAN®
Fiberglass Venting Asphalt Base Sheet 1 ply
TAMKO AWAPLAN 170 (Granule Surfaced) 1 ply
Asphalt (Per 100 sq. ft.) Approx. 23 lbs.
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.

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, 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. 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 AWAPLAN 170 should be solidly adhered to the base ply (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.

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 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 “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 “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

<table>
<thead>
<tr>
<th>Material</th>
<th>Requirement</th>
</tr>
</thead>
<tbody>
<tr>
<td>TAMKO TYPE 43</td>
<td>Coated Base Sheet, TAMKO GLASS-BASE®, or BASE-N-PLY® Base Sheet 1 ply</td>
</tr>
<tr>
<td>TAMKO AWAPLAN 170</td>
<td>(Granule Surfaced) 1 ply</td>
</tr>
<tr>
<td>Asphalt</td>
<td>Approx. 23 lbs.</td>
</tr>
<tr>
<td>Clinch-type nails</td>
<td>for base sheet (per 100 sq ft.) Approx. 100 nails</td>
</tr>
</tbody>
</table>

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.

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.

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. 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 AWAPLAN 170 should be solidly adhered to the base ply (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.

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 “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 "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

<table>
<thead>
<tr>
<th>Material Description</th>
<th>Quantity</th>
</tr>
</thead>
<tbody>
<tr>
<td>TAMKO VAPOR-CHAN® Fiberglass Venting Asphalt Base Sheet</td>
<td>1 ply</td>
</tr>
<tr>
<td>TAMKO TAM-GLASS PREMIUM® or TAM-PLY IV® Fiberglass Ply Sheet</td>
<td>1 ply</td>
</tr>
<tr>
<td>TAMKO AWAPLAN 170 (Granule Surfac ed)</td>
<td>1 ply</td>
</tr>
<tr>
<td>Asphalt (Per 100 sq. ft.)</td>
<td>Approx. 46 lbs.</td>
</tr>
<tr>
<td>Clinch-type nails for base sheet (per 100 sq ft.)</td>
<td>Approx. 100 nails</td>
</tr>
</tbody>
</table>

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.

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.

Fiberglass Ply Sheet: Starting at the low point of the roof, install a 1/2 m width, then a full 1 m width of TAM-GLASS PREMIUM or TAM-PLY IV, 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.

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 (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.

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 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 “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 “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.

*Precast Concrete Decks: This specification may be utilized over a precast concrete deck when joints are taped and the VAPOR-CHAN is installed in spot moppings of specification asphalt spaced on (not to exceed) 24 in. centers.
Material Requirements

<table>
<thead>
<tr>
<th>Material</th>
<th>Specification</th>
</tr>
</thead>
<tbody>
<tr>
<td>TAMKO TYPE 43 Coated Base Sheet, TAMKO GLASS-BASE®, or BASE-N-PLY® Base Sheet</td>
<td>1 ply</td>
</tr>
<tr>
<td>TAMKO TAM-GLASS PREMIUM® or TAM-PLY IV® Fiberglass Ply Sheet</td>
<td>1 ply</td>
</tr>
<tr>
<td>TAMKO AWAPLAN 170 (Granule Surfaced)</td>
<td>1 ply</td>
</tr>
<tr>
<td>Asphalt (Per 100 sq. ft.)</td>
<td>Approx. 46 lbs.</td>
</tr>
<tr>
<td>Clinch-type nails for base sheet (per 100 sq. ft.)</td>
<td>Approx. 100 nails</td>
</tr>
</tbody>
</table>

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.

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.

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, 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.

Fiberglass Ply Sheet: Starting at the low point of the roof, install a 1/2 m width, then a full 1 m width of TAM-GGLASS PREMIUM or TAM-PLY IV, 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.

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 (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.

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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For complete information on TAMKO’s recommendations and requirements, consult TAMKO’s web site at www.tamko.com

TAMKO®, TAMKO Glass-Base®, Tam-Glass Premium®, Tam-Ply IV®, and Base-N-Ply® are registered trademarks of TAMKO Building Products, Inc.
Application of product(s) in this specification using “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 “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

<table>
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<tr>
<th>Product</th>
<th>Requirement</th>
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<tbody>
<tr>
<td>TAMKO VAPOR-CHAN®</td>
<td>Fiberglass Base Sheet 1 ply</td>
</tr>
<tr>
<td>TAMKO AWAPLAN VERSA-SMOOTH</td>
<td>Modified Base Sheet 1 ply</td>
</tr>
<tr>
<td>TAMKO AWAPLAN 170 (Granule Surfaced)</td>
<td>1 ply</td>
</tr>
<tr>
<td>Asphalt (Per 100 sq. ft.)</td>
<td>Approx. 46 lbs.</td>
</tr>
</tbody>
</table>

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.

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.

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 (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. Alternately, the AWAPLAN VERSA-SMOOTH can be heat welded and should be solidly adhered to the base sheet by sufficiently heating the back side with a torch at the juncture of the base sheet and the AWAPLAN VERSA-SMOOTH roll to form a bead of melted asphalt as the AWAPLAN VERSA-SMOOTH is rolled out. Use care when applying heat as damage can occur to the product by overheating.

AWAPLAN 170: Starting at the low point of the roof, install 1 ply 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 (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.

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 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.

*Precast Concrete Decks: This specification may be utilized over a precast concrete deck when joints are taped and the VAPOR-CHAN is installed in spot moppings of specification asphalt spaced on (not to exceed) 24 in. centers.
Material Requirements

TAMKO VAPOR-CHAN®
Fiberglass Venting Asphalt Base Sheet 1 ply
TAMKO TAM-PLY IV®
Fiberglass Ply Sheet 1 ply
TAMKO AWAPLAN 170 1 ply
Interply Asphalt (Per 100 sq. ft.) Approx. 46 lbs.
Concrete Primer (Per 100 sq. ft.) Approx. 3/4 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.

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.

Preparation: Spud the membrane surface and remove all loose roofing gravel and debris. Make random cuts or breaks in the old membrane 4 ft. o.c. to allow vapor pressure to vent. All wet or deteriorated insulation or membrane must be removed and replaced prior to the application of new roofing materials. The surface should be primed with concrete primer at a rate of approximately 3/4 gal. per 100 sq. ft. prior to the application of new roofing materials.

VAPOR-CHAN: Over the old membrane and starting at the low point of the roof, install 1 ply of TAMKO VAPOR-CHAN Base Sheet. The VAPOR-CHAN should be side lapped 2 in. and end lapped 4 in. The base ply should be secured to the old membrane with spots of Type III, Steep Asphalt spaced on (not to exceed) 24 in. centers.

TAM-PLY IV: Starting at the low point of the roof, install 1 ply of TAM-PLY IV, 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 base ply with approximately 23 lbs. (±15%) of specification asphalt per 100 sq. ft.

AWAPLAN 170: Starting at the low point of the roof, install 1 ply 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 (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.

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

Venting: One-way roof vents may be placed at a minimum of 1 vent for each 10 squares of roof area.

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 IARC as known or probable human carcinogens. The physical nature of the product(s) in this
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Application of product(s) in this specification using “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 “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 VAPOR-CHAN®**  
Fiberglass Venting Asphalt Base Sheet  1 ply

**TAMKO TAM-PLY IV®**  
Fiberglass Ply Sheet  1 ply

**TAMKO AWAPLAN 170**  
1 ply

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

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

**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.

**Preparation:** Broom the membrane surface and remove all loose roofing gravel and debris. Make random cuts or breaks in the old membrane 4 ft. o.c. to allow vapor pressure to vent from the old system and any existing insulation materials. All wet or deteriorated insulation or membrane must be removed and replaced prior to the application of new roofing materials. DO NOT USE ANY PRIMERS.

**VAPOR-CHAN:** Over the old membrane and starting at the low point of the roof, install 1 ply of TAMKO VAPOR-CHAN Base Sheet. The VAPOR-CHAN should be side lapped 2 in. and end lapped 4 in. The base ply should be secured to the old membrane with spots of Type III, Steep Asphalt spaced on (not to exceed) 24 in. centers.

**TAM-PLY IV:** Starting at the low point of the roof, install 1 ply of TAM-PLY IV, 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 base ply with approximately 23 lbs. (±15%) of specification asphalt per 100 sq. ft.

**AWAPLAN 170:** Starting at the low point of the roof, install 1 ply 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 (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.

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

**Venting:** One-way roof vents may be placed at a minimum of 1 vent for each 10 squares of roof area.

**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 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 “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 “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

<table>
<thead>
<tr>
<th>Material</th>
<th>Description</th>
</tr>
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<tbody>
<tr>
<td>TAMKO AWAPLAN VERSA-SMOOTH</td>
<td>1 ply</td>
</tr>
<tr>
<td>TAMKO TAM-PLY IV® OR TAM-GLASS PREMIUM Fiberglass Ply Sheet</td>
<td>2 plies</td>
</tr>
<tr>
<td>TAMKO AWAPLAN 170 (Granule Surfaced)</td>
<td>1 ply</td>
</tr>
<tr>
<td>Interply Asphalt (Per 100 sq. ft.)</td>
<td>Approx. 92 lbs.</td>
</tr>
</tbody>
</table>

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.

AWAPLAN VERSA-SMooth: Starting at the low point of the roof, install 1 ply of TAMKO AWAPLAN VERSA-SMooth, 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 (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.

*Except in FL, TX, NM, AZ, CA

Alternately, the AWAPLAN VERSA-SMooth may be installed by sufficiently heating the back side with a torch at the juncture of the insulation and the AWAPLAN VERSA-SMooth roll to form a bead of melted asphalt as the AWAPLAN VERSA-SMooth is rolled out. Use care when applying heat as damage can occur to the product by overheating.

Fiberglass Ply Sheet 2 Ply Installation: Over the base ply, 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 base ply 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 ply 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 (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.

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-
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.

*Except in FL, TX, NM, AZ, CA

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Material Requirements

**TAMKO GLASS-BASE®, TAM-GLASS PREMIUM®, TAM-PLY IV®, or BASE-N-PLY®**
Fiberglass Sheet  1 ply

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

**TAM-PRO® 856**
Premium SBS Adhesive (Per 100 sq. ft.)  1-1/2 gal

Fasteners as required for Base Sheet and Insulation

**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 must conform to TAMKO general requirements and Metal Deck 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 or expanded polystyrene insulation must have an overlay of a minimum 1/2 in. fiberboard, perlite, or fiberglass roof insulation.

**Adhesive:** The cold process adhesive must be TAM-PRO 856 Premium SBS Adhesive.

**Base Ply:** Starting at the low point of the roof, install 1 ply of TAMKO GLASS-BASE, TAM-GLASS PREMIUM, TAM-PLY IV or 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. Mechanically fasten through the base ply and insulation, penetrating through the deck with appropriate fasteners as recommended by the insulation manufacturer. For specific fastening patterns for wind uplift listings, contact the Technical Services Department.

Alternately, the TAMKO GLASS-BASE, TAM-GLASS PREMIUM, or TAM-PLY IV may be solidly mopped 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 ply 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 TAM-PRO 856 Premium SBS Adhesive at a rate not to exceed 1-1/2 gallons per square, and the side laps and the end laps set in adhesive or heat welded together. Use care when applying heat as damage can occur to the product by overheating.

Caution should be used when exposing cold 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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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

<table>
<thead>
<tr>
<th>Material</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>TAMKO VERSA-BASE®</td>
<td>Modified Asphalt Base Sheet 1 ply</td>
</tr>
<tr>
<td>TAMKO AWAPLAN 170 (Granule Surfaced)</td>
<td>1 ply</td>
</tr>
<tr>
<td>TAM-PRO® 856 Premium SBS Adhesive</td>
<td>(Per 100 sq. ft.) 1-1/2 gal</td>
</tr>
<tr>
<td>Fasteners as required for Base Sheet</td>
<td>and Insulation</td>
</tr>
</tbody>
</table>

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 must conform to TAMKO general requirements and Metal Deck 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 expanded polystyrene insulation must have an overlay of a minimum 1/2 in. fiberboard, perlite, or fiberglass roof insulation.

Adhesive: The cold process adhesive must be TAM-PRO 856 Premium SBS Adhesive.

VERSA-BASE Sheet: 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. Mechanically fasten through the base ply and insulation, penetrating through the deck with appropriate fasteners as recommended by the insulation manufacturer. For specific fastening patterns for wind uplift listings, contact the Technical Services Department.

Alternately, the VERSA-BASE may be solidly mopped 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 ply 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 TAM-PRO 856 Premium SBS Adhesive at a rate not to exceed 1-1/2 gallons per square, and the side laps and the end laps set in adhesive or heat welded together. Use care when applying heat as damage can occur to the product by overheating.

Caution should be used when exposing cold 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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and contact with skin.

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Material Requirements
TAMKO VAPOR-CHAN®
Fiberglass Venting Asphalt Base Sheet  1 ply
TAMKO AWAPLAN 170
(Granule Surfaced)  1 ply
TAM-PRO® 856
Premium SBS Adhesive (Per 100 sq. ft.)  1-1/2 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 cold process adhesive must be TAM-PRO 856 Premium SBS 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 4 in. and end lapped 6 in. The field of the VAPOR-CHAN should be solidly ad-hered to the base sheet with an application of TAM-PRO 856 Premium SBS Adhesive at a rate not to exceed 1-1/2 gallons per square, and the side laps and the end laps set in adhesive or heat welded together. Use care when applying heat as damage can occur to the product by overheating.

Caution should be used when exposing cold adhesive to an open flame.

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 ad-hered to the base sheet with an application of TAM-PRO 856 Premium SBS Adhesive at a rate not to exceed 1-1/2 gallons per square, and the side laps and the end laps set in adhesive or heat welded together. Use care when applying heat as damage can occur to the product by overheating.

Caution should be used when exposing cold adhesive to an open flame.

Flash:  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-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.

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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 TYPE 43 Coated Base Sheet, or BASE-N-PLY® Base Sheet 1 ply

TAMKO AWAPLAN 170 (Granule Surfaced) 1 ply

TAM-PRO® 856 Premium SBS Adhesive (Per 100 sq. ft.) 1-1/2 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 cold process adhesive must be TAM-PRO 856 Premium SBS 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 TAM-PRO 856 Premium SBS Adhesive at a rate not to exceed 1-1/2 gallons per square, and the side laps and the end laps set in adhesive or heat welded together. Use care when applying heat as damage can occur to the product by overheating.

Caution should be used when exposing cold 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.
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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

M³ 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. Polysiocyanurate 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® M³ 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 M³ 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 M³ Adhesive must be a minimum of 100°F at the spray tip. M³ Adhesive should not be heated above 180°F.

**Caution should be used when exposing M³ 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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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.
M³ 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. Polysiocyanurate 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. per linear ft., and Type IV for slopes up to 3 in.

Adhesive: The adhesive must be TAM-PRO® M³ 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.

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 M³ 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 M³ Adhesive must be a minimum of 100°F at the spray tip. M³ Adhesive should not be heated above 180°F.

Caution should be used when exposing M³ Adhesive to an open flame.

Flash: 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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Material Requirements

**TAMKO AWAPLAN VERSA-SMOOTH** 1 ply  
**TAMKO AWAPLAN 170** (Granule Surfaced) 1 ply  
**M³ 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® M³ 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 M³ 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 M³ 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 M³ Adhesive must be a minimum of 100°F at the spray tip. M³ Adhesive should not be heated above 180°F.

**Caution should be used when exposing M³ 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. Crystalline silica has been classified as a “known” human carcinogen 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” 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 AWAPLAN VERSAFLEX 1 ply
TAMKO AWAPLAN 170 (Granule Surfaced) 1 ply
M³ 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® M³ 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 M³ 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 M³ Adhesive must be a minimum of 100°F at the spray tip. M³ Adhesive should not be heated above 180°F.

Caution should be used when exposing M³ Adhesive to an open flame.

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 M³ 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.

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.

For complete information on TAMKO’s recommendations and requirements, consult TAMKO’s web site at www.tamko.com

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TAMKO® is a registered trademark of TAMKO Building Products, Inc.
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 VERSA-BASE**® 1 ply

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

M³ 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. Polysocyanurate 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® M³ 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 M³ 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 M³ 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 M³ 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 M³ Adhesive must be a minimum of 100°F at the spray tip. M³ Adhesive should not be heated above 180°F.

Caution should be used when exposing M³ 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 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” 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

<table>
<thead>
<tr>
<th>TAMKO TAM-PLY IV®</th>
<th>Fiberglass Ply Sheet</th>
<th>3 plies</th>
</tr>
</thead>
<tbody>
<tr>
<td>TAMKO AWAPLAN 170 (Granule Surfaced)</td>
<td>1 ply</td>
<td></td>
</tr>
<tr>
<td>Asphalt (Per 100 sq. ft.)</td>
<td>Approx. 69 lbs.</td>
<td></td>
</tr>
<tr>
<td>M³ Adhesive (Per 100 sq. ft.)</td>
<td>Approx. 1-1/2 to 2-1/2 gal.</td>
<td></td>
</tr>
</tbody>
</table>

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. Polysiocyanurate 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® M³ 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 M³ 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 M³ Adhesive must be a minimum of 100°F at the spray tip. M³ Adhesive should not be heated above 180°F.

Caution should be used when exposing M³ 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 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

<table>
<thead>
<tr>
<th>Material</th>
<th>Specification</th>
</tr>
</thead>
<tbody>
<tr>
<td>TAMKO TAM-GLASS PREMIUM®</td>
<td>1 ply</td>
</tr>
<tr>
<td>TAMKO VERSA-BASE®</td>
<td>1 ply</td>
</tr>
<tr>
<td>TAMKO AWAPLAN 170 (Granule Surfaced)</td>
<td>1 ply</td>
</tr>
<tr>
<td>Asphalt (Per 100 sq. ft.)</td>
<td>Approx. 46 lbs.</td>
</tr>
<tr>
<td>M³ Adhesive (Per 100 sq. ft.)</td>
<td>Approx. 1-1/2 to 2-1/2 gal.</td>
</tr>
</tbody>
</table>

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® M³ Adhesive.

VERSAS-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 M³ Adhesive at a rate not to exceed 1-1/2 to 2 gal. per sq. ft. for squeegee application and 1-1/2 to 2-1/2 gal. per sq. ft. 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. ft. For spray application, the M³ Adhesive must be a minimum of 100°F at the spray tip. M³ Adhesive should not be heated above 180°F.

Caution should be used when exposing M³ 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

TAMKO VAPOR-CHAN®
Fiberglass Venting Asphalt Base Sheet  1 ply

TAMKO AWAPLAN 170
(Granule Surfaced)  1 ply

M³ 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® M³ 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 M³ 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 M³ Adhesive must be a minimum of 100°F at the spray tip. M³ Adhesive should not be heated above 180°F.

Caution should be used when exposing M³ 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-
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.
**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

M³ 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® M³ 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 M³ Adhesive at a rate not to exceed 1-1/2 to 2 gal. per sq. ft. for squeegee application and 1-1/2 to 2-1/2 gal. per sq. ft. for spray application. Side laps and end laps shall be heat welded together. Use care when applying heat as damage may 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. ft. For spray application, the M³ Adhesive must be a minimum of 100°F at the spray tip. M³ Adhesive should not be heated above 180°F.

**Caution:** Care should be used when exposing M³ 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

M³ 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 M³ 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 M³ 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 M³ Adhesive must be a minimum of 100°F at the spray tip. M³ Adhesive should not be heated above 180°F.

Caution should be used when exposing M³ 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-
Specifications 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.

For complete information on TAMKO’s recommendations and requirements, consult TAMKO’s web site at www.tamko.com

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Material Requirements

TAMKO AWAPLAN VERSA-SMOOTH 1 ply
TAMKO TAM-GLASS PREMIUM® or TAM-PLY IV®
Fiberglass Ply Sheet 2 plies
Interply Asphalt (Per 100 sq. ft.) Approx. 69 lbs.
Flood Coat Asphalt (Per 100 sq. ft.) Approx. 60 lbs.
Gravel (Per 100 sq. ft.) Approx. 400 lbs.

Slope: Positive drainage up to 3 in. per linear ft. For slopes above 3/4 in. per linear ft., fastening of the AWAPLAN VERSA-SMOOTH and the roofing felts 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.

AWAPLAN VERSA-SMOOTH: Starting at the low point of the roof, install 1 ply of TAMKO AWAPLAN VERSA-SMOOTH, 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 (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.

Alternately, the AWAPLAN VERSA-SMOOTH may be installed by sufficiently heating the back side with a torch at the juncture of the insulation and the AWAPLAN VERSA-SMOOTH roll to form a bead of melted asphalt as the AWAPLAN VERSA-SMOOTH is rolled out. Use care when applying heat as damage can occur to the product by overheating.

Fiberglass Ply Sheet 2 Ply Installation: Over the base ply, 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 base ply at any one point. Approximately 23 lbs. (+15%) of specification asphalt per 100 sq. ft. should be used to embed each ply.

Surfacing: Apply a flood coat of 60 lbs. (+15%) of specification asphalt per 100 sq. ft. over the entire surface. While hot, embed approximately 400 lbs. of clean roofing gravel or 300 lbs. of slag per 100 sq. ft. of completed roof area.

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 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.

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TAMKO®, Tam-Glass Premium® and Tam-Ply IV® are registered trademarks of TAMKO Building Products, Inc.
Material Requirements

**Tamko Awaplan Versa-Smooth** 1 ply

**Tamko Tam-Cap** Fiberglass Mineral Surfaced Cap Sheet 1 ply

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

**Slope:** Positive drainage up to 3 in. per linear ft. For slopes above 3/4 in. per linear ft., fastening of the AWAPLAN VERSA-SMOOTH 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.

**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 (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.

Alternately, the AWAPLAN VERSA-SMooth may be installed by sufficiently heating the back side with a torch at the juncture of the insulation and the AWAPLAN VERSA-SMooth roll to form a bead of melted asphalt as the AWAPLAN VERSA-SMooth is rolled out. Use care when applying heat as damage can occur to the product by overheating.

**Tam-cap Mineral Surfaced Cap Sheet:** Starting at the low point of the roof, apply 1 ply of TAMKO TAM-CAP side lapping each sheet 2 in. and end lapping 6 in. over the preceding sheets. Fully mop each sheet with specification asphalt at the rate of 23 lbs. (+15%) of specification asphalt per 100 sq. ft. On slopes of 1 in. per foot or greater, nail adjacent to top edge on 12 in. centers.

**NOTE:** Before application of TAM-CAP, cut into 12 ft. to 18 ft. lengths, allow to flatten and relax. Stagger the end laps.

**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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TAMKO BUILDING PRODUCTS

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Material Requirements

**TAMKO AWAPLAN VERSA-SMOOTH** 2 plies

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

**Surfacing (Options Below)**

<table>
<thead>
<tr>
<th>Option</th>
<th>Description</th>
<th>Approx. lbs/ft²</th>
</tr>
</thead>
<tbody>
<tr>
<td>(1) Flood Coat Asphalt (Per 100 sq. ft.)</td>
<td>Approx. 60 lbs.</td>
<td></td>
</tr>
<tr>
<td>Gravel (Per 100 sq. ft.)</td>
<td>Approx. 400 lbs.</td>
<td></td>
</tr>
<tr>
<td>(2) Surface Coat:</td>
<td>Approx. 60 lbs.</td>
<td></td>
</tr>
<tr>
<td>(a) Fibered Aluminum Coating</td>
<td>1-1/2 to 2 gals.</td>
<td></td>
</tr>
<tr>
<td>(b) Emulsion Coating</td>
<td>3 gals.</td>
<td></td>
</tr>
<tr>
<td>(c) Asphalt Glaze Coating</td>
<td>20 to 25 lbs.</td>
<td></td>
</tr>
<tr>
<td>(d) TAM-GUARD or White Elastomeric Coating</td>
<td>2 gals.</td>
<td></td>
</tr>
</tbody>
</table>

**Slope:** Positive drainage up to 3 in. per linear ft. For slopes above 3/4 in. per linear ft., fastening of the AWAPLAN VERSA-SMOOTH membrane 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.

**AWAPLAN VERSA-SMOOTH 2-Ply Installation:** Over the insulation, install 2 plies of AWAPLAN VERSA-SMOOTH in specification asphalt. Starting at the low point of the roof, apply the first ply of 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. Start the second ply of AWAPLAN VERSA-SMOOTH beginning with 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 or previous ply (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.

**Surfacing:** Select one of the following surfacings:

1. **Flood Coat and Gravel:** Apply a flood coat of 60 lb. of specification asphalt per 100 sq. ft. over the entire surface. While hot, embed approximately 400 lb. of clean roofing gravel or 300 lb. of slag per 100 sq. ft. of completed roof area, or
2. **Surface Coat:** Apply the entire roof surface with (a) Fibered Aluminum Roof Coating at a rate of 1-1/2 to 2 gal. per 100 sq. ft. or (b) Emulsion Roof Coating at a rate of not less than 3 gals. per 100 sq. ft., or (c) a surface grade hot asphalt using a min. of 20 lbs. and a max. of 25 lbs. per 100 sq. ft., or (d) TAM-STAR or TAM-GUARD White Elastomeric Coating at a rate of 2 gals. per 100 sq. ft.

**Maintenance of the surface coating is required.**

**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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Material Requirements

TAMKO BASE-N-PLY®
Fiberglass Sheet  1 ply
TAMKO AWAFLEX®  1 ply
Asphalt (Per 100 sq. ft.)  Approx. 46 lbs.

Slope: Positive drainage up to 3 in. per linear ft. For slopes above 3/4 in. per linear ft., fastening of the AWAFLEX membrane 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.

Base Ply: Starting at the low point of the roof, install 1 layer of 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.

AWAFLEX: Starting at the low point of the roof, install 1 layer of TAMKO AWAFLEX® granule surfaced sheet, side lapped 3 in. and end lapped 6 in. The AWAFLEX should be solidly adhered to the base ply (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.

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

U.L. Requirements:
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**Material Requirements**

- **TAMKO TAM-GLASS PREMIUM® or TAM-PLY IV® Fiberglass Ply Sheet**: 2 plies
- **TAMKO AWAFLEX® (Granule Surfaced)**: 1 ply
- **Asphalt (Per 100 sq. ft.)**: Approx. 69 lbs.

**Slope:**
Positive drainage up to 3 in. per linear ft. For slopes above 3/4 in. per linear ft., fastening of the AWAFLEX membrane 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.

**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 10-11/16 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.

**AWAFLEX:**
Starting at the low point of the roof, install 1 layer of TAMKO AWAFLEX granule surfaced sheet, side lapped 3 in. and end lapped 6 in. The AWAFLEX should be solidly adhered to the ply 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.

**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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Material Requirements

TAMKO AWAPLAN VERSAFLEX  1 ply
TAMKO AWAFLEX®  1 ply
Asphalt (Per 100 sq. ft.)  Approx. 46 lbs.

Slope: Positive drainage up to 3 in. per linear ft. For slopes above 3/4 in. per linear ft., fastening of the AWAFLEX membrane 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.

AWAPLEX: Starting at the low point of the roof, install 1 layer of TAMKO AWAPLEX granule surfaced sheet, side lapped 3 in. and end lapped 6 in. The AWAFLEX should be solidly adhered to the base ply (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.

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

U.L. Requirements:
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**Material Requirements**

- **TAMKO VERSABASE®**
  - Modified Asphalt Base Sheet  1 ply
- **TAMKO AWAFLEX® FR**  1 ply
- **Asphalt (Per 100 sq. ft.)**  Approx. 46 lbs.

**Slope:** Positive drainage up to 3 in. per linear ft.  For slopes above 3/4 in. per linear ft., fastening of the AWAFLEX membrane 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.

**VERSA-BASE Sheet:** Starting at the low point of the roof, install 1 layer 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.  Solid mop to the insulation with approximately 23 lbs. (±15%) of specification asphalt per 100 sq. ft.

**AWAFLEX:** Starting at the low point of the roof, install 1 layer of TAMKO AWAFLEX granule surfaced sheet, side lapped 3 in. and end lapped 6 in.  The AWAFLEX should be solidly adhered to the ply 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.

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

**U.L. Requirements:**
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Material Requirements

TAMKO VAPOR-CHAN®
Fiberglass Venting Asphalt Base Sheet 1 ply
TAMKO TAM-PLY IV®
Fiberglass Ply Sheet 1 ply
TAMKO AWAFLEX®
(Granule Surfaced) 1 ply
Asphalt (Per 100 sq. ft.) Approx. 46 lbs.
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 AWAFLEX membrane 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 12 in. from each edge of the base sheet. For specific fastening patterns for wind uplift listings, contact the Technical Services Department.

Fiberglass Ply Sheet: Starting at the low point of the roof, install a 1/2 m width, then a full 1 m width of TAM-PLY IV, 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.

AWAFLEX: Starting at the low point of the roof, install 1 layer of TAMKO AWAFLEX granule surfaced sheet, side lapped 3 in. and end lapped 6 in. The AWAFLEX should be solidly adhered to the ply 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.

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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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 “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 “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.

*Precast Concrete Decks: This specification may be utilized over a precast concrete deck when joints are taped and the VAPOR-CHAN is installed in spot moppings of specification asphalt on (not to exceed) 24 in. centers.
Material Requirements

<table>
<thead>
<tr>
<th>Material</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>TAMKO BASE-N-PLY®</td>
<td>1 ply</td>
</tr>
<tr>
<td>TAMKO TAM-PLY IV®</td>
<td>1 ply</td>
</tr>
<tr>
<td>TAMKO AWAFLEX® (Granule Surfaced)</td>
<td>1 ply</td>
</tr>
<tr>
<td>Asphalt (Per 100 sq. ft.)</td>
<td>Approx. 46 lbs.</td>
</tr>
<tr>
<td>Clinch-type nails for base sheet (per 100 sq ft.)</td>
<td>Approx. 100 nails</td>
</tr>
</tbody>
</table>

**Slope:** Positive drainage up to 3 in. per linear ft. For slopes above 3/4 in. per linear ft., fastening of the AWAFLEX membrane 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.

**Base Sheet:** Starting at the low point of the roof, install 1 ply of TAMKO BASE-N-PLY, 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 on 16 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.

**Fiberglass Ply Sheet:** Starting at the low point of the roof, install a 1/2 m width, then a full 1 m width of TAM-PLY IV, 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.

**AWAFLEX:** Starting at the low point of the roof, install 1 layer of TAMKO AWAFLEX granule surfaced sheet, side lapped 3 in. and end lapped 6 in. The AWAFLEX should be solidly adhered to the ply 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.

**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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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.

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*Precast Concrete Decks: This specification may be utilized over a precast concrete deck when joints are taped and the VAPOR-CHAN is installed in spot moppings of specification asphalt on (not to exceed) 24 in. centers.
Material Requirements

TAMKO VAPOR-CHAN®
Fiberglass Base Sheet 1 ply
TAMKO AWAPLAN VERSA-SMOOTH®
Modified Base Sheet 1 ply
TAMKO AWAFLEX (Granule Surfaced) 1 ply
Asphalt (Per 100 sq. ft.) Approx. 46 lbs.

Slope:
Positive drainage up to 3 in. per linear ft. For slopes above 3/4 in. per linear ft., fastening of the AWAFLEX 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. 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. 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 (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. Alternately, the AWAPLAN VERSA-SMOOTH can be heat welded and should be solidly adhered to the base sheet by sufficiently heating the back side with a torch at the juncture of the base sheet and the AWAPLAN VERSA-SMOOTH roll to form a bead of melted asphalt as the AWAPLAN VERSA-SMOOTH is rolled out.

AWAFLEX: Starting at the low point of the roof, install 1 layer of TAMKO AWAFLEX granule surfaced sheet, side lapped 3 in. and end lapped 6 in. The AWAFLEX should be solidly adhered to the ply 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.

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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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.

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Material Requirements

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

**TAMKO AWAFLEX (Granule Surfaced)**  
1 ply

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

**M³ 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 AWAFLEX® 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. Polysisocyanurate and expanded polystyrene must have an overlay of a minimum 1/2 in. fibereboard, 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® M³ Adhesive.

**Fiberglass Ply Sheet 2 Ply Installation:** Over the insulation, install 2 plies of TAM-GLASS PREMIUM® or TAM-PLY IV® inspsification 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.

**AWAFLEX:** Starting at the low point of the roof, install 1 layer of TAMKO AWAFLEX granule surfaced sheet, side lapped 3 in. and end lapped 6 in. The AWAFLEX should be solidly adhered to the ply sheet with an application of M³ 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 M³ Adhesive. Care should be taken to prevent damage to the system from water or wind prior to the cured adhesive sealing the laps.

Using a 3/16” serrated edge squeegee will achieve an application rate of 1-1/2 gal. per sq. For spray application, the M³ Adhesive must be a minimum of 100°F at the spray tip. M³ Adhesive should not be heated above 180°F.

**Caution should be used when exposing M³ 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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Material Requirements

**TAMKO AWAPLAN VERSA-SMOOTH**  1 ply
**TAMKO AWAFLEX** (Granule Surfaced)  1 ply
**M³ 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 AWAFLEX 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. Polysisocyanurate 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® M³ 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 M³ 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.

**AWAFLEX**: Starting at the low point of the roof, install 1 layer of TAMKO AWAFLEX granule surfaced sheet, side lapped 3 in. and end lapped 6 in. The AWAFLEX should be solidly adhered to the base ply with an application of M³ 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 M³ Adhesive. Care should be taken to prevent damage to the system from water or wind prior to the cured adhesive sealing the laps.

Using a 3/16” serrated edge squeegee will achieve an application rate of 1-1/2 gal. per sq. For spray application, the M³ Adhesive must be a minimum of 100°F at the spray tip. M³ Adhesive should not be heated above 180°F.

Caution should be used when exposing M³ 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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For complete information on TAMKO’s recommendations and requirements, consult TAMKO’s web site at www.tamko.com
TAMKO Building Products, Inc., P. O. Box 1404, Joplin, MO 64802 • 1-800-641-4691 • www.tamko.com

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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.

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Material Requirements

TAMKO AWAPLAN VERSAFLEX 1 ply
TAMKO AWAFLEX (Granule Surfaced) 1 ply
M³ 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 AWAFLEX 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. Polysisocyanurate 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-PRO³ M³ 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 M³ 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 M³ 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.

AWAFLEX: Starting at the low point of the roof, install 1 layer of TAMKO AWAFLEX granule surfaced sheet, side lapped 3 in. and end lapped 6 in. The AWAFLEX should be solidly adhered to the base ply with an application of M³ 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 M³ Adhesive. Care should be taken to prevent damage to the system from water or wind prior to the cured adhesive sealing the laps.

Using a 3/16” serrated edge squeegee will achieve an application rate of 1-1/2 gal per sq. For spray application, the M³ Adhesive must be a minimum of 100°F at the spray tip. M³ Adhesive should not be heated above 180°F.

Caution should be used when exposing M³ 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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Material Requirements

**TAMKO VERSA-BASE®** 1 ply

**TAMKO AWAFLEX FR** (Granule Surfaced) 1 ply

M³ 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 AWAFLEX 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. Polysiocyanurate 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® M³ 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 M³ 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 M³ 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.

**AWAFLEX:** Starting at the low point of the roof, install 1 layer of TAMKO AWAFLEX granule surfaced sheet, side lapped 3 in. and end lapped 6 in. The AWAFLEX should be solidly adhered to the base ply with an application of M³ 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 M³ Adhesive. Care should be taken to prevent damage to the system from water or wind prior to the cured adhesive sealing the laps.

Using a 3/16” serrated edge squeegee will achieve an application rate of 1-1/2 gal. per sq. For spray application, the M³ Adhesive must be a minimum of 100°F at the spray tip. M³ Adhesive should not be heated above 180°F.

**Caution should be used when exposing M³ Adhesive to an open flame.**

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

**U.L. Requirements:**
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Material Requirements

TAMKO VAPOR-CHAN®
Fiberglass Venting Asphalt Base Sheet 1 ply

TAMKO AWAPLAN VERSA-SMOOTH
Modified Base Sheet 1 ply

TAMKO AWAFLEX (Granule Surfaced) 1 ply

M3 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 AWAPFLEX 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 insulation with an application of M3 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 M3 Adhesive. Care should be taken to prevent damage to the system from water or wind prior to the cured adhesive sealing the laps.

Using a 3/16” serrated edge squeegee will achieve an application rate of 1-1/2 gal per sq. For spray application, the M3 Adhesive must be a minimum of 100°F at the spray tip. M3 Adhesive should not be heated above 180°F.

Caution should be used when exposing M3 Adhesive to an open flame.

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

U.L. Requirements:
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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 AWAPLAN VERSAFLEX**

2 plies

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

Surfacing (Options Below)

1. **Flood Coat Asphalt**
   - (Per 100 sq. ft.) Approx. 60 lbs.
   - Gravel (Per 100 sq. ft.) Approx. 400 lbs.

2. **Surface Coat: Fibered Aluminum**
   - Coating (Per 100 sq. ft.) Approx. 1-1/2-2 gals.

3. **Surface Coat: TAM-STAR or TAM-GUARD White, Elastomeric Roof Coating**
   - (Per 100 sq. ft.) Approx. 2 gals.

Slope: Positive drainage up to 3 in. per linear ft. For slopes above 3/4 in. per linear ft., fastening of the AWAPLAN VERSAFLEX membrane 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. Polysisocyanate 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.

**AWAPLAN VERSAFLEX 2-Ply Installation:** Over the insulation, install 2 plies of AWAPLAN VERSAFLEX in specification asphalt. Starting at the low point of the roof, apply the first ply of AWAPLAN VERSAFLEX beginning with a 1/2 m. width, then a full 1 m. width, side lapped 4 in. and end lapped 6 in. Start the second ply of AWAPLAN VERSAFLEX beginning with 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 or previous ply (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.

Surfacing: Select one of the following surfacings:

1. **Flood Coat and Gravel:** Apply a flood coat of 60 lb. (±15%) of specification asphalt per 100 sq. ft. over the entire surface. While hot, embed approximately 400 lb. of clean roofing gravel or 300 lb. of slag per 100 sq. ft. of completed roof area, or

2. **Surface Coat: Aluminum Roof Coating:** Coat the entire roof surface with Fibered Aluminum Roof Coating at a rate of 1-1/2 to 2 gal. per 100 sq. ft.

3. **Surface Coat: White Elastomeric Roof Coating:** Coat the entire roof surface with TAM-STAR or TAM-GUARD White Elastomeric Roof Coating at a rate of 2 gals. per 100 sq. ft.

Maintenance of the surface coating is required.

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

**NOTE:** AWAPLAN VERSAFLEX IS NOT AN ACCEPTABLE FLASHING MATERIAL.

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

Caution: A product(s) in this specification contains crystalline silica. Crystalline silica has been classified as a “known” human carcinogen 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 “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 “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 BASE-N-PLY®** 1 ply
**TAMKO AWAPLAN VERSAFLEX** 1 ply

**Asphalt (Per 100 sq. ft.)** Approx. 23 lbs.

**Surface Coat: (Per 100 sq. ft.)**
1. Fibered Aluminum Coating  Approx. 1-1/2 - 2 gals.
2. Surface Coat: TAM-STAR or TAM-GUARD White Elastomeric Roof Coating  Approx. 2 gals.

**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 VERSAFLEX membrane 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.

**Base Sheet:** Starting at the low point of the roof, install 1 ply 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. Nail the sheets along the lap at intervals of no more than 8 in. Stagger-nail on 16 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 VERSAFLEX:** Starting at the low point of the roof, install 1 layer of TAMKO AWAPLAN VERSAFLEX membrane, side lapped 4 in. and end lapped 6 in. The AWAPLAN VERSAFLEX membrane should be solidly adhered to the base ply (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.

**Surfacing:** Select one of the following surfacings:
1. **Surface Coat: Aluminum Roof Coating:** Coat the entire roof surface with Fibered Aluminum Roof Coating at a rate of 1-1/2 to 2 gal. per 100 sq. ft.
2. **Surface Coat: White Elastomeric Roof Coating:** Coat the entire roof surface with TAM-STAR or TAM-GUARD White Elastomeric Roof Coating at a rate of 2 gals. per 100 sq. ft.

**Maintenance of the surface coating is required.**

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

**NOTE:** AWAPLAN VERSAFLEX IS NOT AN ACCEPTABLE 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 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 “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 “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 AWAPLAN VERSAFLEX**  
1 ply

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

**Interply Asphalt (Per 100 sq. ft.)**  
Approx. 69 lbs.

**Flood Coat Asphalt (Per 100 sq. ft.)**  
Approx. 60 lbs.

**Gravel (Per 100 sq. ft.)**  
Approx. 400 lbs.

**Slope:** Positive drainage up to 3 in. per linear ft. For slopes above 3/4 in. per linear ft., fastening of the AWAPLAN VERSAFLEX and the roofing felts 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.

**AWAPLAN VERSAFLEX:** Starting at the low point of the roof, install 1 ply of TAMKO AWAPLAN VERSAFLEX 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 (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.

**Fiberglass Ply Sheet 2 Ply Installation:** Over the base ply, 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 base ply at any one point. Approximately 23 lbs. (±15%) of specification asphalt per 100 sq. ft. should be used to embed each ply.

**Surfacing:** Apply a flood coat of 60 lb. (±15%) of specification asphalt per 100 sq. ft. over the entire surface. While hot, embed approximately 400 lb. of clean roofing gravel or 300 lb. of slag per 100 sq. ft. of completed roof area.

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

**NOTE:** AWAPLAN VERSAFLEX IS NOT AN ACCEPTABLE 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 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

For complete information on TAMKO’s recommendations and requirements, consult TAMKO’s web site at www.tamko.com  
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TAMKO®, Tam-Glass Premium® and Tam-Ply IV® are registered trademarks of TAMKO Building Products, Inc.
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 “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 “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 VERSA-BASE®
Modified Asphalt Base Sheet 1 ply

TAMKO VERSA-CAP FR®
Modified Asphalt Cap Sheet 1 ply

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

Slope: Positive drainage up to 3 in. per linear ft. For slopes above 3/4 in. per linear ft., fastening of the VERSA-CAP FR 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 IV.

VERSA-CAP FR: Starting at the low point of the roof and offsetting the laps of the base ply, install 1 layer of TAMKO VERSA-CAP FR granule surfaced sheet, side lapped 3 in. and end lapped 4 in. The VERSA-CAP FR should be solidly adhered to the base ply (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.

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

NOTE: VERSA-CAP FR IS NOT AN ACCEPTABLE 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 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 hazard.
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 “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 “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

<table>
<thead>
<tr>
<th>Material Type</th>
<th>Specification</th>
</tr>
</thead>
<tbody>
<tr>
<td>TAMKO VERSA-BASE®</td>
<td>Modified Asphalt Base Sheet 2 plies</td>
</tr>
<tr>
<td>TAMKO VERSA-CAP FR®</td>
<td>Modified Asphalt Cap Sheet 1 ply</td>
</tr>
<tr>
<td>Asphalt (Per 100 sq. ft.)</td>
<td>Approx. 69 lbs.</td>
</tr>
</tbody>
</table>

**Slope:** Positive drainage up to 3 in. per linear ft. For slopes above 3/4 in. per linear ft., fastening of the VERSA-CAP FR 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 IV.

**VERSA-BASE Sheet 2 Ply Installation:** Over the insulation, install 2 plies of VERSA-BASE Modified Asphalt Base Sheet in specification asphalt. Starting from the low point of the roof, install 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. The asphalt should be above 400°F at the point of application and mopped no more than 4 ft. in front of the roll.

**VERSA-CAP FR:** Starting at the low point of the roof and offsetting the laps of the VERSA-BASE, install 1 layer of TAMKO VERSA-CAP FR granule surfaced sheet, side lapped 3 in. and end lapped 4 in. The VERSA-CAP FR should be solidly adhered to the VERSA-BASE (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.

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

**NOTE:** VERSA-CAP FR IS NOT AN ACCEPTABLE 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 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 “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 “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-PLY IV®**
Fiberglass Ply Sheet  2 plies

**TAMKO VERSA-CAP FR®**
Modified Asphalt Cap Sheet  1 ply

Interply Asphalt (Per 100 sq. ft.)  Approx. 69 lbs.

**Slope:** Positive drainage up to 3 in. per linear ft. For slopes above 3/4 in. per linear ft., fastening of the VERSA-CAP FR 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. Polysiocyanurate 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 IV.

**Fiberglass Ply Sheet 2 Ply Installation:** Over the insulation, install 2 plies of TAM-PLY IV in specification asphalt. Starting from the low point of the roof, install 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 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.

**VERSA-CAP FR:** Starting at the low point of the roof, install 1 layer of TAMKO VERSA-CAP FR granule surfaced sheet, side lapped 3 in. and end lapped 4 in. The VERSA-CAP FR should be solidly adhered to the TAM-PLY IV (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.

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

**NOTE:** VERSA-CAP FR IS NOT AN ACCEPTABLE FLASHING MATERIAL.

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

**Caution:** A product(s) in this specification contains formaldehyde. Formaldehyde has been classified as a “known” human carcinogen 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 “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 “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**

<table>
<thead>
<tr>
<th>Material</th>
<th>Description</th>
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<tbody>
<tr>
<td>TAMKO TAM-PLY IV®</td>
<td>Fiberglass Ply Sheet 3 plies</td>
</tr>
<tr>
<td>TAMKO VERSA-CAP FR®</td>
<td>Modified Asphalt Cap Sheet 1 ply</td>
</tr>
<tr>
<td>Asphalt (Per 100 sq. ft.)</td>
<td>Approx. 92 lbs.</td>
</tr>
</tbody>
</table>

**Slope:** Positive drainage up to 3 in. per linear ft. For slopes above 3/4 in. per linear ft., fastening of the VERSA-CAP FR 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 IV.

**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 and 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.

**VERSA-CAP FR:** Starting at the low point of the roof, install 1 layer of TAMKO VERSA-CAP FR granule surfaced sheet, side lapped 3 in. and end lapped 4 in. The VERSA-CAP FR should be solidly adhered to the TAM-PLY IV (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.

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

**NOTE:** VERSA-CAP FR IS NOT AN ACCEPTABLE FLASHING MATERIAL.

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

**Caution:** A product(s) in this specification contains formaldehyde. Formaldehyde has been classified as a “known” human carcinogen 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 “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 “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-PLY IV®**
- Fiberglass Ply Sheet 4 plies

**TAMKO VERSA-CAP FR®**
- Modified Asphalt Cap Sheet 1 ply
- Interply Asphalt (Per 100 sq. ft.) Approx. 115 lbs.

**Slope:** Positive drainage up to 3 in. per linear ft. For slopes above 3/4 in. per linear ft., fastening of the VERSA-CAP FR 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. Polysiocyanurate 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 IV.

**Fiberglass Ply Sheets:** Over the insulation, install 4 plies of TAMKO TAM-PLY IV Fiberglass Ply Sheet in specification asphalt. Starting from the low point of the roof, apply a 1/4 m width, a 1/2 m width, then a 3/4 m width. Follow with full 1 m widths, shingle fashion, lapping each ply 30-1/16 in. in such a manner so that at least 4 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.

**VERSA-CAP FR:** Starting at the low point of the roof, install 1 layer of TAMKO VERSA-CAP FR granule surfaced sheet, side lapped 3 in. and end lapped 4 in. The VERSA-CAP FR should be solidly adhered to the TAM-PLY IV (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.

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

**NOTE:** VERSA-CAP FR IS NOT AN ACCEPTABLE FLASHING MATERIAL.

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

**Caution:** A product(s) in this specification contains formaldehyde. Formaldehyde has been classified as a “known” human carcinogen 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 “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 “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 VAPOR-CHAN®**
Fiberglass Venting Asphalt Base Sheet  1 ply

**TAMKO VERSA-BASE®**
Modified Asphalt Base Sheet  1 ply

**TAMKO VERSA-CAP FR®**
Modified Asphalt Cap Sheet  1 ply

Asphalt (Per 100 sq. ft.)  Approx. 46 lbs.
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 VERSA-CAP FR 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 IV.

**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.

**VERSA-BASE Sheet:** Starting at the low point of the roof, install a 1/2 m width. Then install a full 1 m width, side lapped 2 in. and end lapped 4 in. in order to offset the laps of the cover sheet. 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.

**VERSA-CAP FR:** Starting at the low point of the roof and offsetting the laps of the VERSA-BASE, install 1 layer of TAMKO VERSA-CAP FR granule surfaced sheet, side lapped 3 in. and end lapped 4 in. The VERSA-CAP FR should be solidly adhered to the VERSA-BASE (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.

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

**NOTE:** VERSA-CAP FR IS NOT AN ACCEPTABLE 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-
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**Material Requirements**

**TAMKO GLASS-BASE® or BASE-N-PLY®**

1 ply

**TAMKO VERSA-BASE®**

Modified Asphalt Base Sheet

1 ply

**TAMKO VERSA-CAP FR®**

Modified Asphalt Cap Sheet

1 ply

**Asphalt (Per 100 sq. ft.)**

Approx. 46 lbs.

**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 VERSA-CAP FR 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 IV.

**BASE SHEET:**

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 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 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 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.

**VERSA-BASE Sheet:**

Starting at the low point of the roof, install a 1/2 m width. Then install a full 1 m width, side lapped 2 in. and end lapped 4 in. in order to offset the laps of the cover sheet. 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.

**VERSA-CAP FR:**

Starting at the low point of the roof and offsetting the laps of the VERSA-BASE, install 1 layer of TAMKO VERSA-CAP FR granule surfaced sheet, side lapped 3 in. and end lapped 4 in. The VERSA-CAP FR should be solidly adhered to the VERSA-BASE (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.

**Flashing:**

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

**NOTE: VERSA-CAP FR IS NOT AN ACCEPTABLE FLASHING MATERIAL.**

**U.L. Requirements:**

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

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<thead>
<tr>
<th>Material</th>
<th>Specifications</th>
</tr>
</thead>
<tbody>
<tr>
<td>TAMKO AWAPLAN VERSA-SMooth</td>
<td>1 ply</td>
</tr>
<tr>
<td>TAMKO VERSA-CAP FR®</td>
<td>1 ply</td>
</tr>
<tr>
<td>Modified Asphalt Cap Sheet</td>
<td></td>
</tr>
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<td>Asphalt (Per 100 sq. ft.)</td>
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</tr>
</tbody>
</table>

Slope: Positive drainage up to 3 in. per linear ft. For slopes above 3/4 in. per linear ft., fastening of the VERSA-CAP FR 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 fiber-glass roof insulation.

Asphalt: The asphalt should be certified by the manufacturer to meet ASTM D-312, Type IV.

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 (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.

Alternately, AWAPLAN VERSA-SMooth can be heat welded and should be solidly adhered to the insulation by sufficiently heating the back side with a torch at the juncture of the insulation and the AWAPLAN VERSA-SMooth roll to form a bead of melted asphalt as the AWAPLAN VERSA-SMooth is rolled out. Use care when applying heat as damage can occur to the product by overheating.

VERSA-CAP FR: Starting at the low point of the roof and offsetting the laps of the base ply, install 1 layer of TAMKO VERSA-CAP FR granule surfaced sheet, side lapped 3 in. and end lapped 4 in. The VERSA-CAP FR should be solidly adhered to the base ply (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.

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

NOTE: VERSA-CAP FR IS NOT AN ACCEPTABLE FLASHING MATERIAL.

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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 VAPOR-CHAN®
Fiberglass Venting Asphalt Base Sheet 1 ply

AWAPLAN VERSA-SMOOTH
Modified Asphalt Base Sheet 1 ply

TAMKO VERSA-CAP FR®
Modified Asphalt Cap Sheet 1 ply

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

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 VERSA-CAP FR 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 IV.

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 (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.

Alternately, AWAPLAN VERSA-SMOOTH can be heat welded and should be solidly adhered to the base sheet by sufficiently heating the back side with a torch at the juncture of the base ply and the AWAPLAN VERSA-SMOOTH roll to form a bead of melted asphalt as the AWAPLAN VERSA-SMOOTH is rolled out. Use care when applying heat as damage can occur to the product by overheating.

VERSA-CAP FR: Starting at the low point of the roof and offsetting the laps of the VERSA-SMOOTH, install 1 layer of TAMKO VERSA-CAP FR granule surfaced sheet, side lapped 3 in. and end lapped 4 in. The VERSA-CAP FR should be solidly adhered to the VERSA-SMOOTH (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.

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

NOTE: VERSA-CAP FR IS NOT AN ACCEPTABLE FLASHING MATERIAL.

U.L. Requirements:
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### Material Requirements

<table>
<thead>
<tr>
<th>Material</th>
<th>Quantity</th>
</tr>
</thead>
<tbody>
<tr>
<td>TAMKO TAM-GLASS PREMIUM®</td>
<td>3 plies</td>
</tr>
<tr>
<td>Interply Asphalt (Per 100 sq. ft.)</td>
<td>Approx. 69 lbs.</td>
</tr>
<tr>
<td>Flood Coat Asphalt (Per 100 sq. ft.)</td>
<td>Approx. 60 lbs.</td>
</tr>
<tr>
<td>Gravel (Per 100 sq. ft.)</td>
<td>Approx. 400 lbs.</td>
</tr>
</tbody>
</table>

**Slope:** Positive drainage up to 3 in. per linear ft. *For slopes above 1 in. per linear ft., fastening of the roofing felts 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 II* for slopes up to 1/2 in. and *Type III* for slopes up to 3 in.

**Fiberglass Ply Sheets:** Over the insulation, install 3 plies of TAM-GLASS PREMIUM Fiberglass Ply Sheet in specification asphalt. Starting from the low point of the roof, apply a 1/3 m width, then a 2/3 m width, and 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.

**Surfacing:** Apply a flood coat of 60 lbs. (+15%) of specification asphalt per 100 sq. ft. over the entire surface. While hot, embed approximately 400 lbs. of clean roofing gravel or 300 lbs. of slag per 100 sq. ft. of completed roof area.

**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 formaldehyde. Formaldehyde has been classified as a “known” human carcinogen 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.

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*Except in FL, TX, NM, AZ, CA*
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

<table>
<thead>
<tr>
<th>Product</th>
<th>Description</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>TAMKO TAM-GLASS PREMIUM®</td>
<td>Fiberglass Ply Sheet 3 plies</td>
<td></td>
</tr>
<tr>
<td>TAMKO TAM-CAP®</td>
<td>Fiberglass Mineral Surfaced Cap Sheet 1 ply</td>
<td></td>
</tr>
<tr>
<td>Interply Asphalt (Per 100 sq. ft.)</td>
<td>Approx. 92 lbs.</td>
<td></td>
</tr>
</tbody>
</table>

Slope: Positive drainage up to 3 in. per linear ft. For slopes above 1 in. per linear ft., fastening of the roofing felts 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. Polysisocyanurate 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 II* for slopes up to 1/2 in. and Type III for slopes up to 3 in.

Fiberglass Ply Sheets: Over the insulation, install 3 plies of TAM-GLASS PREMIUM Fiberglass Ply Sheet in specification asphalt. Starting from the low point of the roof, apply a 1/3 m width, then a 2/3 m width, and 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.

TAM-CAP: Starting from the low point of the roof, apply 1 ply of TAM-CAP, side lapping each sheet 2 in. and end lapping 6 in. over the preceding sheets. Fully mop each sheet with specification asphalt at the rate of 23 lbs. (+15%) per 100 sq. ft. On slopes of 1 in. per foot or greater, nail adjacent to top edge on 12 in. centers. Nail the laps on 3 in. centers and mop the full width with specification asphalt. NOTE: Before application of TAM-CAP, cut it into 12 ft. to 18 ft. lengths and allow it to flatten and relax. Stagger the end laps.

Alternately, installation by the “fly-in” or “mop and flop” method requires the installer to use a maximum of 12 ft. sections and to mop the 2 in. selvedge and the back of the TAM-CAP that will cover the selvedge.

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

U.L. Requirements:
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*Except in FL, TX, NM, AZ, CA

For complete information on TAMKO’s recommendations and requirements, consult TAMKO’s web site at www.tamko.com
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TAMKO®, Tam-Glass Premium® and Tam-Cap® are registered trademarks of TAMKO Building Products, Inc.
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Material Requirements

TAMKO TAM-GLASS PREMIUM®
Fiberglass Ply Sheet 4 plies
Interply Asphalt (Per 100 sq. ft.) Approx. 92 lbs.
Flood Coat Asphalt (Per 100 sq. ft.) Approx. 60 lbs.
Gravel (Per 100 sq. ft.) Approx. 400 lbs.

Slope: Positive drainage up to 3 in. per linear ft. For slopes above 1 in. per linear ft., fastening of the roofing felts 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. Polysocyanurate 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 II* for slopes up to 1/2 in. and Type III for slopes up to 3 in.

Fiberglass Ply Sheets: Over the insulation, install 4 plies of TAM-GLASS PREMIUM Fiberglass Ply Sheet in specification asphalt. Starting from the low point of the roof, apply a 1/4 m width, a 1/2 m width, then a 3/4 m width. Follow with full 1 m widths, shingle fashion, lapping each ply 30-1/16 in. in such a manner so that at least 4 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.

Surfacing: Apply a flood coat of 60 lbs. (±15%) of specification asphalt per 100 sq. ft. over the entire surface. While hot, embed approximately 400 lbs. of clean roofing gravel or 300 lbs. of slag per 100 sq. ft. of completed roof area.

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

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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.

*Except in FL, TX, NM, AZ, CA
Material Requirements

<table>
<thead>
<tr>
<th>Material</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>TAMKO TAM-GLASS PREMIUM*</td>
<td>3 plies</td>
</tr>
<tr>
<td>Interply Asphalt</td>
<td>Per 100 sq. ft., approx. 69 lbs.</td>
</tr>
<tr>
<td>Fibered Aluminum Coating</td>
<td>1-1/2 to 2 gals.</td>
</tr>
<tr>
<td>Emulsion Coating</td>
<td>3 gals.</td>
</tr>
<tr>
<td>Asphalt Glaze Coating</td>
<td>20 to 25 lbs.</td>
</tr>
<tr>
<td>TAM-STAR or TAM-GUARD</td>
<td>White Elastomeric Roof Coating, 2 gals.</td>
</tr>
</tbody>
</table>

Slope: Positive drainage up to 3 in. per linear ft. For slopes above 1 in. per linear ft., fastening of the roofing felts 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. Polysisocyanurate and expanded polystyrene must have an overlay of a minimum 1/2 in. fibberboard, perlite, or fiberglass roof insulation.

Asphalt: The asphalt should be certified by the manufacturer to meet ASTM D-312, Type II* for slopes up to 1/2 in. and Type III for slopes up to 3 in.

Fiberglass Ply Sheets: Over the insulation, install 3 plies of TAM-GLASS PREMIUM Fiberglass Ply Sheet in specification asphalt. Starting from the low point of the roof, apply a 1/3 m width, then a 2/3 m width, and 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.

Surface Coat: Coat the entire roof surface with Fibered Aluminum Roof Coating at a rate of 1-1/2 to 2 gals. per 100 sq. ft., or Emulsion Roof Coating at a rate of not less than 3 gals. per 100 sq. ft., or a surface grade hot asphalt using a minimum of 20 lbs. and a maximum of 25 lbs. per 100 sq. ft., or TAM-STAR or TAM-GUARD White Elastomeric Roof Coating at rate of 2 gals. per 100 sq. ft.

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 formaldehyde. Formaldehyde has been classified as a “known” human carcinogen 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 “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 “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.

*Except in FL, TX, NM, AZ, CA
**SPECIFICATION SUBMITTAL**

**505 TAM-GLASS PREMIUM**  
(Regions 1, 2, & 3)  
INSULATED DECKS

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**Material Requirements**

- **TAMKO TAM-GLASS PREMIUM®**  
  Fiberglass Ply Sheet  
  4 plies
- **Interply Asphalt (Per 100 sq. ft.)**  
  Approx. 92 lbs.
- **Surface Coat:**  
  (1) Fibered Aluminum Coating  
  1-1/2 to 2 gals.  
  (2) Emulsion Coating  
  3 gals.  
  (3) Asphalt Glaze Coating  
  20 to 25 lbs.  
  (4) TAM-STAR or TAM-GUARD White Elastomeric Roof Coating  
  2 gals.

**Slope:** Positive drainage up to 3 in. per linear ft. For slopes above 1 in. per linear ft., fastening of the roofing felts 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 II* for slopes up to 1/2 in. and Type III for slopes up to 3 in.

**Fiberglass Ply Sheets:** Over the insulation, install 4 plies of TAM-GLASS PREMIUM Fiberglass Ply Sheet in specification asphalt. Starting from the low point of the roof, apply a 1/4 m width, a 1/2 m width, then a 3/4 m width. Follow with full 1 m widths, shingle fashion, lapping each ply 30-1/16 in. in such a manner so that at least 4 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.

**Surface Coat:** Coat the entire roof surface with Fibered Aluminum Roof Coating at a rate of 1-1/2 to 2 gals. per 100 sq. ft., or Emulsion Roof Coating at a rate of not less than 3 gals. per 100 sq. ft., or a surface grade hot asphalt using a minimum of 20 lbs. and a maximum of 25 lbs. per 100 sq. ft., or TAM-STAR or TAM-GUARD White Elastomeric Roof Coating at rate of 2 gals. per 100 sq. ft. Maintenance of the surface coating is required.

**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 formaldehyde. Formaldehyde has been classified as a “known” human carcinogen 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.

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For complete information on TAMKO’s recommendations and requirements, consult TAMKO’s web site at www.tamko.com  
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Application of product(s) in this specification using “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 “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.

*Except in FL, TX, NM, AZ, CA*
SPECIFICATION SUBMITTAL
TAMKO BUILDING PRODUCTS

507 TAM-GLASS PREMIUM
(Regions 2 & 3)

INSULATED DECKS

Material Requirements

TAMKO TAM-GLASS PREMIUM®
Fiberglass Ply Sheet 4 plies

TAMKO TAM-CAP®
Fiberglass Mineral Surfaced Cap Sheet 1 ply
Interply Asphalt (Per 100 sq. ft.) Approx. 115 lbs.

Slope: Positive drainage up to 3 in. per linear ft. For slopes above 1 in. per linear ft., fastening of the roofing felts is required.

Deck: The deck should conform to TAMKO general requirements.

Insulation: The insulation shall 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 II* for slopes up to 1/2 in. and Type III for slopes up to 3 in.

Fiberglass Ply Sheets: Over the insulation, install 4 plies of TAM-GLASS PREMIUM Fiberglass Ply Sheet in specification asphalt. Starting from the low point of the roof, apply 1 ply of TAM-CAP, side lapping each sheet 2 in. and end lapping 6 in. over the preceding sheets. Fully mop each sheet with specification asphalt at the rate of 23 lbs. (+15%) per 100 sq. ft. On slopes of 1 in. per foot or greater, nail adjacent to top edge on 12 in. centers. Nail the laps on 3 in. centers and mop the full width with specification asphalt. **NOTE: Before application of TAM-CAP, cut it into 12 ft. to 18 ft. lengths and allow it to flatten and relax. Stagger the end laps.**

Alternately, installations by the “fly-in” or “mop and flop” method requires the installer to use a maximum of 12 ft. sections and to mop the 2 in. selvedge and the back of the TAM-CAP that will cover the selvedge.

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 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. Take precautions to prevent breathing and contact with skin.

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TAMKO®, Tam-Glass Premium® and Tam-Cap® are registered trademarks of TAMKO Building Products, Inc.
Application of product(s) in this specification using “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 “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.

*Except in FL, TX, NM, AZ, CA
Material Requirements

TAMKO TYPE 43 Coated Base Sheet or BASE-N-PLY® Base Sheet 1 ply
TAMKO TAM-GLASS PREMIUM® Fiberglass Ply Sheet 2 plies
TAMKO TAM-CAP® Fiberglass Mineral Surfaced Cap Sheet 1 ply
Interply Asphalt (Per 100 sq. ft.) Approx. 69 lbs.
Clinch-type nails (Per 100 sq. ft.) Approx. 100 Nails

Slope: Positive drainage up to 1-1/2 in. per linear ft. For slopes above 1 in. per linear ft., fastening of the roofing felts 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 II* for slopes up to 1/2 in. and Type III for slopes up to 1-1/2 in.

TYPE 43 Coated Base Sheet or BASE-N-PLY Base Sheet: Starting at the low point of the roof, install 1 ply of TAMKO TYPE 43 Coated Base Sheet or BASE-N-PLY, side lapped 2 in. and end lapped 4 in. Apply at a right angle to the slope of the roof. 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 13 in. from each edge of the base sheet. For specific fastening patterns for wind uplift listings, contact the Technical Services Department.

Fiberglass Ply Sheets: Over the base ply, install 2 plies of TAM-GLASS PREMIUM Fiberglass Ply Sheet in specification asphalt. Start with a 1/2 m width followed by full 1 m widths, shingle fashion, lapping each ply 20-11/16 in. over the preceding ply so that at least 2 plies cover the base ply at any point. Approximately 23 lbs. (+15%) of specification asphalt per 100 sq. ft. should be used to embed each ply.

TAM-CAP Mineral Surfaced Cap Sheet: Starting at the low point of the roof, apply 1 ply of TAM-CAP, side lapping each sheet 2 in. and end lapping 6 in. over the preceding sheets. Fully mop each sheet with specification asphalt at the rate of 23 lbs. (+15%) per 100 sq. ft. On slopes of 1 in. per foot or greater, nail adjacent to top edge on 12 in. centers. Nail the laps on 3 in. centers and mop the full width with specification asphalt. NOTE: Before application of TAM-CAP, cut it into 12 ft. to 18 ft. lengths and allow it to flatten and relax. Stagger the end laps.

Alternately, installation by the “fly-in” or “mop and flop” method requires the installer to use a maximum of 12 ft. sections and to mop the 2 in. selvedge and the back of the TAM-CAP that will cover the selvedge.

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”.

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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 “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 “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 VAPOR-CHAN®**
Fiberglass Venting Base Sheet  1 ply

**TAMKO TAM-GLASS PREMIUM®**
Fiberglass Ply Sheet  4 plies

**TAMKO TAM-CAP®**
Fiberglass Mineral Surface Cap Sheet  1 ply

Interply Asphalt (Per 100 sq. ft.)  Approx. 115 lbs.

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 1 in. per linear ft., fastening of the roofing felts 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 II* for slopes up to 1/2 in. and Type III for slopes up to 3 in.

**VAPOR-CHAN:** Starting at the low point of the roof, install 1 ply of 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.

**Fiberglass Ply Sheets:** Over the insulation, install 4 plies of TAM-GLASS PREMIUM Fiberglass Ply Sheet in specification asphalt. Starting from the low point of the roof, apply a 1/4 m width, an 1/2 m width, then a 3/4 m width. Follow with full 1 m widths, shingle fashion, lapping each ply 30-1/16 in. in such a manner so that at least 4 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.

**TAM-CAP:** Starting from the low point of the roof, apply 1 ply of TAM-CAP, side lapping each sheet 2 in. and end lapping 6 in. over the preceding sheets. Fully mop each sheet with specification asphalt at the rate of 23 lbs. (±15%) per 100 sq. ft. On slopes of 1 in. per foot or greater, nail adjacent to top edge on 12 in. centers. Nail the laps on 3 in. centers and mop the full width with specification asphalt. NOTE: Before application of TAM-CAP, cut it into 12 ft. to 18 ft. lengths and allow it to flatten and relax. Stagger the end laps.

Alternately, installations by the “fly-in” or “mop and flop” method requires the installer to use a maximum of 12 ft. sections and to mop the 2 in. selvedge and the back of the TAM-CAP that will cover the selvedge.

**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

*Except in FL, TX, NM, AZ, CA*
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 “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 “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.

*Except in FL, TX, NM, AZ, CA*
Material Requirements

| TAMKO TYPE 43 Coated Base Sheet or BASE-N-PLY® Base Sheet | 1 ply |
| TAMKO TAM-GLASS PREMIUM® Fiberglass Ply Sheet | 3 plies |
| Interply Asphalt (Per 100 sq. ft.) | Approx. 69 lbs. |
| Flood Coat Asphalt (Per 100 sq. ft.) | Approx. 60 lbs. |
| Gravel (Per 100 sq. ft.) | Approx. 400 lbs. |
| Clinic-type nails (Per 100 sq. ft.) | Approx. 100 Nails |

Slope: Positive drainage up to 3 in. per linear ft. For slopes above 1 in. per linear ft., fastening of the roofing felts 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 II* for slopes up to 1/2 in. and Type III for slopes up to 3 in.

TYPE 43 Coated Base Sheet or BASE-N-PLY Base Sheet: Starting at the low point of the roof, install 1 ply of TAMKO TYPE 43 Coated Base Sheet or BASE-N-PLY, side lapped 2 in. and end lapped 4 in. Apply at a right angle to the slope of the roof. 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. Nail BASE-N-PLY sheet 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. For specific fastening patterns for wind uplift listings, contact the Technical Services Department.

Fiberglass Ply Sheets: Over the base ply, install 3 plies of TAM-GLASS PREMIUM Fiberglass Ply Sheet in specification asphalt. Starting from the low point of the roof, apply a 1/3 m width, then a 2/3 m width, and 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 base ply at any point. Approximately 23 lbs. (+15%) of specification asphalt per 100 sq. ft. should be used to embed each ply.

Surfacing: Apply a flood coat of 60 lbs. (+15%) of specification asphalt per 100 sq. ft. over the entire surface. While hot, embed approximately 400 lbs. of clean roofing gravel or 300 lbs. of slag per 100 sq. ft. of completed roof area.

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.

*Except in FL, TX, NM, AZ, CA
of the product(s) in this specification. Take precautions to prevent breathing and contact with skin.

Application of product(s) in this specification using “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 “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.

*Except in FL, TX, NM, AZ, CA

For complete information on TAMKO’s recommendations and requirements, consult TAMKO’s web site at www.tamko.com
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**SPECIFICATION SUBMITTAL**

**515 TAM-GLASS PREMIUM**

(Regions 1, 2, & 3)

**NAILABLE DECKS (GYPSUM AND LIGHTWEIGHT INSULATING CONCRETE)**

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**Material Requirements**

**TAMKO VAPOR-CHAN®**  
Fiberglass Venting Base Sheet  
1 ply

**TAMKO TAM-GLASS PREMIUM®**  
Fiberglass Ply Sheet  
3 plies

Interply Asphalt (Per 100 sq. ft.)  
Approx. 69 lbs.

Flood Coat Asphalt (Per 100 sq. ft.)  
Approx. 60 lbs.

Gravel (Per 100 sq. ft.)  
Approx. 400 lbs.

Clinch-type nails (Per 100 sq. ft.)  
Approx. 100 Nails

**Slope:** Positive drainage up to 3 in. per linear ft.  
**For slopes above 1 in. per linear ft.,** fastening of the roofing felts 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 II* for slopes up to 1/2 in. and Type III for slopes up to 3 in.

**VAPOR-CHAN:** Starting at the low point of the roof, install 1 ply of 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 12 in. from each edge of the base sheet. For specific fastening patterns for wind uplift listings, contact the Technical Services Department.

**Fiberglass Ply Sheets:** Over the base ply, install 3 plies of TAM-GLASS PREMIUM Fiberglass Ply Sheet in specification asphalt. Starting from the low point of the roof, apply a 1/3 m width, then a 2/3 m width, and 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 base ply at any point. Approximately 23 lbs. (+15%) of specification asphalt per 100 sq. ft. should be used to embed each ply.

**Surfacing:** Apply a flood coat of 60 lbs. (+15%) of specification asphalt per 100 sq. ft. over the entire surface. While hot, embed approximately 400 lbs. of clean roofing gravel or 300 lbs. of slag per 100 sq. ft. of completed roof area.

**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 IARC as known or probable human carcinogens. The physical nature of the product(s) in this specification may help limit any

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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 “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 “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.

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<tbody>
<tr>
<td>TAMKO TYPE 43 Coated Base Sheet or BASE-N-PLY® Base Sheet</td>
<td>1 ply</td>
</tr>
<tr>
<td>TAMKO TAM-GLASS PREMIUM® Fiberglass Ply Sheet</td>
<td>3 plies</td>
</tr>
<tr>
<td>Interply Asphalt (Per 100 sq. ft.)</td>
<td>Approx. 69 lbs.</td>
</tr>
<tr>
<td>Surface Coat: (Per 100 sq. ft.)</td>
<td></td>
</tr>
<tr>
<td>(1) Fibered Aluminum Coating</td>
<td>1-1/2 to 2 gals.</td>
</tr>
<tr>
<td>(2) Emulsion Coating</td>
<td>3 gals.</td>
</tr>
<tr>
<td>(3) Asphalt Glaze Coating</td>
<td>20 to 25 lbs.</td>
</tr>
<tr>
<td>(4) TAM-STAR or TAM-GUARD White Elastomeric Roof Coating</td>
<td>2 gals.</td>
</tr>
</tbody>
</table>

Clinch-type nails (Per 100 sq. ft.) Approx. 100 Nails

Slope: Positive drainage up to 3 in. per linear ft. For slopes above 1 in. per linear ft., fastening of the roofing felts 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 II* for slopes up to 1/2 in. and Type III for slopes up to 1 in.

TYPE 43 Coated Base Sheet or BASE-N-PLY Base Sheet: Starting at the low point of the roof, install 1 ply of TAMKO TYPE 43 Coated Base Sheet or BASE-N-PLY, side lapped 2 in. and end lapped 4 in. Apply at a right angle to the slope of the roof. 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. Nail BASE-N-PLY sheet 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. For specific fastening patterns for wind uplift listings, contact the Technical Services Department.

Fiberglass Ply Sheets: Over the base ply, install 3 plies of TAM-GLASS PREMIUM Fiberglass Ply Sheet in specification asphalt. Starting from the low point of the roof, apply a 1/3 m width, then a 2/3 m width, and 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 base ply at any point. Approximately 23 lbs. (+15%) of specification asphalt per 100 sq. ft. should be used to embed each ply.

Surface Coat: Coat the entire roof surface with Fibered Aluminum Roof Coating at a rate of 1-1/2 to 2 gals. per 100 sq. ft., or Emulsion Roof Coating at a rate of not less than 3 gals. per 100 sq. ft., or a surface grade hot asphalt using a minimum of 20 lbs. and a maximum of 25 lbs. per 100 sq. ft., or TAM-STAR or TAM-GUARD White Elastomeric Roof Coating at rate of 2 gals. per 100 sq. ft. Maintenance of the surface coating is required.

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”.

*Except in FL, TX, NM, AZ, CA
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 “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 “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.

*Except in FL, TX, NM, AZ, CA

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**Material Requirements**

**TAMKO TAM-PLY IV®**

- **Fiberglass Ply Sheet**: 3 plies
- **Interply Asphalt (Per 100 sq. ft.)**: Approx. 69 lbs.
- **Flood Coat Asphalt (Per 100 sq. ft.)**: Approx. 60 lbs.
- **Gravel (Per 100 sq. ft.)**: Approx. 400 lbs.

**Slope:** Positive drainage up to 3 in. per linear ft. For slopes above 1 in. per linear ft., fastening of the roofing felts 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. Polysiocyanurate 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 II® for slopes up to 1/2 in. and Type III for slopes up to 3 in.

**Fiberglass Ply Sheets:** Over the insulation, install 3 plies of TAM-PLY IV Fiberglass Ply Sheet in specification asphalt. Starting from the low point of the roof, apply a 1/3 m width, then a 2/3 m width, and 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.

**Surfacing:** Apply a flood coat of 60 lbs. (+15%) of specification asphalt per 100 sq. ft. over the entire surface. While hot, embed approximately 400 lbs. of clean roofing gravel or 300 lbs. of slag per 100 sq. ft. of completed roof area.

**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 formaldehyde. Formaldehyde has been classified as a “known” human carcinogen 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 “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 “hot mopped” application, workers must take precautions to assure adequate ventilation and use effective personal protective equipment to prevent exposures to dusts.

*Except in FL, TX, NM, AZ, CA*
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.

*Except in FL, TX, NM, AZ, CA
Material Requirements

<table>
<thead>
<tr>
<th>Material</th>
<th>Description</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>TAMKO TAM-PLY IV®</td>
<td>Fiberglass Ply Sheet</td>
<td>3 plies</td>
</tr>
<tr>
<td>TAMKO TAM-CAP®</td>
<td>Fiberglass Mineral Surfaced Cap Sheet</td>
<td>1 ply</td>
</tr>
<tr>
<td>Interply Asphalt (Per 100 sq. ft.)</td>
<td>Approx. 92 lbs.</td>
<td></td>
</tr>
</tbody>
</table>

Slope: Positive drainage up to 3 in. per linear ft. For slopes above 1 in. per linear ft., fastening of the roofing felts 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 II* for slopes up to 1/2 in. and Type III for slopes up to 3 in.

Fiberglass Ply Sheets: Over the insulation, install 3 plies of TAM-PLY IV Fiberglass Ply Sheet in specification asphalt. Starting from the low point of the roof, apply a 1/3 m width, then a 2/3 m width, and 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.

TAM-CAP: Starting from the low point of the roof, apply 1 ply of TAM-CAP or VERSA-CAP FR, side lapping each sheet 2 in. and end lapping 6 in. over the preceding sheets. Fully mop each sheet with specification asphalt at the rate of 23 lbs. (+15%) per 100 sq. ft. On slopes of 1 in. per foot or greater, nail adjacent to top edge on 12 in. centers. Nail the laps on 3 in. centers and mop the full width with specification asphalt. NOTE: Before application of TAM-CAP, cut it into 12 ft. to 18 ft. lengths and allow it to flatten and relax. Stagger the end laps.

Alternately, installation by the “fly-in” or “mop and flop” method requires the installer to use a maximum of 12 ft. sections and to mop the 2 in. selvedge and the back of the TAM-CAP that will cover the selvedge.

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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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 “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 “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.

*Except in FL, TX, NM, AZ, CA*
Material Requirements

TAMKO TAM-PLY IV®
Fiberglass Ply Sheet 4 plies
Interply Asphalt (Per 100 sq. ft.) Approx. 92 lbs.
Flood Coat Asphalt (Per 100 sq. ft.) Approx. 60 lbs.
Gravel (Per 100 sq. ft.) Approx. 400 lbs.

Slope: Positive drainage up to 3 in. per linear ft. For slopes above 1 in. per linear ft., fastening of the roofing felts 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. Polysiocyanurate 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 II* for slopes up to 1/2 in. and Type III for slopes up to 3 in.

Fiberglass Ply Sheets: Over the insulation, install 4 plies of TAM-PLYIV Fiberglass Ply Sheet in specification asphalt. Starting from the low point of the roof, apply a 1/4 m width, a 1/2 m width, then a 3/4 m width. Follow with full 1 m widths, shingle fashion, lapping each ply 30-1/16 in. in such a manner so that at least 4 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.

Surface: Apply a flood coat of 60 lbs. (±15%) of specification asphalt per 100 sq. ft. over the entire surface. While hot, embed approximately 400 lbs. of clean roofing gravel or 300 lbs. of slag per 100 sq. ft. of completed roof area.

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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Material Requirements

TAMKO TAM-PLY IV®
Fiberglass Ply Sheet  3 plies

Interply Asphalt (Per 100 sq. ft.)  Approx. 69 lbs.
Surface Coat:  (Per 100 sq. ft.)
(1) Fibered Aluminum Coating  1-1/2 to 2 gals.
(2) Emulsion Coating  3 gals.
(3) Asphalt Glaze Coating  20 to 25 lbs.
(4) TAM-STAR or TAM-GUARD White Elastomeric Roof Coating  2 gals.

Slope: Positive drainage up to 3 in. per linear ft. For slopes above 1 in. per linear ft., fastening of the roofing felts 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 II* for slopes up to 1/2 in. and Type III for slopes up to 3 in.

Fiberglass Ply Sheets: Over the insulation, install 3 plies of TAM-PLY IV Fiberglass Ply Sheet in specification asphalt. Starting from the low point of the roof, apply a 1/3 m width, then a 2/3 m width, and 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.

Surface Coat: Coat the entire roof surface with Fibered Aluminum Roof Coating at a rate of 1-1/2 to 2 gals. per 100 sq. ft., or Emulsion Roof Coating at a rate of not less than 3 gals. per 100 sq. ft., or a surface grade hot asphalt using a minimum of 20 lbs. and a maximum of 25 lbs. per 100 sq. ft., or TAM-STAR or TAM-GUARD White Elastomeric Roof Coating at rate of 2 gals. per 100 sq. ft. Maintenance of the surface coating is required.

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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Material Requirements

**TAMKO TAM-PLY IV®**

**Fiberglass Ply Sheet**

4 plies

**Interply Asphalt (Per 100 sq. ft.)**

Approx. 92 lbs.

**Surface Coat:** (Per 100 sq. ft.)

1. Fibered Aluminum Coating 1-1/2 to 2 gals.
2. Emulsion Coating 3 gals.
3. Asphalt Glaze Coating 20 to 25 lbs.
4. TAM-STAR or TAM-GUARD White Elastomeric Roof Coating 2 gals.

**Slope:** Positive drainage up to 3 in. per linear ft. For slopes above 1 in. per linear ft., fastening of the roofing felts 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. Polysisocyanurate 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 II* for slopes up to 1/2 in. and Type III for slopes up to 3 in.

**Fiberglass Ply Sheets:** Over the insulation, install 4 plies of TAM-PLYIV Fiberglass Ply Sheet in specification asphalt. Starting from the low point of the roof, apply a 1/4 m width, a 1/2 m width, then a 3/4 m width. Follow with full 1 m widths, shingle fashion, lapping each ply 30-1/16 in. in such a manner so that at least 4 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.

**Surface Coat:** Coat the entire roof surface with Fibered Aluminum Roof Coating at a rate of 1-1/2 to 2 gals. per 100 sq. ft., or Emulsion Roof Coating at a rate of not less than 3 gals. per 100 sq. ft., or a surface grade hot asphalt using a minimum of 20 lbs. and a maximum of 25 lbs. per 100 sq. ft., or TAM-STAR or TAM-GUARD White Elastomeric Roof Coating at rate of 2 gals. per 100 sq. ft.

**Maintenance of the surface coating is required.**

**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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Material Requirements

**TAMKO TAM-PLY IV®**
Fiberglass Ply Sheet 4 plies

**TAMKO TAM-CAP®**
Fiberglass Mineral Surfaced Cap Sheet 1 ply
Interply Asphalt (Per 100 sq. ft.) Approx. 115 lbs.

**Slope:** Positive drainage up to 3 in. per linear ft. For slopes above 1 in. per linear ft., fastening of the roofing felts 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. Polysisocyanurate 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 II* for slopes up to 1/2 in. and Type III for slopes up to 3 in.

**Fiberglass Ply Sheets:** Over the insulation, install 4 plies of TAM-PLY IV Fiberglass Ply Sheet in specification asphalt. Starting from the low point of the roof, apply a 1/4 m width, a 1/2 m width, then a 3/4 m width. Follow with full 1 m widths, shingle fashion, lapping each ply 30-1/16 in. in such a manner so that at least 4 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.

**TAM-CAP:** Starting from the low point of the roof, apply 1 ply of TAM-CAP, side lapping each sheet 2 in. and end lapping 6 in. over the preceding sheets. Fully mop each sheet with specification asphalt at the rate of 23 lbs. (+15%) per 100 sq. ft. On slopes of 1 in. per foot or greater, nail adjacent to top edge on 12 in. centers. Nail the laps on 3 in. centers and mop the full width with specification asphalt. **NOTE:** Before application of TAM-CAP, cut it into 12 ft. to 18 ft. lengths and allow it to flatten and relax. Stagger the end laps. Alternately, installation by the “fly-in” or “mop and flop” method requires the installer to use a maximum of 12 ft. sections and to mop the 2 in. selvedge and the back of the TAM-CAP that will cover the selvedge.

**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 IARC as known or probable human carcinogens. The physical nature of the product(s) in this specification may help limit any

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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.

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Material Requirements

**TAMKO TYPE 43 Coated Base Sheet** or **BASE-N-PLY** Base Sheet
1 ply

**TAMKO TAM-PLY IV**
Fiberglass Ply Sheet
2 plies

**TAMKO TAM-CAP**
Fiberglass Mineral Surfaced Cap Sheet
1 ply

Interply Asphalt (Per 100 sq. ft.)
Approx. 69 lbs.

Clinch-type nails (Per 100 sq. ft.)
Approx. 100 Nails

Slope: Positive drainage up to 1-1/2 in. per linear ft. For slopes above 1 in. per linear ft., fastening of the roofing felts 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 II* for slopes up to 1/2 in. and Type III for slopes up to 1-1/2 in.

**TYPE 43 Coated Base Sheet or BASE-N-PLY Base Sheet:**
Starting at the low point of the roof, install 1 ply of TAMKO TYPE 43 Coated Base Sheet or BASE-N-PLY, side lapped 2 in. and end lapped 4 in. Apply at a right angle to the slope of the roof. 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. Nail BASE-N-PLY sheet 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. For specific fastening patterns for wind uplift listings, contact the Technical Services Department.

**Fiberglass Ply Sheets:**
Over the base ply, install 2 plies of TAM-PLY IV Fiberglass Ply Sheet in specification asphalt. Start with a 1/2 m width followed by full 1 m widths, shingle fashion, lapping each ply 20-11/16 over the preceding ply so that at least 2 plies cover the base ply at any point. Approximately 23 lbs. (+15%) of specification asphalt per 100 sq. ft. should be used to embed each ply.

**TAM-CAP Mineral Surfaced Cap Sheet:**
Starting at the low point of the roof, apply 1 ply of TAM-CAP, side lapping each sheet 2 in. and end lapping 6 in. over the preceding sheets. Fully mop each sheet with specification asphalt at the rate of 23 lbs. (+15%) per 100 sq. ft. On slopes of 1 in. per foot or greater, nail adjacent to top edge on 12 in. centers. Nail the laps on 3 in. centers and mop the full width with specification asphalt. NOTE: Before application of TAM-CAP, cut it into 12 ft. to 18 ft. lengths and allow it to flatten and relax. Stagger the end laps.

Alternately, installation by the “fly-in” or “mop and flop” method requires the installer to use a maximum of 12 ft. sections and to mop the 2 in. selvedge and the back of the TAM-CAP that will cover the selvedge.

**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.

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Material Requirements

TAMKO VAPOR-CHAN®
Fiberglass Venting Base Sheet 1 ply
TAMKO TAM-PLY IV®
Fiberglass Ply Sheet 4 plies
TAMKO TAM-CAP®
Fiberglass Mineral Surface Cap Sheet 1 ply
Interply Asphalt (Per 100 sq. ft.) Approx. 115 lbs.
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 1 in. per linear ft., fastening of the roofing felts 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 II* for slopes up to 1/2 in. and Type III for slopes up to 3 in.

VAPOR-CHAN: Starting at the low point of the roof, install 1 ply of 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.

Fiberglass Ply Sheets: Over the insulation, install 4 plies of TAMGLASS PREMIUM Fiberglass Ply Sheet in specification asphalt. Starting from the low point of the roof, apply a 1/4 m width, an 1/2 m width, then a 3/4 m width. Follow with full 1 m widths, shingle fashion, lapping each ply 30-1/16 in. in such a manner so that at least 4 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.

TAM-CAP: Starting from the low point of the roof, apply 1 ply of TAM-CAP, side lapping each sheet 2 in. and end lapping 6 in. over the preceding sheets. Fully mop each sheet with specification asphalt at the rate of 23 lbs. (+15%) per 100 sq. ft. On slopes of 1 in. per foot or greater, nail adjacent to top edge on 12 in. centers. Nail the laps on 3 in. centers and mop the full width with specification asphalt. NOTE: Before application of TAM-CAP, cut it into 12 ft. to 18 ft. lengths and allow it to flatten and relax. Stagger the end laps.

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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Material Requirements

**TAMKO TYPE 43 Coated Base Sheet or BASE-N-PLY® Base Sheet**
- 1 ply

**TAMKO TAM-PLY IV® Fiberglass Ply Sheet**
- 3 plies

**Interply Asphalt (Per 100 sq. ft.)**
- Approx. 69 lbs.

**Flood Coat Asphalt (Per 100 sq. ft.)**
- Approx. 60 lbs.

**Gravel (Per 100 sq. ft.)**
- Approx. 400 lbs.

**Clinch-type nails (Per 100 sq. ft.)**
- Approx. 100 Nails

**Slope:** Positive drainage up to 3 in. per linear ft. For slopes above 1 in. per linear ft., fastening of the roofing felts 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 II® for slopes up to 1/2 in. and Type III for slopes up to 3 in.

**TYPE 43 Coated Base Sheet or BASE-N-PLY® Base Sheet:** Starting at the low point of the roof, install 1 ply of TAMKO TYPE 43 Coated Base Sheet or BASE-N-PLY, side lapped 2 in. and end lapped 4 in. Apply at a right angle to the slope of the roof. 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. Nail BASE-N-PLY sheet 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. For specific fastening patterns for wind uplift listings, contact the Technical Services Department.

**Fiberglass Ply Sheets:** Over the base ply, install 3 plies of TAM-PLY IV Fiberglass Ply Sheet in specification asphalt. Starting from the low point of the roof, apply a 1/3 m width, then a 2/3 m width, and 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 base ply at any point. Approximately 23 lbs. (+15%) of specification asphalt per 100 sq. ft. should be used to embed each ply.

**Surfacing:** Apply a flood coat of 60 lbs. (+15%) of specification asphalt per 100 sq. ft. over the entire surface. While hot, embed approximately 400 lbs. of clean roofing gravel or 300 lbs. of slag per 100 sq. ft. of completed roof area.

**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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*Except in FL, TX, NM, AZ, CA*
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.

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Material Requirements

**TAMKO VAPOR-CHAN®**
Fiberglass Venting Base Sheet 1 ply

**TAMKO TAM-PLY IV®**
Fiberglass Ply Sheet 3 plies

Interply Asphalt (Per 100 sq. ft.) Approx. 69 lbs.
Flood Coat Asphalt (Per 100 sq. ft.) Approx. 60 lbs.
Gravel (Per 100 sq. ft.) Approx. 400 lbs.
Clinch-type nails (Per 100 sq. ft.) Approx. 100 Nails

**Slope:** Positive drainage up to 3 in. per linear ft. **For slopes above 1 in. per linear ft.,** fastening of the roofing felts 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 II* for slopes up to 1/2 in. and Type III for slopes up to 3 in.

**VAPOR-CHAN:** Starting at the low point of the roof, install 1 ply of 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.**

**Fiberglass Ply Sheets:** Over the base ply, install 3 plies of TAM-PLY IV Fiberglass Ply Sheet in specification asphalt. Starting from the low point of the roof, apply a 1/3 m width, then a 2/3 m width, and 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 base ply at any point. Approximately 23 lbs. (+15%) of specification asphalt per 100 sq. ft. should be used to embed each ply.

**Surfacing:** Apply a flood coat of 60 lbs. (+15%) of specification asphalt per 100 sq. ft. over the entire surface. While hot, embed approximately 400 lbs. of clean roofing gravel or 300 lbs. of slag per 100 sq. ft. of completed roof area.

**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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Material Requirements

TAMKO TYPE 43 Coated Base Sheet or BASE-N-PLY® Base Sheet 1 ply

TAMKO TAM-PLY IV®
Fiberglass Ply Sheet 3 plies
Interply Asphalt (Per 100 sq. ft.) Approx. 69 lbs.

Surface Coat: (Per 100 sq. ft.)
(1) Fibered Aluminum Coating 1-1/2 to 2 gals.
(2) Emulsion Coating 3 gals.
(3) Asphalt Glaze Coating 20 to 25 lbs.
(4) TAM-STAR or TAM-GUARD White Elastomeric Roof Coating 2 gals.

Clinch-type nails (Per 100 sq. ft.) Approx. 100 Nails

Slope: Positive drainage up to 3 in. per linear ft. For slopes above 1 in. per linear ft., fastening of the roofing felts 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 II* for slopes up to 1/2 in. and Type III for slopes up to 1 in.

TYPE 43 Coated Base Sheet or BASE-N-PLY® Base Sheet:
Starting at the low point of the roof, install 1 ply of TAMKO TYPE 43 Coated Base Sheet or BASE-N-PLY, side lapped 2 in. and end lapped 4 in. Apply at a right angle to the slope of the roof. 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. Nail BASE-N-PLY sheet 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. For specific fastening patterns for wind uplift listings, contact the Technical Services Department.

Fiberglass Ply Sheets: Over the base ply, install 3 plies of TAM-PLY IV Fiberglass Ply Sheet in specification asphalt. Starting from the low point of the roof, apply a 1/3 m width, then a 2/3 m width, and 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 base ply at any point. Approximately 23 lbs. (+15%) of specification asphalt per 100 sq. ft. should be used to embed each ply.

Surface Coat: Coat the entire roof surface with Fibered Aluminum Roof Coating at a rate of 1-1/2 to 2 gals. per 100 sq. ft., or Emulsion Roof Coating at a rate of not less than 3 gals. per 100 sq. ft., or a surface grade hot asphalt using a minimum of 20 lbs. and a maximum of 25 lbs. per 100 sq. ft., or TAM-STAR or TAM-GUARD White Elastomeric Roof Coating at rate of 2 gals. per 100 sq. ft. Maintenance of the surface coating is required.

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

U.L. Requirements:
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The following insulations are manufactured by companies who have read and responded to TAMKO’s requirements for insulations. This list IS NOT an approval or endorsement of the insulations with regard to any physical or thermal requirements. This list is subject to change.

Any roof insulation manufactured as a 4’ x 8’ board must be mechanically fastened according to the requirements of Factory Mutual, or contact the insulation manufacturer for their application recommendations.

For 15- and 20-year Roofing System Limited Warranties, TAMKO requires a minimum of 2 layers of insulation and the top layer must be adhered in hot asphalt.

If you need more information or clarification regarding TAMKO’s insulation requirements, contact the Technical Services Department at P. O. Box 1404, Joplin, MO 64802 • 1-800-641-4691 • www.tamko.com

<table>
<thead>
<tr>
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<th>PRODUCT NAME</th>
<th>GUARANTEE ELIGIBILITY</th>
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<tr>
<td>Cant Strip of America Phoenix, AZ</td>
<td>Fesco</td>
<td>Premium Coverage Roofing System NDL Guarantee</td>
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<td>GAF Corporation</td>
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<td>GAFTEMP Recover Board</td>
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