

TAMKO® TW METAL AND TILE

Underlayment

APPLICATION INSTRUCTIONS

THESE ARE THE APPLICATION INSTRUCTIONS FOR TAMKO METAL AND TILE UNDERLAYMENT. TAMKO BUILDING PRODUCTS, INC. SHALL NOT BE RESPONSIBLE FOR LEAKS OR OTHER ROOFING PROBLEMS RESULTING FROM IMPROPER APPLICATION. FAILURE TO PROPERLY APPLY THIS PRODUCT ACCORDING TO THESE INSTRUCTIONS COULD RESULT IN UNSAFE CONDITIONS AND COULD ADVERSLY AFFECT COVERAGE OF THE LIMITED WARRANTY.

SAFETY PRECAUTION

Personal fall protection devices must always be used when applying TAMKO TW METAL AND TILE UNDERLAYMENT. Moisture, frost or debris will decrease the traction while walking on TAMKO TW METAL AND TILE UNDERLAYMENT. PLEASE EXERCISE CAUTION DURING INSTALLATION.

SURFACE PREPARATION

To begin, remove any dust, dirt, loose nails or other protrusions from the deck of new roofs. Remove all shingles, roofing felt, nails, or other existing roofing materials and debris from the deck of existing roofs. Sweep thoroughly to remove any dust and dirt. For best application, apply TAMKO® TW Metal and Tile Underlayment only in fair weather and when air, substrate, and membrane temperatures are above 40°F. Priming is generally not required for surfaces that are smooth, clean, and dry. In any case where adhesion is found to be marginal, prime with TAMKO® TWP-1 or TWP-2 primers at the designated coverage rates. Priming is always required when adhering to concrete.

FOR ROOF DECKS

Apply TAMKO TW Metal and Tile Underlayment from low to high point in shingle fashion as shown below, so that laps will shed water. Overlap edge seams 4". End seams must be overlapped 6" and staggered. Where necessary, the membrane may be unrolled and cut into 10- to 15-foot lengths. Align the membrane on the lower edge of the roof. Remove the release film from the membrane then press the membrane into place. Roll lower edges firmly with a roofing seam roller; "Broom in" the installed membrane using an industrial flat broom or squeegee. Bear down on the installed membrane with the broom or squeegee to insure total, even adherence to the substrate. Care should be taken not to damage the surface when brooming.

FOR VALLEYS AND RIDGES

Where necessary, the membrane may be unrolled and cut into 4- to 6-foot lengths. Peel the release film and center sheet over valley or ridge. Drape and press sheet into place, working from the center of the valley or ridge outward in each direction. For valleys, apply the membrane starting at the lowest point and work upward. Overlap all sheets a minimum of 6 inches. The TW Metal and Tile Underlayment must be used on "closed valley" applications only. TW Metal and Tile Underlayment must not be left permanently exposed to the weather. It must be covered by roofing materials.

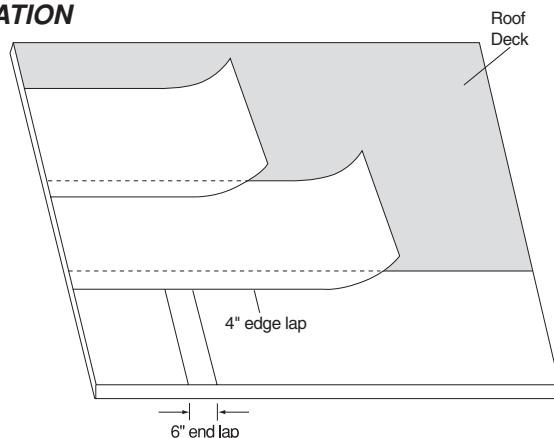
APPLICATION WITH ROLL LENGTH PARALLEL TO THE ROOF SLOPE

TAMKO TW Metal and Tile Underlayment may be applied with the long dimension of the roll running parallel to the roof slope in situations where the roof slope equals or exceeds 21 inches per foot. In these applications, side laps must be a minimum of 4" wide and formed so the smooth film selvage along one side of the roll is covered by the adjacent roll of TW Metal and Tile Underlayment. All side and end laps must be rolled with a roofing seam roller in addition to brooming the entire surface.

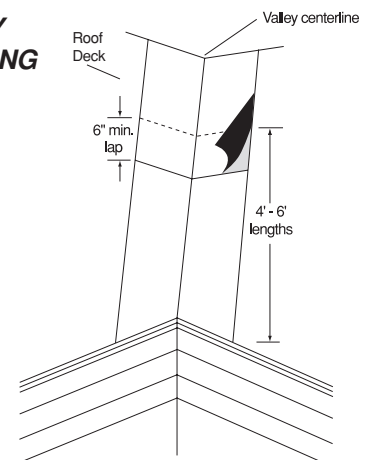
VENTILATION

A vapor retarding layer may result when TW Metal and Tile Underlayment is installed over an entire roof deck. Design of the entire roof system and the area immediately beneath the roof deck (e.g. attic, plenum, conditioned space) to properly address potential moisture and heat accumulation is the responsibility of a design professional (e.g. architect, engineer) and the building owner. Specific ventilation requirements expressed in applicable building codes or necessitated by the roof covering may apply and should be considered.

TW METAL AND TILE UNDERLAYMENT FIELD APPLICATION



VALLEY FLASHING DETAIL



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REPAIRING MINOR DAMAGE TO TW METAL AND TILE UNDERLAYMENT

Patch Repair: Minor damaged areas of TAMKO TW Metal & Tile Underlayment that are no larger than 4" by 4" in size can be repaired by installing a patch of TW Metal and Tile Underlayment extending a minimum of 12" beyond the damaged area on all sides.

End Lap Repair: Loose end laps no wider than 4" can be repaired by cutting and removing the loose material and applying a patch that extends 12" beyond the area on all sides.

Limitations stated previously in this Product Data Sheet still apply when conducting repairs.

A Patch Repair or an End Lap Repair must begin with removal of dust, dirt and other materials that may interfere with adhesion from the area receiving the patch. Sweep the area to receive the patch with a stiff nylon bristle broom, making sure all loose material is removed from the area to receive the patch. Remove or cut non-adhered, torn, or otherwise damaged membrane as necessary, creating a fully-adhered surface to receive the patch. The underlying substrate must not be damaged while performing a Patch Repair or an End Lap Repair.

In areas where available, prime the entire area receiving the patch with TAMKO TWP-1 Quick Dry Primer at the recommended application rate to enhance adhesion (refer to the TWP-1 Quick Dry Primer Product Data Sheet). Allow the primer to cure prior to installation of the TW Metal and Tile Underlayment patch. Install the TW Metal and Tile Underlayment patch. Apply sufficient pressure using a broom or roofing seam roller to promote adhesion to the underlying material. Seal the edges of the patch by applying a bead of compatible polyurethane sealant; smooth the bead with a trowel. Select a sealant suitable for use with rubberized asphalt per the sealant manufacturer's written application instructions.

IMPORTANT:

Tiles can slide during roof loading and until properly fastened. In order to protect TW Metal and Tile Underlayment from damage, care must be taken to insure stability of stacked tiles. Fasteners and batten strips must be used when installing tiles over TW Metal and Tile. TAMKO requires the fastening of every tile in addition to mortar or adhesive, or foam regardless of the slope. These are TAMKO's minimum requirements. State and local registrations may contain additional requirements.



CAUTION: This product contains crystalline silica and formaldehyde. Crystalline silica and formaldehyde have been classified as "known" human carcinogens by the International Agency for Research on Cancer and the National Toxicology Program. This product contains asphalt. The National Institute for Occupational Safety and Health has concluded that the fumes of heated roofing asphalt are a potential occupational carcinogen. The physical nature of this product 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 this product. Take precautions to prevent breathing and contact with skin.

For questions about TAMKO TW METAL AND TILE UNDERLAYMENT or its application, contact TAMKO's Technical Services Department at 800-641-4691

This product data sheet and application instructions were current at time of printing. To obtain a copy of the most current version of this product data sheet and application instructions, visit us online at tamko.com or call us at 800-641-4691.

This product is covered by a 5-year limited warranty. For information regarding or a copy of TAMKO's limited warranty, contact your local TAMKO representative, visit us online at tamko.com, or call us at 800-641-4691.

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PRODUCT DATA

IMPORTANT: This product features a skid resistant and tear resistant surface. This feature does not serve as a substitute for following all proper fall protection procedures in accordance with OSHA regulatory requirements - including the use of personal fall protection devices when working on a roof. **Applicator safety is of utmost importance.**

DESCRIPTION

TAMKO® TW Metal and Tile Underlayment is a flexible, fiberglass reinforced, self-adhering rubberized asphalt sheet membrane with a polymer film on the surface and a removable treated release film on the adhesive side.

USES

TAMKO TW Metal and Tile Underlayment is well-suited for use as an underlayment where prevention of water penetration is required prior to installation of a metal roof system or a mechanically fastened tile roof system*. TW Metal and Tile Underlayment also provides secondary protection against water penetration after installation of the roof system. When fasteners penetrate the TW Metal and Tile Underlayment membrane during installation of a metal roof system, the metal roof system manufacturer's recommendations must be followed for watertight integrity at the fastener penetrations.

*Before installing TW Metal and Tile Underlayment under copper roofing, a design professional must be consulted to analyze the interaction of the building, roof deck, and roof assembly with regards to adequate temperature resistance.

ADVANTAGES

- Textured surface provides skid resistance.
- Strong fiberglass reinforcement for added stability during installation.
- Split treated release film for easier installation.
- Adheres to plywood, OSB, exterior gypsum sheathing, DensGlass®, DensGlass Gold®, felt-faced and foil-faced polyisocyanurate foam insulation, metal, cast-in-place concrete, or pre-cast concrete surfaces.
- Meets ASTM D 1970 for nail sealability of self-adhering roofing underlayments.
- Can be left exposed for up to 120 days before application of finished roof.
- ICC-ES ESR-1252
- Florida Building Code Approval # FL 12328

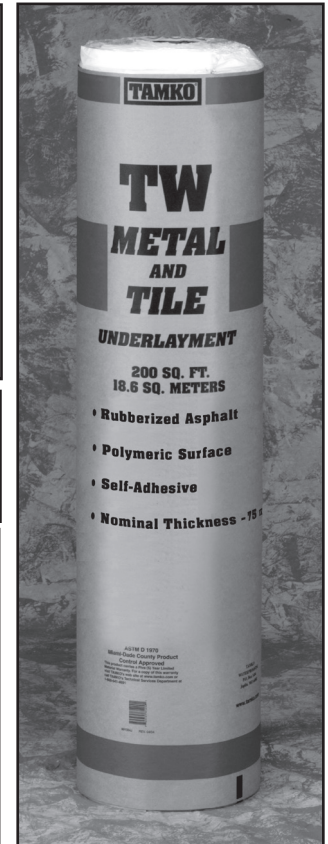
LIMITATIONS

- Membrane must not be applied to damp, frosty or contaminated surfaces.
- Membrane must not come into contact with products containing coal-tar pitch.
- Must be applied at temperatures of 40°F and higher.

PRODUCT DATA**

Roll Size	2 square (200 sq. ft.) <i>The coverage before overlaps as required by the instructions.</i>
Roll Coverage	179.82 sq. ft. (16.71 square meters) <i>When applied according to instructions (excluding side lap).</i>
Roll Dimensions	39-3/8" x 61'
Thickness	75 mil
Rolls Per 37" x 47" Pallet	25 rolls

**All values stated as nominal.



TYPICAL PHYSICAL PROPERTIES

Property	Test Method	Typical Value
Adhesion to Plywood at 75°F	ASTM D 1970	15 lbf/ft width (min.)
Moisture Vapor Permeability	ASTM E 96 (BW)	0.05 perms (max.)
Air Permeance ($\Delta P = 75$ Pa)	ASTM E 2178	<0.0005 L/s-m ² (<0.0001 CFM/ft ²)
Maximum Load	ASTM D 1970	30 lbf/in.
Elongation Modified Bitumen Portion	ASTM D 1970	40%
Low Temp. Flexibility	ASTM D 1970	-20°F