

# TAMKO® TW-60

## Self-Adhering Sheet Waterproofing Membrane

PRODUCT DATA

### DESCRIPTION

TAMKO® TW-60 is a flexible, self-adhering rubberized asphalt sheet membrane with a polymer film on the surface and a removable treated release film on the adhesive side.

### USES

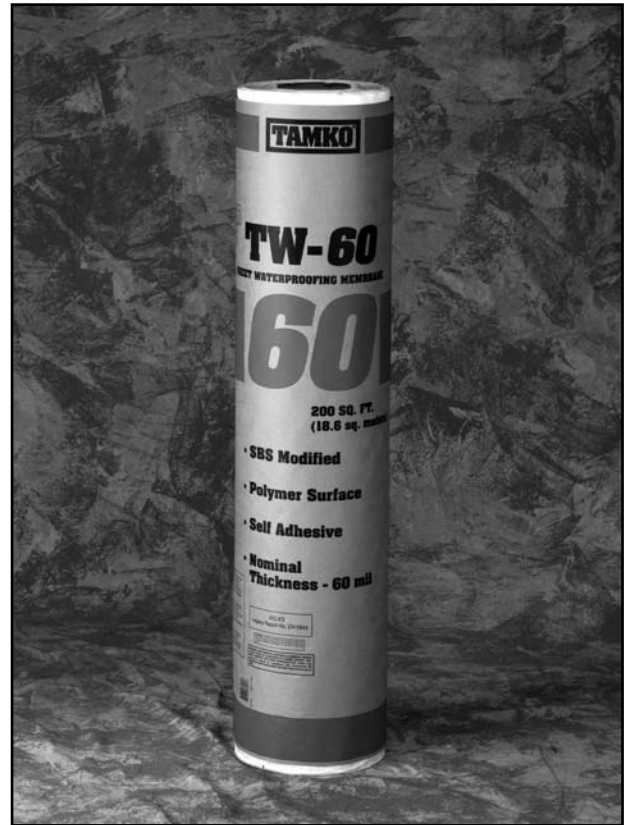
TW-60 is especially well suited for below-grade waterproofing of foundation walls, tunnels, earth shelters, and similar structures. TW-60 is also suitable for waterproofing plaza decks, parking decks, balconies, and terraces.

### ADVANTAGES

- Excellent tensile, elongation, and permeance characteristics.
- Rubberized asphalt sheet and polymer surfacing provide superior waterproofing protection.
- Treated release film for easier installation and handling.
- Available in factory pre-cut widths of 6", 9", 12", 18", and 39-3/8" rolls.
- High temperature resistance up to 240°F.
- ICC-ES ESR-2260.

### LIMITATIONS

- Membrane or primer must not be applied to damp, frosty or contaminated surfaces.
- Membrane must not be left exposed to sunlight for more than 30 days.
- Membrane must not come into contact with products containing coal-tar pitch.
- Best applied between the temperatures of 35°F and 90°F.



### PRODUCT DATA\*

Asphalt Modifier	SBS		
Product Thickness	60 mil		
<b>Roll Width</b>	<b>Roll Size</b>	<b>Coverage per Ctn.</b>	<b>Rolls per ctn.</b>
6"	6" x 61'	183 sq. ft.	6
9"	9" x 61'	183 sq. ft.	4
12"	12" x 61'	183 sq. ft.	3
18"	18" x 61'	183 sq. ft.	2
39-3/8"	39-3/8" x 61'	200 sq. ft.	1 roll/wrapper

\*All values stated as nominal at time of manufacture.

### TYPICAL PHYSICAL PROPERTIES

Property	Test Method	Typical Value
Tensile, Membrane	ASTM D 412 (C)	425 psi
Tensile, Film	ASTM D 882	6300 psi
Elongation**	ASTM D 412 (C)	600% (min.)
Permeance	ASTM E 96 (BW)	0.05 perms (max.)
Low Temp. Flexibility	ASTM D 1970 (modified) <sup>1</sup>	Unaffected @ -20°F
Crack Cycling (100 cycles)	ASTM C 836	Unaffected @ -15°F
Peel Strength	ASTM D 903	9.0 lb/in. width (min.)
Lap Adhesion	ASTM D 1876	5.5 lb/in. width
Puncture Resistance	ASTM E 154	60 lb. (min.)
Hydrostatic Head	ASTM D 5385	231 ft. (min.)
Resistance to Soil Organisms (Fungi)	ASTM E 154	No effect (Permeability)

\*\*% elongation to ultimate failure of rubberized asphalt membrane.

<sup>1</sup> Testing done using the procedure in ASTM D 1970 with adhesive side away from the mandrel.

# **TAMKO® TW-60**

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### **APPLICATION INSTRUCTIONS**

#### **SURFACE PREPARATION**

##### **Concrete-**

The surface must be dry and have a smooth (not broomed) finish and be free of form release agents, voids and sharp protrusions. Forms should be removed as quickly as possible. On a horizontal deck do not apply membrane when forms are in place, unless the forms are vented. Concrete should be allowed to cure for a minimum of 7 days. Curing agents containing wax, oil, or pigment should not be used. Any holes or voids must be repaired with non-shrink grout. Cracks greater than 1/16" in width shall be cut out to a minimum of 1/4" with a minimum depth of 1/4" and sealed using a sealant suitable for use with rubberized asphalt per sealant manufacturer, prior to the installation of the sheet membrane. **Note: On masonry surfaces mortar joints must be flush to the face of the concrete block or brick and have a thorough parge coat.**

##### **Expanded / Extruded Polystyrene (EXP/XPS) or Insulated Concrete Forms (ICF)-**

Ultraviolet radiation in sunlight causes a rapid deterioration of the EPS surface which can create a chalky or dusty layer which could interfere with the membrane adhesion. If this occurs, or if the surface of the EPS is dirty, brush off the excess dirt and dust to provide a clean dry surface for the application of the membrane. Joints and voids in the surface over 1/4" should be filled with non-shrink grout, expandable foam or compatible crack filler.

##### **Priming-**

Priming is required on concrete and masonry surfaces, but may not be necessary on EPS/XPS and ICF surfaces that are clean and dry and have not developed a dusty layer due to sun exposure. Select either TWP-1\*\*\* Primer or TWP-2 Water-Based Primer, as appropriate, for the surface to be primed. DO NOT USE products containing solvents on EPS/XPS or ICF surfaces. Thoroughly mix the primer. Apply at recommended coverage rates with a sprayer or long nap roller and allow to dry as specified in the primer's application instructions. Drying times may vary according to weather conditions.

##### **Flashing-**

All penetrations and drains must be flashed with TW-60 membrane, extending the membrane a minimum of 6" on all sides. All cracks and joints must be sealed with a sealant suitable for use with rubberized asphalt per sealant manufacturer, and flashed with a 12" wide strip of TW-60 membrane centered on the axis of the corners.

#### **HORIZONTAL APPLICATION**

Starting at the low point of the surface and working to the high point, install TW-60 membrane by simultaneously rolling the sheet into place while removing the release film. Side laps should be 2 1/2", and end laps should be 5". Stagger all end laps. All terminating edges should be sealed with TWM-1 Mastic. Roll the entire membrane as soon as possible with a minimum 75 lb. garden roller wrapped with indoor/outdoor carpet.

Before the application of a protection layer, all horizontal applications should be flood tested with a minimum 2" head of water for 24 hours. Check for leaks and make repairs immediately. Before flood testing be sure the structure is capable of withstanding the dead load of the water. Re-test after repairs have been made.

When TAMKO TW-60 is utilized as a waterproofing membrane in accordance with TAMKO Waterproofing Construction Detail TW-10 "Typical Balcony / Entry / Breezeway Outside Edge Detail" flood testing of the installation is considered good practice. The decision regarding necessity of a flood test is the responsibility of a design professional. When utilizing TW-60 as a waterproofing membrane on horizontal applications for balconies - the balcony must have a built-in positive slope away from the wall.

#### **VERTICAL APPLICATION**

Install TW-60 Sheet Membrane in lengths of 8' or less. Overlap edge seams 2 1/2". On walls above 8', apply in 8' sections, starting at the lowest point with the higher section overlapping the lower section 5". Use heavy hand pressure or a suitable roller to press membrane firmly against wall.

##### **Terminations when applying to a concrete surface:**

TW-60 sheet should be installed over the top of a wall or over the edge of a slab. If the membrane must terminate on a vertical surface, use a reglet or counter flashing. Press terminating edge firmly with a hammer handle or similar tool. Apply TWM-1 Mastic to all terminating edges.

TW-60 Sheet Membrane shall be installed on the base of the foundation wall, over the edge of the footing and the terminating edge pressed firmly against the vertical surface of the footing. Apply TWM-1 Mastic to all terminating edges including both vertical and horizontal.

*Note: Failure to use adequate pressure at terminating edges will result in poor seal, potential leak and may affect coverage under the limited warranty. The use of mastic is not a substitute for a good seal.*

##### **Terminations when applying to EPS / XPS and ICF:**

Apply a thick (min 3/8") bead of sealant suitable for use with rubberized asphalt and EPS / XPS and/or ICF per sealant manufacturer, at the termination of the waterproofing membrane and smooth with a putty knife to seal the termination. A non-deteriorating termination bar is required at the head of the waterproofing membrane.

#### **MEMBRANE PROTECTION**

Vertical surfaces must be protected immediately following installation of the membrane. Horizontal surfaces should be protected immediately following the 24 hour flood test. If the flood test is delayed, a temporary protection layer must be installed to protect the membrane from future operations and other trades. When TW-60 is utilized as a waterproofing membrane in accordance with TAMKO Waterproofing Construction Detail TW-10 "Typical Balcony / Entry / Breezeway Outside Edge Detail" flood testing of the installation is considered good practice. The decision regarding necessity of a flood test is the responsibility of a design professional.

##### **\*\*\*WARNINGS AND HAZARDS**

TWP-1 contains combustible solvents. Avoid exposure to sparks, open flame, heat, and other forms of ignition. Use in well-ventilated areas. Avoid breathing vapors. Refer to MSDS for detailed product information and warnings.

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PRODUCT DATA

### APPLICATION INSTRUCTIONS

(CONTINUED)

#### PROTECTION COURSE FOR USE WITH TAMKO TW-60 WATERPROOFING MEMBRANE

##### Horizontal Application Protection Course

TAMKO recommends the use of TAMKO TWH-1 Horizontal Protection Course in situations where membrane protection is required in TAMKO's application instructions. Another manufacturer's protection course that is designed for horizontal installations can be used in conjunction with TAMKO's TW-60 waterproofing membrane provided the minimum requirements shown below are satisfied.

##### Vertical Application Protection Course

For vertical applications where membrane protection is required in TAMKO's application instructions, another manufacturer's protection course that is designed for vertical installations may be used in conjunction with TAMKO's TW-60 waterproofing membrane, provided the minimum requirements shown below are satisfied.

##### Protection Course Minimum Requirements

**Asphalt composition boards** used as protection course shall comply with ASTM D6506 Standard Specification for Asphalt Based Protection Board for Below-Grade Waterproofing.

**Cellular polystyrene insulation** used as protection course shall comply with ASTM C578 Specification for Rigid, Cellular Polystyrene Insulation, Types IV, V, VI, VII, X, or XII.

**Fan-folded extruded polystyrene insulation** used as protection course shall have compressive strength exceeding 15 psi when tested in accordance with ASTM D1621 Test Method for Compressive Properties of Rigid Cellular Plastics and maximum water absorption of 0.4% when tested in accordance with ASTM C272 Test Method for Water Absorption of Core Materials for Structural Sandwich Constructions.

**Plastic drainage panels** used as protection course shall have puncture strength exceeding 50 lbs when tested in accordance with ASTM D4833 Test Method for Index Puncture Resistance of Geotextiles, Geomembranes, and Related Products.

##### BACK FILL

Back fill must be clean fill with no rocks, pails or wood. After back fill is in place, it must be tamped with a tamper to compress the fill.

#### REPAIRING MINOR DAMAGE TO THE TW-60 MEMBRANE

##### Patch Repair:

Minor damaged areas of TAMKO TW-60 Membrane that are no larger than 4" by 4" in size (e.g. tears, holes, fishmouths, and delaminations) can be repaired by installing a patch of TW-60 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.

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. 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.

Install the TW-60, applying sufficient pressure by hand or with a roofing seam roller to promote adhesion to the underlying material. Seal the edges of the patch by applying a 1/4" to 3/8" bead of TWM-1 mastic; smooth the bead with a trowel.

#### INSTALLATION OF TW-60 OVER PREVIOUSLY INSTALLED LAYER OF TW-60

A second layer of TAMKO TW-60 Self-Adhering Sheet Waterproofing Membrane may be applied over an existing layer of TW-60 provided that appropriate surface preparation of the existing material is successfully accomplished.

As required for direct installation to a substrate, the surface of the existing layer must be free of dust, dirt and other materials or conditions that could interfere with adhesion of the second layer. Irregularities in the installed TW-60 must be corrected prior to installation of the second layer; this includes removing or cutting non-adhered, torn, or otherwise damaged membrane or surface film. Take care to prevent damage to underlying substrates, such as insulated concrete forms, with these types of corrections. Side and end laps of the second layer must not coincide with side and end laps of the first layer.

The decision for surface suitability of the first layer is subjective and rests with the applicator; TAMKO assumes no responsibility for improper application (refer to TAMKO Waterproofing Limited Warranty) of the first or second layer, including improper application due to poor adhesion from an improper surface.

Upon installation of the second layer of TW-60, the first layer of TW-60 is recognized as part of the assembly substrate and considered "sold AS IS" and without warranty of any kind.

Failure to properly apply TAMKO TW-60 Self-Adhering Sheet Waterproofing Membrane according to the Application Instructions may affect coverage under the applicable 5-year limited warranty.

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**CAUTION:** This product 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. 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.

Information included in this product data sheet was current at time of printing. To obtain a copy of the most current version of this product data sheet, visit us online at [tamko.com](http://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](http://tamko.com), or call us at 800-641-4691.

[tamko.com](http://tamko.com)

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