

**SECTION 071326**

**TW-60 Self-Adhering Sheet Waterproofing Membrane**



This three-part specification is for design professionals for use as a guide and must be edited to delete information and instructions not required on a particular project. Delete the "specifier notes" in red once the editing is completed. The design professional and not TAMKO is responsible for the final specification.

Rev 8/23/17

## SECTION 071326

### TW-60 Self-Adhering Sheet Waterproofing Membrane

#### PART I GENERAL

##### 1.01 SECTION INCLUDES

- A. Rubberized Asphalt Sheet Membrane Waterproofing System

##### 1.02 RELATED SECTIONS

\*\*\*Note: Delete sections below not relevant to this project\*\*\*

- A. Section 33 46 00 – Subdrainage
- B. Section 03 30 00 – Cast in Place Concrete
- C. Section 04 20 00 – Unit Masonry
- D. Section 07 95 00 – Expansion Control
- E. Section 07 11 00 – Dampproofing
- F. Section 07 60 00 – Flashing and Sheet Metal
- G. Section 07 92 00 – Joint Sealants
- H. Section 15400 – Drains

##### 1.03 REFERENCES

\*\*\*Note: Delete references below not relevant to this project\*\*\*

- A. American Society for Testing and Materials (ASTM) International - Annual Book of ASTM Standards
  1. ASTM D412 – Standard Test Methods for Vulcanized Rubber and Thermoplastic Elastomers-Tension.
  2. ASTM E96 – Standard Test Methods for Water Vapor Transmission of Materials.
  3. ASTM C836 – Standard Specification for High Solids Content, Cold Liquid-Applied Elastomeric Waterproofing Membrane for use with Separate Wearing Course.
  4. ASTM E154 – Standard Test Methods for Water Vapor Retarders used in contact with Earth Under Concrete Slabs, on Walls, or as Ground Cover.
  5. ASTM D5385 – Standard Test Method for Hydrostatic Pressure Resistance of Waterproofing Membranes.
- B. Sheet Metal & Air Conditioning Contractors' National Association (SMACNA) - Architectural Sheet Metal Manual.
- C. American Society of Civil Engineers (ASCE).

##### 1.04 DEFINITIONS

- A. Terminology: Refer to ASTM D1079 – Standard Terminology Relating to Roofing and Waterproofing and the glossary of the National Roofing Contractors Association (NRCA) Roofing and Waterproofing Manual for definitions of terms related to this section.

## SECTION 071326

### TW-60 Self-Adhering Sheet Waterproofing Membrane

#### 1.05 SUBMITTALS

\*\*\*Note: Delete sections below not relevant to this project and delete show drawing paragraph unless unusual project conditions mandate shop drawings\*\*\*

- A. Product Data: Provide copies of manufacturer's product data information and samples for each type of membrane product.
- B. Manufacturers Application Instructions: Provide manufacturer's application instructions that indicate preparation required, installation procedures, and detail drawings.
- C. Shop Drawings: Provide drawings to indicate specially configured metal flashing, jointing methods and locations and installation details as required by project conditions indicated.

#### 1.06 MANUFACTURER & CONTRACTOR QUALIFICATIONS

- A. Manufacturer Qualifications: Provide all primary membrane products, including sheet waterproofing membrane, primers and mastics offered by a single manufacturer.
- B. Installer Qualifications: Installer must be licensed or otherwise authorized by all federal, state and local authorities for installation of all membrane products to be installed under this section.

#### 1.07 REGULATORY REQUIREMENTS

- A. Install all membrane products in accordance with all applicable federal, state and local building codes.
- B. All work shall be performed in a manner consistent with current OSHA guidelines.

#### 1.08 PREINSTALLATION MEETING

\*\*\*Note: Delete sections below not relevant to this project\*\*\*

- A. General Contractor: may conduct a pre-installation meeting at the site prior to commencing work of this section: Require attendance of entities directly concerned with membrane installation.
- B. Agenda: Installation procedures; safety procedures; coordination with installation and other work; availability of waterproofing materials; regulatory requirements; preparation and approval of substrate and penetrations through waterproofing; and other items related to successful execution of work.
- C. Maintain one copy of manufacturer's application instructions and SDS sheet on the project site.

#### 1.09 DELIVERY, STORAGE, AND HANDLING

\*\*\*Note: Delete sections below not relevant to this project\*\*\*

- A. Deliver product and other materials to site in manufacturer's unopened labeled packaging. Promptly verify quantities and conditions. Immediately remove damaged products from site.

## SECTION 071326

### TW-60 Self-Adhering Sheet Waterproofing Membrane

- B. Store all products in manufacturer's unopened, labeled packaging until they are ready for installation.
- C. Store rolls on a flat surface. Maximum stacking height shall not exceed TAMKO's recommendations. Store all rolls on end and do not double stack pallets.
- D. Store and dispose of solvent-based materials in accordance with all applicable federal, state and local regulations.
- E. Store products in weather protected environment out of direct sunlight, below 90°F, above 32°F clear of ground and moisture. All waterproof tarps shall be opaque.

#### 1.10 WEATHER CONDITIONS

- A. Proceed with work only when existing and forecasted weather conditions will permit work to be performed in accordance with TAMKO's application instructions.
- B. Membrane must not be left exposed to sunlight for more than 30 days after installation.

#### 1.11 LIMITED WARRANTY AND ARBITRATION AGREEMENT

**WATERPROOFING PRODUCTS BEGIN TO AGE AS SOON AS THEY ARE EXPOSED TO NATURE. BUILDINGS EXPERIENCE AGING FACTORS DIFFERENTLY, SO IT IS DIFFICULT TO PREDICT HOW LONG WATERPROOFING PRODUCTS WILL LAST. THAT'S WHY TAMKO PROVIDES A LIMITED WARRANTY THAT INCLUDES A BINDING ARBITRATION CLAUSE AND OTHER TERMS AND CONDITIONS WHICH ARE INCORPORATED HEREIN BY REFERENCE. YOU MAY OBTAIN A COPY OF THE LIMITED WARRANTY AT TAMKO.COM OR BY CALLING 1-800-641-4691.**

**\*\*\*Note: Choose Limited Warranty Option and delete sections not required \*\*\***

**\*\*\*IMPORTANT NOTE: THIS SECTION IS FOR INFORMATIONAL PURPOSES ONLY AND DOES NOT SUPERCEDE, ALTER OR LIMIT THE LIMITED WARRANTY AND ARBITRATION AGREEMENT. Contact TAMKO Building Products, Inc. for a copy of the Limited Warranty and Arbitration Agreement and carefully read the Limited Warranty for complete and detailed limited warranty information\*\*\***

- A. **Manufacturer's Limited Warranty:** Provide to the owner a TAMKO® Waterproofing, Fenestration Flashings, Underlayment's and Accessories Limited Warranty and Arbitration Agreement for the product listed below which includes a binding arbitration provision.
  1. TAMKO® TW-60 Self-Adhering Sheet Waterproofing Membrane: TAMKO Waterproofing, Fenestration Flashings, Underlayment's and Accessories Limited Warranty and Arbitration Agreement. Available at [www.tamko.com](http://www.tamko.com)
  2. Term: The period of time this Limited Warranty lasts is five (5) years for TW-60 Self-Adhering Sheet Waterproofing Membrane.
  3. The limited warranty does not cover any cost or expenses associated with removal, excavation, or replacement of concrete or other materials in connection with the testing, repair, removal, or replacement of the product.
  4. Exclusions: **See TAMKO® Waterproofing, Fenestration Flashing, Underlayment's and Accessories Limited Warranty and Arbitration Agreement for exclusions and other important details.** Contact TAMKO for a copy of the Limited Material Warranty.

## PART II PRODUCTS

### 2.01 MANUFACTURERS – TAMKO® TW-60 Self-Adhering Sheet Waterproofing Membrane

## SECTION 071326

### TW-60 Self-Adhering Sheet Waterproofing Membrane

\*\*\*Note: Delete sections below not relevant to this project\*\*\*

- A. Acceptable Manufacturer: TAMKO Building Products, Inc., 220 West 4th Street, Joplin, MO 64801. Toll Free: 1-800-641-4691.
- B. Requests for substitutions will be considered in accordance with provisions of Section 01600.

#### 2.02 MASTIC

\*\*\*Note: Select All Applicable Products and delete products not required \*\*\*

- A. **TAMKO® TWM-1 Mastic:** Trowel grade, rubberized bitumen mastic that dries to a pliable seal allowing for minor expansion and contraction.

#### 2.03 PRIMERS

\*\*\*Note: Select All Applicable Products and delete products not required\*\*\*

- A. **TAMKO® TWP-1 Primer:** Quick dry, rubberized waterproofing primer formulated for the waterproofing contractor. Features a red tint to identify areas that have been primed with TWP-1 when compared to areas that have not been primed.
- B. **TAMKO® TWP-2 Primer:** Water based, rubberized waterproofing primer formulated for the waterproofing contractor.

### PART III EXECUTION

\*\*\*IMPORTANT NOTE: THIS SECTION IS FOR INFORMATIONAL PURPOSES AND DOES NOT SUPERCEDE, ALTER OR LIMIT THE MANUFACTURER'S INSTALLATION INSTRUCTIONS. For a copy of the applicable installation instructions for complete and detailed product installation information visit our web site at [www.tamko.com](http://www.tamko.com) or contact TAMKO at 800-641-4691.\*\*\*

#### 3.01 EXAMINATION

- A. Examine substrates, areas and conditions, with installer present for compliance with requirements for installation tolerances and other conditions affecting performance.
  - 1. The surface must be dry and have a smooth (not broomed) finish and be free of form release agents, voids and sharp protrusions.
- B. Proceed with installation only after unsatisfactory conditions have been corrected.
- C. If preparation is the responsibility of another installer, notify the architect or building owner of unsatisfactory preparation before proceeding.

#### 3.02 PREPARATION

\*\*\* Note: New Construction \*\*\*

- A. 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

## SECTION 071326

### TW-60 Self-Adhering Sheet Waterproofing Membrane

suitable for use with rubberized asphalt per sealant manufacturer, prior to the installation of the sheet membrane.

- B. Concrete must be properly cured and dry. Curing time is a minimum of 7 days for normal structural concrete and a minimum of 14 days for lightweight structural concrete. Curing agents containing wax, oil, or pigment should not be used.
- C. Masonry (CMU) surfaces must have a thorough parge coat and mortar joints must be flush to the face of the concrete block or brick, and have a thorough parge coat.
- D. 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.
- E. Expanded/Extruded Polystyrene (EPS/XPS) or Insulated Concrete Forms (ICF). Ultraviolet radiation in sunlight causes a rapid deterioration of the surface of these materials which can create a chalky or dusty layer which could interfere with membrane adhesion. If this occurs, or if the surface is dirty, brush off all dirt and dust to provide a clean dry surface for the application of the membrane. Joints and voids in the surface over ¼" wide should be filled with non-shrink grout, expandable foam or compatible crack filler.

#### 3.03 PRIMING

- A. Priming is required on concrete, masonry, metal, EPS/XPS and ICF surfaces. Thoroughly mix the primer. Apply at recommended coverage rates with a sprayer or long nap roller and allow drying as specified in the primer's application instructions.
  - 1. TAMKO® TWP-1 Primer: Apply primer to a properly prepared, clean surface. All surfaces that are to receive a waterproofing membrane shall be primed at the rate of 250 to 300 sq. ft. per gallon. Apply an even coat, and allow drying. Refer to manufacturer's written application instructions for specific application rates and drying time.
  - 2. TAMKO® TWP-2 Primer: Apply primer to a properly prepared, clean surface. All surfaces that are to receive a waterproofing membrane shall be primed at the rate of 350 to 400 sq. ft. per gallon. Apply an even coat, and allow drying. Refer to manufacturer's written applications instructions for specific application rates and drying time.

\*\*\*Warning: DO NOT USE TWP-1 Primer or products containing solvents on EPS/XPS or ICF surfaces.

#### \*\*\*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 SDS for detailed product information and warnings. SDS information is available online at [tamko.com](http://tamko.com), or by calling TAMKO's Technical Services Department at 1-800-641-4691.

#### 3.04 APPLICATION

\*\*\*IMPORTANT NOTE: THIS SECTION IS FOR INFORMATIONAL PURPOSES AND DOES NOT SUPERCEDE, ALTER OR LIMIT THE MANUFACTURER'S INSTALLATION INSTRUCTIONS. For a copy of the applicable TAMKO installation instructions for complete and detailed product installation information visit our web site at [www.tamko.com](http://www.tamko.com) or contact TAMKO at 800-641-4691.\*\*\*

## SECTION 071326

### TW-60 Self-Adhering Sheet Waterproofing Membrane

- A. 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 strip of TW-60 membrane centered on the crack and extending a minimum of 6" beyond the crack on all sides.
- B. Horizontal: Starting at the low point of the surface and working to the high point, install the sheet waterproofing membrane by simultaneously rolling the sheet into place while removing the release film. Side laps should be a minimum of 2 1/2", and end laps should be a minimum of 5". Stagger all end laps. All edges terminating on a surface other than the waterproofing membrane should be sealed with TWM-1 Mastic or another compatible termination sealant. Roll the entire membrane as soon as possible with a minimum 75 lb. hard-surface or rubber-faced roller.
  - 1. When utilizing the waterproofing membrane for balconies and breezeways, roll membrane with a suitable hard-surface or rubber-faced roller. Incorporate proper drainage to prevent standing water by building in positive slope away from the wall. In situations where use of adequate slope to ensure drainage is not a feasible design option, install TAMKO® TW-60 Sheet Waterproofing Membrane with a minimum 5" lap at all junctions, thoroughly roll all laps, and seal all terminating edges with a sealant suitable for use with rubberized asphalt per sealant manufacturer. Alternatively, install TW-60 with a minimum 8" lap at all junctions and thoroughly roll all laps.
- C. Vertical: Install waterproofing membrane in lengths of 8' or less. Overlap edge seams a minimum of 2 1/2". On walls greater than 8' apply in 8' sections, starting at the lowest point with the higher section overlapping the lower section a minimum of 5". Use heavy hand pressure or a suitable roller to press membrane firmly against wall and to seal all overlaps.

#### 3.05 TERMINATIONS

- A. Concrete or Masonry Surfaces: 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, termination bar, or counter flashing. Press terminating edge firmly with a hammer handle, roller, or similar tool. Apply TWM-1 Mastic or another compatible termination sealant to all edges terminating on a surface other than TW-60.

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 or another compatible termination sealant to all terminating edges including both vertical and horizontal.

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

- B. EPS/XPS and ICF Surfaces: Press terminating edge firmly with a hammer handle, roller or similar tool. 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. Use a non-deteriorating termination bar or counter flashing at the head of the waterproofing membrane.

**\*\*\*Warning: DO NOT USE TWM-1 Mastic on EPS/XPS or ICF surfaces.**

## SECTION 071326

### TW-60 Self-Adhering Sheet Waterproofing Membrane

#### 3.06 MEMBRANE PROTECTION

\*\*\*IMPORTANT NOTE: THIS SECTION IS FOR INFORMATIONAL PURPOSES AND DOES NOT SUPERCEDE, ALTER OR LIMIT THE MANUFACTURER'S INSTALLATION INSTRUCTIONS. For a copy of the applicable installation instructions for complete and detailed product installation information visit our web site at [www.tamko.com](http://www.tamko.com) or contact TAMKO at 800-641-4691.\*\*\*

- A. Protection of the waterproofing membrane on vertical and horizontal surface is required immediately after installation with an appropriate protection course. For balcony and breezeway installations, use of protection course is not required.

#### 3.07 CLEAN UP

- A. In areas where adjacent finished surfaces are soiled by work of this section, consult manufacturer of surfaces for cleaning advice and conform to their documented instructions. Remove all debris, tools and equipment.

END OF SECTION