

INSTALLATION GUIDE

# LIQUID WATERPROOF MEMBRANE

## BENEFITS

- **GREEN FRIENDLY** - water-based formula
- **ELASTOMERIC** - crack isolation up to 1/4" (6mm)
- **EASY TO USE** - roll or spray on application
- **FAST DRYING** - next-day tile application
- **HIGH PERFORMANCE** - exceeds ANSI A118.10 & A118.12 standards



## PRODUCT DESCRIPTION

MiTek's Liquid Waterproof Membrane is a ready-to-use liquid applied, elastomeric waterproofing and crack isolation membrane for use in tile and stone applications. It is ideal for interior and exterior wood and masonry substrates such as cement, cement backer board, and concrete. When applied with an airless sprayer or roller, MiTek's Liquid Waterproof Membrane creates a super-bonding, seamless moisture/water barrier. Meets ANSI A118.10 for waterproofing membranes and ANSI A118.12 for crack isolation membranes.

MiTek's Liquid Waterproof Membrane is designed for waterproofing under tile in showers for both residential and commercial use and meets Uniform Plumbing Code specifications for use as a shower pan liner.

MiTek's Liquid Waterproof Membrane may also be used as a slab-on-grade moisture barrier under wear-resistant flooring.

## AREAS OF USE

- Showers, Shower Pans
- Steam Rooms
- Interior/Exterior Moisture Barrier Applications
- Interior Waterproofing Applications

## SUITABLE SUBSTRATES

- TRITON® Backer Board
- Concrete
- Cement backer boards
- Exterior grade plywood (interior, dry areas for crack isolation only)
- Gypsum drywall

## LIMITATIONS

- MiTek's Liquid Waterproof Membrane is not intended to be used as a wear surface.
- Do not apply to surfaces subject to temperatures lower than 40° F (4° C) during the first 72 hours after application.
- Do not apply to surfaces subject to wetness during the first 72 hours after application.
- Do not apply to surfaces subject to 5-30 psi of hydrostatic pressure without the use of appropriate moisture mitigation.
- Do not apply to surfaces subject to an excess of 30 psi of hydrostatic pressure.
- Do not apply MiTek's Liquid Waterproof Membrane as an adhesive or thin set substitute.
- Do not apply to any existing control, expansion, saw-cut, cold, or construction joint as a bridge and/or cover.

## APPLICATION

### NEW CONCRETE - SURFACE PREPARATION

Concrete must have a Concrete Surface Profile (CSP) between CSP4 and CSP6. To accomplish a CSP4-CSP6 finish, use a steel trowel and a broom to finish surface. Untreated new concrete substrates must be allowed to cure for 28 days prior to application of MiTek's Liquid Waterproof Membrane. Substrates treated with VAPOR SHIELD can be coated with MiTek's Liquid Waterproof Membrane after a cure time of 7 days. Substrate must be structurally sound, clean, and dry. Contaminants such as oil, acidic prep products, and cleaning products may prevent MiTek's Liquid Waterproof Membrane's ability to bond to the substrate. Ensure the surface is free from any and all foreign contaminants. If the application area is subject to wetness, necessary sloping must be done prior to the application of MiTek's Liquid Waterproof Membrane.

### EXISTING CONCRETE - SURFACE PREPARATION

Concrete must be cleaned and scarified. All chips, divots, and chunks (defects) resulting from scarification must be repaired prior to application of MiTek's Liquid Waterproof Membrane. Concrete must have a Concrete Surface Profile (CSP) between CSP4 and CSP6. Substrate must be structurally sound, clean, and dry. Contaminants such as oil, acidic prep products, and cleaning products may prevent MiTek's Liquid Waterproof Membrane's ability to bond to the substrate. Ensure the surface is free from any and all foreign contaminants. If the application area is subject to wetness, necessary sloping must be done prior to the application of MiTek's Liquid Waterproof Membrane.

### CRACK ISOLATION MEMBRANE

Use a 3/8" nap roller or an airless sprayer that produces 1900-2300 psi with flow. Ensure that MiTek's Liquid Waterproof Membrane extends past both sides of the crack a distance equal or more than the diagonal length of the tile. Fill any gaps between plywood, and where the floor meets any wall with material prior to application of full crack isolation membrane. Apply material over the entire surface at a 20 mil wet thickness to achieve a continuous crack isolation membrane. (146 sqft./gallon)

### WATERPROOF MEMBRANE

#### METHOD OVERVIEW:

- **3/8" Nap Roller**
- **Airless Sprayer**
  - Pressure: 1900-2300 PSI w/flow
  - Rate: 1.0-1.5 GPM
  - Tip Orifice Size: 0.025-0.029

#### GENERAL INSTRUCTIONS:

Apply a uniform coat using overlapping spray and roll strokes. MiTek's Liquid Waterproof Membrane will turn from light yellow to a darker shade of yellow once the material has dried, typically after 2 hours. Once dry, fill any pinholes and/or imperfections in MiTek's Liquid Waterproof Membrane with extra material and begin applying the second coat in a "Cross Hatch" pattern.

**INTERIOR DETAILS:** Apply a heavy coat extending 6" in width on both sides in all corners, plane changes, and pipe penetrations prior to full application. In addition, fill any and all cracks [up to 1/8" (3mm)] in concrete substrates with MiTek's Liquid Waterproof Membrane.

**EXTERIOR DETAILS:** Embed 6" or 12" wide polyester stitch bond fabric mesh into the membrane on every 90° angle (floor to wall union, steps, benches, etc).

**CHANGE OF PLANE (INTERIOR):** Waterproofing applications, especially in the commercial sector, require reinforcement of any plane change that may occur in the interior. Use of MiTek's polyester stitch bond fabric and pre-formed corners is recommended.

Applications include, but are not limited to:

- Any above grade structures that will be required to hold water permanently.
- Commercial floors that are exposed to wash downs, flooding, etc.
- All applications that contain a floor perimeter coming into contact with a shear wall or curtain wall.
- Floor penetrations such as drainage pipes, electrical conduit, light housings, etc.
- Any post-tensioned or pre-stressed above grade slabs.

## APPLICATION

### DRAINS:

MiTek’s Liquid Waterproof Membrane must be applied to the bottom of the flange. The chosen drain unit must have a clamping ring and weep holes for the application of thin set. The drain should also be level with the substrate plane and securely affixed. Continue by following necessary steps outlined under “Application” when applying MiTek’s Liquid Waterproof Membrane. Around the perimeter of the drain, embed 6” or 12” Polyester Stitch Bond Fabric (PSBF) into the first coat of MiTek’s Liquid Waterproof Membrane. Ensure the drainage hole itself is not obstructed by the Fabric (PSBF). Once dry, apply the second coat of MiTek’s Liquid Waterproof Membrane. When the 2nd coat is cured, apply MiTek Adhesive Sealant on the entirety of the union then clamp and tighten the upper flange to MiTek’s Liquid Waterproof Membrane.

### EXPANSION JOINTS:

As described prior, do not bridge any joints or gaps that are there to experience movement. Honor these joints all the way to the wear surface (tile) during the job application. To treat the joint properly, clean it prior to application of an open or closed cell backer rod. Install the rod to the proper depth specified by the Tile Council Handbook (EJ 171). Once installed, compress the architecturally specified sealant into the joint ensuring it contacts both sides and dries flush with the surface plane. Once the sealant is completely dry, place a bond breaking tape over the joint and continue to apply MiTek’s Liquid Waterproof Membrane making sure to overlap the tape. Follow any and all instructions under the “Application” section of this document. As a reminder, the tile installation to follow must honor the joints. **DO NOT BRIDGE THE JOINT.** Once the tile is set properly, you may fill the joint with the specified sealant following any architectural or manufacture specifications that may apply to the project.

### CURING

MiTek’s Liquid Waterproof Membrane turns from a light yellow to a darker shade of yellow once the material has dried, typically after 2 hours. The total drying time will depend on various job site conditions such as temperature, airflow, humidity, etc. In cold, humid conditions drying may take up to 12 hours. If a water test is required after application conduct the test 72 hours after installation.

### CLEAN-UP

MiTek’s Liquid Waterproof Membrane can be cleaned with soap and water while still in liquid form. It is recommended to clean all tools and equipment, especially spray equipment, while the material is still wet.

### PROTECTION

If MiTek’s Liquid Waterproof Membrane is to be exposed for more than 24 hours use felt paper to protect the membrane from any punctures or scraping prior to the wear surface installation.

### TILE INSTALLATION

When installing tile use a polymer-modified mortar that meets or exceeds ANSI A118.4 or A118.11 standards.

### COVERAGE

Coverage Rates (ft <sup>2</sup> ) - 3.5 Gallon Bucket			
CRACK ISOLATION		WATERPROOFING	
General	ANSI 118.12	General	ANSI 118.10*
280 (80/gal)	91 (26/gal)	210 (60/gal)	140 (40/gal)

### STORAGE

- MiTek’s Liquid Waterproof Membrane is packaged in 3.5 - Gallon Pails.
- Store at 40° F to 90° F.
- Shelf life is approximately 24 months.
- Protect from freezing.

### SAFETY

Avoid material contact with eyes. if it occurs, flush with water vigorously for 15 minutes and call a physician. Wash thoroughly after handling. **KEEP OUT OF REACH OF CHILDREN. DO NOT INJECT.**

**DAMAGE LIMITATION**

Seller shall not be liable for any damages, injury, loss, direct or consequential, resulting from its products. The parties intend that the limitation of damages, including consequential damages, applies even if the exclusive remedy provided for herein fails of its essential purpose.

**EXCLUSIVE REMEDY**

Seller’s sole obligation, and buyers exclusive remedy shall be to replace material if found to be defective.

**WARRANTY DISCLAIMER**

There are no warranties which extend beyond the description of the fact hereof. Seller expressly disclaims all other warranties regarding the use of its products, whether expressed or implied, including the implied warranties of merchantability and for fitness of a particular purpose. Since use of the product is beyond the Seller’s control, the Buyer assumes all risk of use.

**WARRANTY**

Materials are guaranteed with respect to uniformity and quality within manufacturer’s specifications.

**TECHNICAL DATA**

Meets and exceeds ANSI A118.10 for load-bearing, bonded, waterproof membranes for thin-set ceramic tile and dimensional stone installations.

Meets and Exceeds ANSI A118.12 for crack isolation membranes. Exceeds Uniform Plumbing Code specifications for use as a shower pan liner.

TEST	DESCRIPTION	EVALUATION	ANSI SPECIFICATION
4.1	Mold Growth	Does not support	Shall not Support
4.3	Breaking Strength	525 PSI	170 PSI
4.4	Dimensional Stability (158°F) (-15°F)	-.19% .35%	.7% Max Change .7% Max Change
5.3	7 Day Shear Strength	241 PSI	>50 PSI
5.4	7 Day Water Immersion	179 PSI	>50 PSI
5.5	4 Week Shear Strength	229 PSI	>50 PSI
5.6	12 Week Shear Strength	134 PSI	>50 PSI
5.7	100 Day Water Immersion	140 PSI	>50 PSI
5.1.6	Accelerated Aging Shear Strength	372 PSI	>50 PSI
5.2	Point Load Test	1811 lbf (Average)	>1,000 lbf