

IMPERMITEK SELF-LEVELING PMMA MORTAR APPLICATION GUIDELINES

Technical Data Sheet

Self-Leveling Mortar Waterproofing & Surfacing

Impermitek Self-Leveling Mortar is a trowel applied resin-mortar used as a thick coating system for interior and exterior waterproofing and surfacing applications. Impermitek Mortar may be applied directly over cantilever balconies, open deck structures and slab on grade substrates or in combination with Impermitek reinforced membrane for waterproofing and surfacing applications over conditioned or occupied space.

General Flashing Guidelines

Impermitek reinforced perimeter, penetration and transition flashings are recommended for all Impermitek Self-Leveling Mortar applications. Impermitek reinforced flashings are installed before Impermitek Mortar waterproofing or traffic surfacing components following standard guidelines, practice and details for Impermitek reinforced membrane systems.

Refer to Impermitek detail drawings for specific information and flashing requirements for common flashing conditions.

Impermitek Self-Leveling Mortar Application

Impermitek Mortar may be applied direct to deck over acceptable prepared and primed substrates or Impermitek reinforced membranes.

Surface Preparation: Where Impermitek Mortar will be applied over Impermitek reinforced flashings or membrane, edges and laps should be pretreated with Impermitek Mortar applied in spackle fashion to smooth the transition over these locations. If not pretreated as indicated, lap lines in the membrane, flashings, or base-ply may telegraph through the Impermitek Mortar layer.

Mix: Thoroughly mix the entire drum of Impermitek Self-Leveling Mortar Part A resin for 2-3 minutes before mixing with the Self-Leveling Mortar Part B Filler Powder. Transfer the mixed resin mortar to a clean, dry container large enough to accommodate the combined resin and filler components leaving adequate room for mixing. Using a slow-speed (200 to 400 rpm) mechanical mixer with spiral agitator, slowly add the entire bag of Impermitek Self-Leveling Mortar Part B filler to the uncatalyzed Impermitek Self-Leveling Mortar Part A resin component while stirring; continue mixing for 2 – 5 minutes or until achieving a smooth lump-free mortar consistency. The mixing ratio is 1 to 2.3 resin to filler respectively. Catalyze only the amount of material that can be placed within 10-15 minutes. Thoroughly mix the pre-measured Impermitek Catalyst Powder into resin-mortar for 2-3 minutes, assuring to incorporate any dry material along the side and bottom of the mixing container. Remix uncatalyzed resin-mortar before each use, and prior to pouring off into a second container if batch mixing.

NOTE:Impermitek Catalyst addition is based on weight of the resin component (not the mixed mortar) and temperature.

Apply: Plan and tape-out the area of work in a checkerboard fashion using reinforced masking tape. After mixing, apply mortar to clean, prepared and primed substrate at the required consumption using an approved Impermitek stub roller, steel v-notch trowel, or V-notch rake as follows:

Normal application:	Stub roller or 1/2 in x 7/16 in deep v-notch trowel or rake with blunted tips
Steep slope applications:	3/8 in or 1/2 in v-notch trowel or rake as required
All applications:	Spiked nylon roller

Mortar should be uniformly spread across substrate and rolled with a pin roller as required to knock-down any high spots before the mortar begins to gel. Before mortar cures, remove all masking tape.

Mortar Installation



Step 1:
Pour mortar onto prepared & primed substrate or membrane.



Step 2:
Spread mortar using a notched trowel.



Step 3:
Pin roll mortar to eliminate bubbles and even out application.

Cure: Allow Impermitek mortar to fully cure before applying the next Impermitek component. Changing project conditions should be monitored throughout the day to adjust catalyst ratios and cure

time. At membrane tie-ins, clean cured Impermitek mortar with Impermitek Cleaner before application of next Impermitek component or surfacing.

Approximate Coverage per 33kg work pack			
Substrate	kg/ft ² (kg/m ²)	ft ² (m ²)	mils (mm)
CSP3 smooth	0.40 (4.3)	83 (7.7)	79 (2.0)

Steep Slope Applications

Impermitek Self-Leveling Mortar is produced ready for application at low slopes but may be applied at any desired slope by adjusting the resin viscosity with Impermitek Liquid Thixo.

For slopes exceeding 1-1/2 : 12, Impermitek Self-Leveling Mortar should be pre-mixed with Impermitek Thixo Additive at up to 2% addition by weight. The amount of thixotropic additive needed will vary by slope and temperature. Addition of Impermitek Thixo Additive should be done following the guidelines below:

Thoroughly mix the entire pre-mixed drum of Impermitek Self-Leveling Mortar for 2-3 minutes before each use, and prior to pouring off resin into a second container if batch mixing, using a slow-speed (200 to 400 rpm) mechanical mixer with spiral agitator taking care not to aerate the resin mortar. Add the required amount of Impermitek Thixo Additive into the Impermitek Mortar and mix for 2-3 minutes.

- Test the amount of Impermitek Thixo Additive required by mixing small batches before mixing entire units of product.
- Start adding Impermitek Thixo Additive at 0.5% addition.
- Mortar mixed with Impermitek Thixo Additive must be allowed to stand 20 to 30 minutes before checking viscosity and use. Adjust the amount of Impermitek Thixo Additive as needed until the desired viscosity is reached.
- Approximately (1) 20-ml spoon or (2) 15 ml spoons equals +/-20g or 2% of Impermitek Thixo Additive per kg of Impermitek Self-Leveling Mortar resin.

Note: Storage and working times are not affected by the addition of Impermitek Thixo Additive mixed with uncatalyzed resin.

Broadcast Aggregate

Approved kiln dried quartz aggregate may be broadcast directly into Impermitek Self-Leveling Mortar to create slip-resistant surfacing. All surfacing aggregates shall be washed, kiln-dried, dust-free, suitable for broadcast, angular grain, and sized as recommended by Impermitek.

When required as part of the traffic surfacing, broadcast #1 (0.7 - 1.2mm) kiln-dried quartz aggregate into the applied wet Impermitek Mortar to excess for full coverage at an approximate consumption of:

- 140 lb/100 ft² (7.0 kg/m²).

Aggregate should be cast upward, allowing it to fall vertically downward into the mortar resin to avoid creating “waves” in the resin. Where required on vertical surfaces, cast aggregate into the wet resin with a perpendicular hand motion. Vertical and horizontal surfaces should be cast separately, applying vertical surfaces first followed by deck areas using appropriate protection and masking.



Note: Broadcast aggregate must be properly sealed with Impermitek PolyFinish resin. Prior to applying finish seal coat, remove excess loose aggregate from the surface of the fully cured mortar by broom, vacuum, or oil-free blower. See Impermitek Finish Application Guidelines for information regarding application of Impermitek Finish and surfacing components.

Impermitek Self-Leveling Mortar Touch-Up

When Impermitek Mortar will be applied without broadcast aggregate, i.e., another Impermitek surfacing component will be applied over the mortar; the mortar layer can be touched up and correct to create a smooth blemish free surface.

Imperfections telegraph through applied finish or surfacing and therefore must be corrected before proceeding. Minor imperfections in Impermitek Mortar or Impermitek membrane can be ground down before applying surfacing or finish components.



Inspect the applied and cured Impermitek Mortar looking for line, lumps and other blemishes. Using a handheld sander with an appropriate abrasive disk

ordiamond cup angle grinder, lightly abrade and remove any imperfections using care not to damage the in-place mortar. If the mortar has been damaged or compromised, repair the mortar as needed.

Where required, additional Impermitek Mortar may be applied over the in-place mortar which can be feathered in with the same grinding/sanding procedure. This surface preparation is recommended on applications using Impermitek ProGrip or Impermitek PolyFinish with broadcast aggregates.

Application Quality Control

Wet film thickness gauges may be used to measure wet film mil thickness of Impermitek Self-Leveling Mortar. However, Impermitek Self-Leveling Mortar consumption typically is monitored by surface profile, application area, and volume of resin applied.

After confirming the approximate surface profile and recommended resin consumption, a chalk-line grid can be applied on the substrate defining coverage areas per batch mix of Impermitek Self-Leveling Mortar.

Substrate Quality Controls

Determinations of bond strength and moisture content should be performed periodically by the contractor throughout the course of work. Bond strength and adhesion can be monitored at the job site using both qualitative and quantitative means depending on the type of system application.

For most STORMURE Self-Leveling Mortar applications, bond testing should be performed by means of an adhesive bond pull test using an appropriate adhesion tester.

Tests should be performed on completely cured primer or primer with applied mortar samples at work start-up, and intervals as required throughout the project assuring specified adhesion with a minimum of three tests per 5000 ft² (465 m²). In the event the tensile bond strengths are lower than the minimum recommended, additional substrate preparation should be performed and testing repeated to verify suitability of substrate. The contractor shall immediately notify the Impermitek in the event tensile bond test results are below recommended criteria.

Refer to Impermitek Technical Data Sheet TDS SC103 Impermitek Application & Quality Control Guidelines for additional information.

Crew Size & Workforce

The appropriate workforce must be determined by the applicator on a job-by-job basis based on the project size, complexity, scheduling and access. A typical size crew usually consists of approximately 5 people, with a designated mixer, runner and 3 applicators.

As an example, on open run vehicular and plaza applications typically there are two workers per run troweling, a runner feeding material, and working broadcasting aggregate into the wet mortar.



The number of worker required and approach to the application typical would be adjusted based project size, complexity, and applicator proficiency.

DISCLAIMER

The purpose of this Guide is to provide fundamental information and important design and/or application considerations for Impermitek roofing, waterproofing and surfacing assemblies. Impermitek manufactures and sells roofing, waterproofing, and traffic surfacing materials and does not practice architecture or engineering.

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