

Impermitek Finish & Surfacing

Impermitek finish and surfacing can be used with various interior and exterior waterproofing, traffic surfacing, commercial flooring, and roofing applications, including colored or slip-resistant topcoats. Impermitek's finishes are applied using trowel, squeegee or roller, depending on the component used and required surfacing. The Impermitek components available for aesthetic finish and surfacing are:

- ImpermiGrip - Textured finish
- ImpermiFinish - Smooth topcoat
- ImpermiFinish Clear - Clear topcoat
- Quartz color aggregates
- PVA Flakes color chips

The above products may be used alone or in combination. Refer to Impermitek's specifications for information regarding each system requirements.

General Application

Impermitek color finish and surfacing may be applied to dry, dust free and clean, fully cured primer, membrane or mortar layers. When applying Impermitek's Finish or surfacing over Impermitek's waterproofing membrane, the in-place membrane should be inspected for deficiencies and corrected prior to application of any finish or surfacing component. This is especially important with regards to correcting pinholes, blisters, or delamination that may be present in any reinforced Impermitek membrane. Care should be taken to correct any imperfections in the substrate, primer, membrane, or mortar that may telegraph through surfacing & finish, and therefore must be corrected before proceeding. Minor imperfections in Impermitek Self-Leveling Mortar or membrane can be ground down before applying surfacing or finishes. Using a handheld grinder with an abrasive disc or appropriate diamond cup wheel, lightly grind the top surface of any imperfections taking care not to damage the in-place mortar or membrane. If the mortar or membrane layer has been damaged or compromised, repairs will be required as needed before proceeding.



Best Practice for Optimum Color & Texture Consistency

Impermitek finish and surfacing are designed as topcoats for roofing, waterproofing, traffic surfacing, and commercial flooring systems. Although Impermitek's waterproofing and surfacing systems are often used for balconies, terraces, parking structures and more, the primary function of any Impermitek system is waterproofing or concrete protection.

Since all Impermitek components are rapid setting, the way finishes and surfacing are applied will have a dramatic impact on aesthetics of the completed application. Impermitek's finish and surfacing products are engineered to offer the highest performance in addition to an aesthetically pleasing and colorfast finish. Due to the nature of the technology and variable installation environments, there are factors such as temperature and exposure to direct sunlight during cure that can impact the finished color and appearance.

The following provides guidance to help minimize the risk of color variation during installation:

- Use same batch numbers for both base resins - and pigment additives when required.
- In instances where batch numbers cannot be maintained, blend and mix batches together to create a single distinct color batch.
- When working in areas where there is constant shading or shadows, use temporary covers to provide consistent shade across the whole work area and avoid application in direct sunlight.
- Be consistent using linear roller strokes.

Using Color Breaks

Applying Impermitek finishes and surfacing with color breaks provides several benefits to the appearance and repair-ability of any Impermitek project. Color breaks help to:

- Provide enhanced aesthetics by simulating tile or other patterned layouts.
- Hide variations in surface gloss and texture.
- Hide minor variations in color.
- Allow for localized repairs if needed.

Example of applied Color Breaks:



Before starting any project, color breaks should be planned and mapped out by the contractor and project designer working with the owner. Things to consider when planning color breaks are:

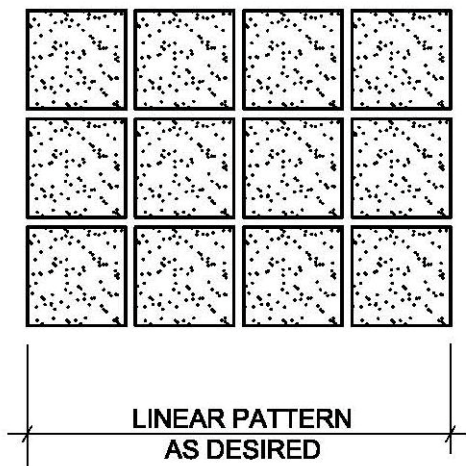
- What type of color break pattern is desired.
- Locations of doors, windows or other focal points that might be impacted.
- Locations of expansion or other moving joints.

Once a plan has been approved, the pattern can be masked off and made ready for application.

Surfacing or finish may be applied in a variety of patterns, color combinations and textures depending upon the designers' imagination and owner's needs.

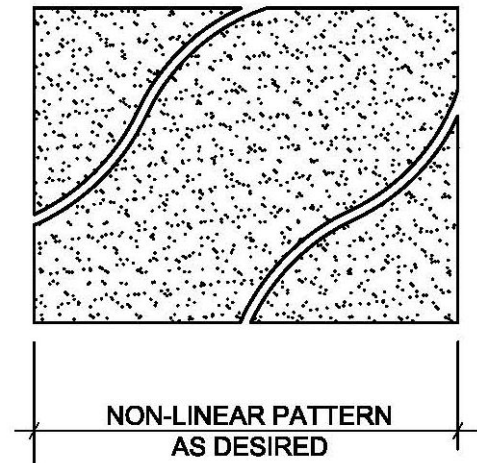
Generally, color breaks are applied in two patterns as follows:

- Linear Pattern Color Breaks:



Linear patterns are the easiest to work with and can be designed to simulate tile or pavers applied square or at angles.

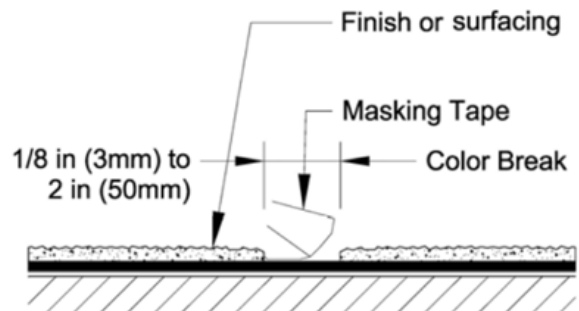
- Non-Linear Pattern Color Breaks:



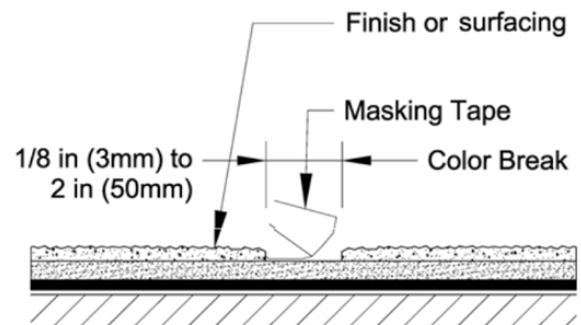
Non-linear patterns can be designed in any shape or configuration. Complex patterns may also be applied with pre-cut templates prepared by third party vendors and are typically used for commercial paint applications.

Regardless of style or pattern, the color break must be applied at the appropriate layer of Impermitek installation depending upon the system and surfacing type. Four typical color break locations are as follows:

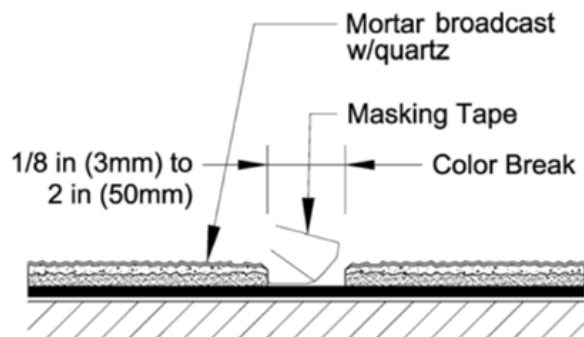
- Color Breaks with Impermitek Finish or Surfacing applied over Impermitek membrane:



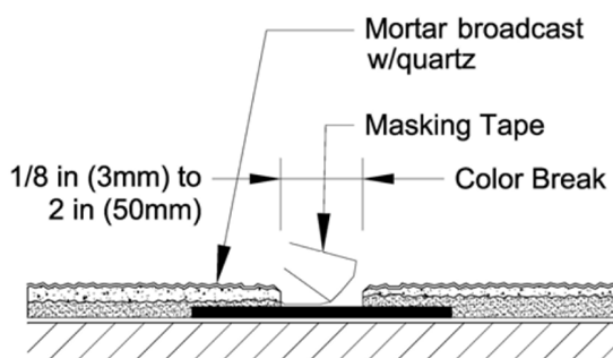
- Color Breaks with Impermitek Finish or Surfacing applied over Impermitek's SL Mortar alone or mortar on membrane:



- Color Breaks with aggregate broadcast directly into Impermitek's SL Mortar applied over Impermitek's membrane:



- Color Breaks with aggregate broadcast directly into Impermitek's SL Mortar applied direct to substrate:



Note: With aggregate broadcast into SL Mortar applied directly to the substrate, color breaks must be applied over previously applied IR-26 or IR-Eco membranes. requires additional coordination to layout and install these strips before applying the SL Mortar.

Finish & Surfacing Applied at Perimeters & Expansion Joints

Impermitek Finish and surfacing are semi-rigid materials formulated for durability and performance. As semi-rigid components, when applied over softer or more flexible materials such as Impermitek's waterproofing membranes, cracks and micro fissures may occur in the surfacing and finish layer. Although this does not affect the system waterproofing or performance, it will impact the cosmetic appearance of the surfacing and finish.

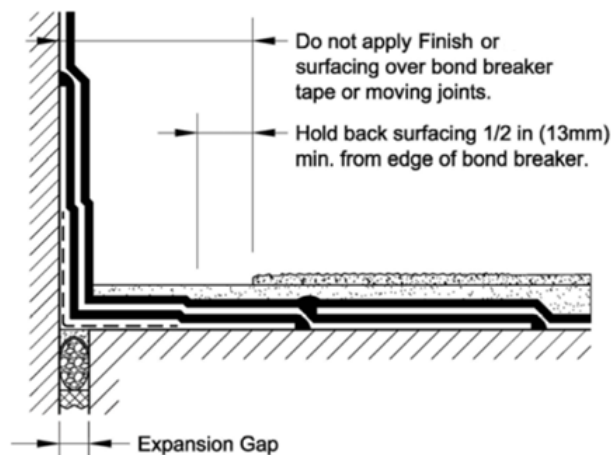
Impermitek's recommendations to help reduce or avoid potential cosmetic cracks or fissures, are as follows:

- Do not apply Impermitek's surfacing and finish over areas of potential movement, or over Metal components flashed into the membrane,

or over expansion joints and other joints where movement is possible.

- Hold surfacing & finish back 1/2 in (13 mm) from horizontal to vertical transitions at walls, penetrations and leading edge of any bond breaker.

Finish & Surfacing Joint Treatment:



Steep Slope Applications

ImpermiFinish Color pigmented topcoat, ImpermiFinish Clear topcoat, and ImpermiGrip resins are ready for application at low slopes and may be applied at any desired slope by adjusting the resin viscosity with Viscora - Impermitek's liquid thixotropic additive.

For vertical substrates or slopes exceeding 1-1/2 : 12, Impermitek's finish and surfacing resins should be pre-mixed with the Viscora Additive at up to 2% addition by weight. The amount of additive needed will vary by slope and temperature and its addition should be done using the guidelines below:

- Thoroughly mix the entire drum of Impermitek finish resin for 2-3 minutes before each use, and prior to pouring off resin into a second container if batch mixing, using a mixing stick or slow-speed (200 to 400 rpm) mechanical mixer with spiral agitator taking care not to aerate the resin. Add the required amount of Viscora Additive into the uncatalyzed resin and mix for 2-3 minutes.
- Test the amount of Viscora Additive required by mixing small batches before mixing entire units of the product. Start adding the Additive at 0.5% addition.

- Resin mixed with Impermitek Viscora additive must be allowed to stand 20 to 30 minutes before checking viscosity or use. Adjust the amount of additive needed until the desired viscosity is reached. Additional additive may be added to previously mixed material to further increase viscosity.
- Approximately (1) TBSP = 20g or 2% of Viscora Additive per kg of Impermitek finish or surfacing resin.

Note: Storage and working times are not affected by the addition of Viscora to uncatalyzed resin.

Impermitek ImpermiFinish Clear & Pigmented Topcoat

Impermitek finishes are available as Impermitek ImpermiFinish Clear, ImpermiFinish (pre-pigmented), and ImpermiFinish Unpigmented (pigment additive required). ImpermiFinish resins are smooth monochromatic color and clear topcoats. For ImpermiFinish Unpigmented, the mixing procedure with the Color Additive is follows:

Mix: Thoroughly mix the entire drum of ImpermiFinish Unpigmented base resin for 2-3 minutes using a slow-speed (200 to 400 rpm) mechanical mixer with spiral agitator. Slowly add the entire contents of ImpermiFinish Color Additive to base resin component while stirring; continue mixing for 2 to 5 minutes or until achieving a uniform streak-free color. Note: ImpermiFinish Clear must be mixed before use but is not combined with ImpermiFinish Color Additive. Remix resin before each use, and prior to pouring off into a second container if batch mixing. Catalyze only the amount of material that can be used within 15-20 minutes. Add the pre-measured Catalyst Powder to the previously mixed resin component and stir for 2-3 minutes using a mixing stick or slow-speed mechanical mixer with spiral agitator. The Catalyst Powder addition is based on the resin component volume and temperature. Note: Combining ImpermiFinish Pigment Color to ImpermiFinish unpigmented base resin does not affect shelf-life or storage.

Apply: Plan and tape-out the area of work in a checkerboard fashion using fiber reinforced masking tape. After mixing, apply the ImpermiFinish resin to clean, prepared and dry substrate at the required consumption as follows:

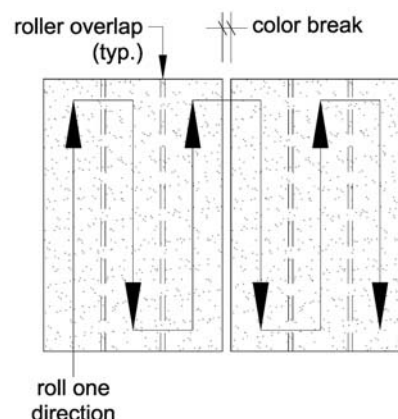
Approx. Coverage per 2.54 gal (9.6 L) [10kg] Unit			
Substrate	gal/100 ft ² (L/m ²)	ft ² (m ²)	mils (mm)
Smooth	1.4 (0.6)	179 (16.7)	24 (0.6)
#0 quartz	1.6 (0.7)	154 (14.3)	28 (0.7)
#1 quartz	1.9 (0.8)	135 (12.5)	31 (0.8)

Application Method	
Smooth surfaces:	1/8 in steel v-notch trowel or rake
Embedment coat for #0 quartz aggregate:	3/16 in steel v-notch trowel or rake
Sealcoat over #0 & #1 quartz aggregate:	Flat blade rubber squeegee
All applications:	Impermitek roller

ImpermiFinish Clear and ImpermiFinish Color topcoats should be uniformly spread across substrate with the required steel v-notch rake; using a roller to remove puddles. Finish the topcoat by lightly rolling in one direction slightly overlapping previously rolled sections to create a single uniform application. The same finish roller procedure and direction should be used throughout the entire application to produce the most consistent and uniform sheen possible.

Remove all masking tape before ImpermiFinish Clear or ImpermiFinish Color topcoats cure.

ImpermiFinish Rolling Pattern:



Cure: Allow ImpermiFinish Clear and ImpermiFinish Color topcoats to fully cure before applying loads or traffic. Changing project conditions should be monitored throughout the day to adjust catalyst ratios and cure time.

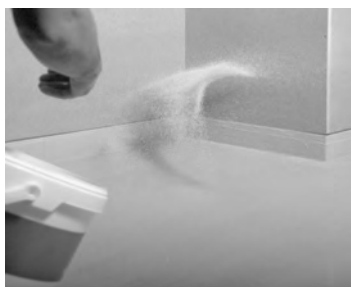
Quartz Aggregate Broadcasting

Approved quartz aggregate, ceramic granule, or mineral surfacing may be applied to Impermitek systems as aesthetic and/or 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 applying colored quartz, Impermitek recommends using a blend of three different colored aggregates.

Broadcast ImpermiFinish Clear or Color topcoats to excess while wet using:

- #0 (0.4 - 0.8mm) kiln-dried quartz aggregate
- approximate rate 100 lb/100 ft² (5.0 kg/m²)



Aggregate should be cast upward by hand or with a hopper gun, allowing it to fall vertically downward into the 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: All broadcast aggregates must be properly sealed with ImpermiFinish. Prior to applying the finish seal coat, remove excess aggregate from surfaces by broom, vacuum or oil-free blower.

PVA Flakes Broadcasting

PVA Flakes may be applied to Impermitek systems as an aesthetic element. When applying PVA Flakes, Impermitek recommends using a blend of two to three different colors.

Broadcast PVA Flakes into ImpermiFinish Color topcoats to excess while wet using a popcorn gun or hand feeder at:

- approximate rate 0.11 lb/100 ft² (0.05 kg/m²)



PVA Flakes should be cast upward by hand or with a hopper gun,

allowing them to fall vertically downward into the resin. Where required on vertical surfaces, cast flakes

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: Any PVA Flakes not fully embedded into ImpermiFinish resin can be removed using a scraper

blade or stiff bristle broom after the resin has cured and prior to applying an ImpermiFinish Clear seal coat if used.

ImpermiGrip Application

Impermitek's ImpermiGrip textured finish is an aggregate filled monochromatic color topcoat. ImpermiGrip is available in factory pre-pigmented and unpigmented formulations. ImpermiGrip unpigmented resin must be mixed with ImpermiGrip Pigment Color additive as follows:

Mix: Thoroughly mix the entire drum of ImpermiGrip Unpigmented base resin for 2-3 minutes using a slow-speed (200 to 400 rpm) mechanical mixer with spiral agitator. Slowly add the entire contents of ImpermiGrip Pigment Color Additive to the base resin component while stirring; continue mixing for 2 to 5 minutes or until achieving a uniform streak-free color.

Note 1: Remix before each use and prior to pouring off resin into a second container if batch mixing. Catalyze only the amount of material that can be used within 15-20 minutes. Add pre-measured Impermitek Catalyst Powder to resin component and stir for 2-4 minutes using a mixing stick or slow-speed mechanical mixer with spiral agitator.

Note 2: Impermitek catalyst addition is based on the resin component volume used and temperature. Combining the Color Additive to the Unpigmented base resin does not affect shelf-life or storage.

Apply: Plan and tape-out the area of work in a checkerboard fashion using fiber reinforced masking tape. After mixing, apply ImpermiGrip

resin to clean, prepared and dry substrate at the required consumption as follows:

Approx. Coverage per 1.7 gal (6.25 L) [10kg] Unit			
Use	gal/100 ft ² (L/m ²)	ft ² (m ²)	mils (mm)
Pedestrian Light	1.6 (0.63)	108 (10)	24 (0.6)
Pedestrian Normal	2.0 (0.84)	80 (7.4)	31 (0.8)
Vehicular Light	2.6 (1.06)	63 (5.9)	43 (1.1)

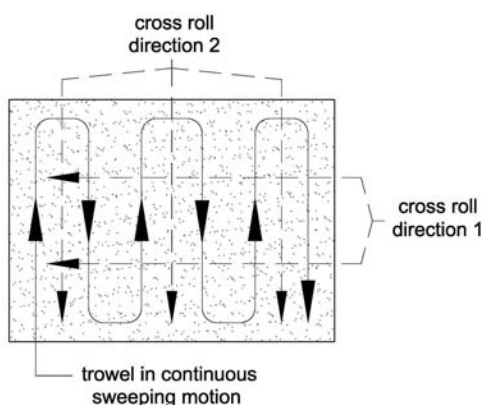
Roller, V-Notch Trowel, or Rake Application

ImpermiGrip textured finish should be uniformly spread across the substrate using a roller, v-notch trowel, or rake. An Impermitek roller is then used to remove any resin puddling and cross roll the applied resin in two directions to even out coverage. Finish the application by lightly rolling in one direction, slightly overlapping previously rolled sections to create a single uniform texture.

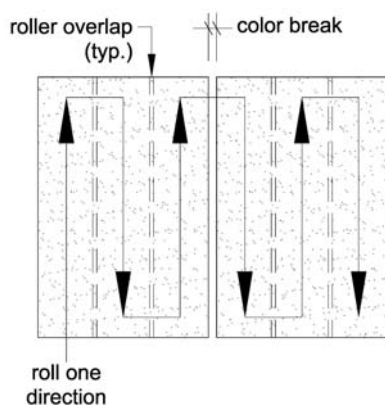
The same roller procedure and direction should be used throughout the entire application to produce the most consistent and uniform aesthetic appearance.

Roller, V-Notch Trowel, or Rake Application Method	
Light Pedestrian Traffic:	Roller, 3/16 in steel v-notch trowel or rake
Normal Pedestrian Traffic:	1/4 in steel v-notch trowel or rake
Vehicular Traffic:	3/8 in steel v-notch trowel or rake
All applications:	Impermitek roller

Roller/Trowel/Rake Application:



Finish Rolling:



For additional slip resistance, random broadcast 0.047 in (1.2 mm) aluminum oxide to the desired degree onto the coating and lightly back roll one final time as needed immediately after the final roller passes are completed. Remove all masking tape before ImpermiGrip cures.

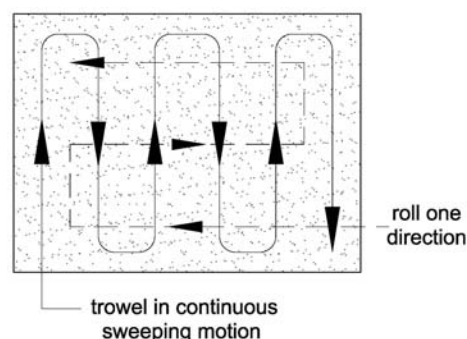
Cure: Allow ImpermiGrip topcoat to fully cure before applying loads or traffic. Changing project conditions should be monitored throughout the day to adjust catalyst ratios and cure time.

Flat Trowel Application

ImpermiGrip textured finish may be uniformly spread across substrate with a steel square edge finishing trowel; using a dry roller to remove trowel marks and imperfections. If required, ImpermiGrip may be lightly rolled in one direction, slightly overlapping previously rolled sections to create a single uniform application. The same finish roller procedure and direction should be used throughout the entire application to produce the most consistent and uniform sheen possible.

Flat Trowel Application Method	
Standard:	Square edge finishing trowel & roller

Trowel Application:



For additional slip resistance, random broadcast 0.047 in (1.2 mm) aluminum oxide to the desired degree onto the coating and lightly back roll one final time immediately after the final roller passes are completed. Remove all masking tape before ImpermiGrip cures.

Cure: Allow ImpermiGrip topcoat to fully cure before applying loads or traffic. Changing project conditions should be monitored throughout the day to adjust catalyst ratios and cure time.

See Impermitek specifications for assemblies using an appropriate finish and surfacing topcoat.