



PlanisealTM VS Fast

**Fast-Track,
Alkali-Resistant,
Epoxy Moisture-
Reduction Barrier**



DESCRIPTION

Planiseal VS Fast is a fast-curing, alkali-resistant, two-component, 100%-solids epoxy coating that effectively stops moisture-related problems with floor coverings. In all cases, moisture vapor emission rates (MVERs) of up to 25 lbs. per 1,000 sq. ft. (11,3 kg per 92,9 m²) per 24 hours are reduced to below the limit of 3 lbs. per 1,000 sq. ft. (1,36 kg per 92,9 m²) required for many types of finished flooring, when the designated film thickness is applied.

Applied in a single-coat application system, *Planiseal VS Fast* features an accelerated cure that enables priming for subsequent installation of self-leveling underlayments as fast as 4 to 5 hours after placement. Once installed, *Planiseal VS Fast* is compatible with a wide number of primers and adhesives typically used with flooring installations, such as tile, vinyl composition tile (VCT), carpet, sheet vinyl, wood and other floor-finishing products.

FEATURES AND BENEFITS

- Treats substrates with an MVER of up to 25 lbs. (11,3 kg) per ASTM F1869 and/or relative humidity (RH) up to 100% per ASTM F2170
- Fast curing time allows installation of primers for self-leveling underlayments as early as 4 hours after placement, ensuring effective moisture vapor treatment and fast, same-day turnaround on jobsites.
- Single-coat application for faster turnaround and lower installation costs
- Offers excellent resistance to alkalinity
- Low-odor and VOC-compliant for use in interior, occupied environments
- Cost-effective protection against the most severely MVER-challenged substrates

WHERE TO USE

For use only by contractors familiar with fast-set epoxies

- Properly prepared sound and stable concrete substrates (at least 7 days old for conventional and at least 5 days old for pre-cast concrete) with an MVER up to 25 lbs. per 1,000 sq. ft. (11,3 kg per 92,9 m²) per 24 hours, and/or RH up to 100%

LIMITATIONS

- Substrate and ambient temperatures must be between 50°F and 86°F (10°C and 30°C).
- Test concrete substrates for MVER according to methods outlined in ASTM F1869 (calcium chloride test) or ASTM F2170 (relative humidity test).
- Verify substrate is free of bond-inhibiting or bond-breaking materials such as curing compounds and dust.
- Do not install topping, sloping, self-leveling underlayments or patching compounds below *Planiseal VS Fast*.
- Do not apply on wet substrates.
- Repair all cracks and treat joints correctly to ensure system performance.
- Do not use on on-grade slabs that are subject to freeze/thaw cycles.
- *Planiseal VS Fast* will bond to previously placed *Planiseal VS Fast* when applied within 48 hours of first placement.
- Once *Planiseal VS Fast* has been applied, protect the surface from traffic or damage until it is covered by subsequent product.

Consult MAPEI Technical Services for installation recommendations regarding any substrates and conditions not listed.

SUITABLE SUBSTRATES

- Properly prepared concrete substrates that have been mechanically prepared using dustless engineer-approved methods to an International Concrete Repair Institute (ICRI) concrete surface profile (CSP) of #3. Substrates with a profile greater than CSP #3 will lower coverage rates. Substrate profile should not exceed CSP #6.
- *Planiseal VS Fast* may be installed on concrete substrates that have had at least 7 days to cure. When installing on green concrete, be aware that continued shrinkage in the substrate during cure may lead to the formation of cracks that may penetrate *Planiseal VS Fast*. This is a natural risk associated with installations over green concrete, particularly with concrete that has a high water-to-cement ratio. Cracks generated by substrate movement are not covered by the MAPEI warranty.
- *Planiseal VS Fast* may be used over substrates exhibiting relative humidity of up to 100% (when tested in accordance with ASTM F2170). In all cases, the surface temperature of the prepared concrete slab must be at least 5°F (2,8°C) above the dew point to avoid condensation on the concrete surface as the *Planiseal VS Fast* hardens.

SURFACE PREPARATION

- Do not use over any substrates containing asbestos.
- All substrates must be structurally sound, dry, solid and stable.
- Mechanically prepare the surface by shotblasting to obtain a CSP of #3 to #4. Ensure that all old adhesives, contaminants, cures and other bond breakers are completely removed. Surfaces that have been contaminated with oil, or treated with silicates or other penetrating treatments, require mechanical profiling to remove these bond breakers before *Planiseal VS Fast* is applied. Inadequate mechanical surface preparation and subsequent cleaning could leave cures and contaminants on the substrate surface, which may lead to pinholing and bubbling in the *Planiseal VS Fast* application.
- Install *Planiseal VS Fast* at temperatures within +/-10°F (5,5°C) of the operating temperature of the facilities in service.
- Some substrates may require waiting 12 to 24 hours after shotblasting before application of *Planiseal VS Fast*. This wait time is required to reduce outgassing from the shotblasted surface.
- Expansion and movement joints must be honored through the finished flooring system.
- Do not acid-etch surfaces before applying *Planiseal VS Fast*.

Joint and Crack Treatment Before Application of *Planiseal VS Fast*

Planiseal VS Fast is designed for moisture mitigation only. Consult with an experienced engineer to determine the

appropriate substrate repair procedures and joint treatment. The various treatments listed below represent procedures for consideration by a consultant or engineer to address contraction (including control or saw-cut), and potential movement, isolation and expansion joints. Regardless of treatment, MAPEI does not warrant against the appearance of cracks or debonding that results from subsequent substrate movement of any kind.

Mechanically prepare control and construction/expansion joints with a diamond crack-chasing/concrete-cutting blade. Overcut the joint width to obtain a sound, clean edge. Clean cracks or joints with oil-free compressed air and/or vacuum with a dustless collection system to completely remove contaminants (follow ACI RAP Bulletin 2, "Crack Repair by Gravity Feed with Resin").

Crack repair

Apply *Planiseal VS Fast* per instructions. Repair any open cracks after the applied *Planiseal VS Fast* has cured.

Cracks narrower than 1/8" (3 mm) may typically be filled with *Planiseal VS Fast* neat.

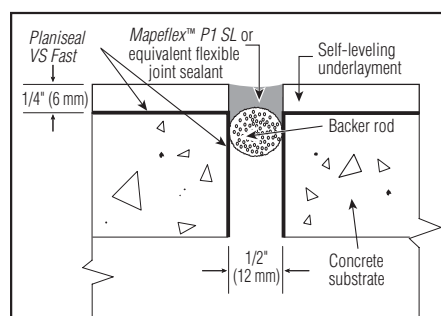
Cracks wider than 1/8" (3 mm) should be repaired by filling with a suitable high-modulus epoxy such as *Planibond EBA*; consider adding sand to create an epoxy mortar, if appropriate.

Contraction, control or saw-cut joint treatment

Dormant control joints may typically be filled with *Planiseal VS Fast*, or with an alternate high-modulus epoxy such as *Planibond EBA* (consider an epoxy mortar if appropriate) after the installation of *Planiseal VS Fast*. Fill the joints to be full-depth and flush to the surface.

Movement, expansion and isolation joint treatment

(See the following diagram.)



MIXING

Note: Choose all appropriate safety equipment before use. Refer to the Material Safety Data Sheet (MSDS) for more information.

1. Premix Part A to a homogenous consistency (about 1 minute) using a low-speed mixer (at 300 to 450 rpm) and a "jiffy" mixing paddle.
2. Pour Part B into the Part A container and mix thoroughly to a smooth, homogenous consistency for about 1 minute. Do not mix longer than 1 minute. Do not mix at high speeds, which can trap air within the mixed material.

Product Performance Properties

Laboratory Tests	Results
Chemistry	2-part 100%-solids epoxy
Percent solids	100%
VOCs	10 g per L
Density	Part A, 9.59 lbs. per U.S. gal. (1,15 g per mL) Part B, 8.25 lbs. per U.S. gal. (0,99 g per mL)
Consistency	Pourable liquid
Color	Part A – transparent yellow Part B – transparent amber
Permeability	< 0.1 perm at > 14 mils (0,35 mm) DFT per ASTM E96-05
Reduction of moisture vapor	> 96% per ASTM E96-05 (14 mils [0,35 mm] DFT)

Shelf Life and Application Properties

Shelf life	2 years (store in cool dry place at 40°F to 95°F [4°C to 35°C])
Open time at 73°F (23°C)	5 to 10 minutes
Drying time at 73°F (23°C)	4 to 6 hours
Flash point (Seta flash)	> 199°F (93°C)

CSI Division Classification

Dampproofing and Waterproofing	07 10 00
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Packaging

Product Code	Size
	Kit: 3 U.S. gals. (11,3 L)
46964	Part A, Pail: 1.97 U.S. gals. (7,46 L)
46953	Part B, Jug: 1.03 U.S. gals. (3,90 L)

Required Application Thickness and Associated Coverage	
Treating areas with up to 15 lbs. (6,80 kg) MVER per ASTM F1869, and/or up to 95% relative humidity per ASTM F2170:	> 14 mils (0,35 mm) of DFT = > 100 sq. ft. per 1 U.S. gal. (2,45 m² per L)*
Treating areas of > 15 lbs. (6,80 kg) MVER per ASTM F1869, and/or > 95% relative humidity per ASTM F2170:	> 18 mils (0,45 mm) of DFT = > 75 sq. ft. per 1 U.S. gal. (1,84 m² per L)*

**This is the typical number realized in field conditions. Coverage varies depending on the desired build as well as the profile and porosity of the substrate.*

3. Immediately pour and spread the entire unit of any mixed *Planiseal VS Fast* onto the substrate after mixing.

PRODUCT APPLICATION

1. Pour the entire contents of the mixed *Planiseal VS Fast* onto the surface of the properly prepared substrate immediately after mixing.
2. Maintain a consistent mixing station and coordinate carefully with those spreading the materials to ensure that subsequent applications of additional units blend with a wet edge of unreacted epoxy. Once the material begins to react and get thicker (within minutes), do not try to thin, roll or spread further.
3. Spread the *Planiseal VS Fast* mixture using a 3/16" to 1/4" (4,5 to 6 mm) squeegee. If puddles form, back-roll with a caged roller that has a short nap of 1/4" to 3/8" (6 to 10 mm). Spread the *Planiseal VS Fast* to achieve the required DFT (dry film thickness) on all areas of the substrate as indicated below in the "Required Application Thickness and Associated Coverage" chart.
4. Construction, expansion or isolation joint treatment: Ensure that inside edges of these joints receive a consistent film of *Planiseal VS Fast*, applied with a brush. Complete joint treatment by placing a backer rod and appropriate joint sealant before installing flooring.

PlanisealTM
VS Fast



Planiseal VS Fast™



5. Ensure that all voids and pinholes are filled/sealed before moving on to the next flooring phase. When applied over very porous concrete, *Planiseal VS Fast* may exhibit what appear to be "air bubbles." This apparently trapped air is a function of the *Planiseal VS Fast* having penetrated into the concrete pores, sealing them and forcing out the air to the surface. The path from the escaping air may manifest itself in the surface of the film as it crosslinks and hardens.
6. If any doubt remains about the 100% sealing of the voids mentioned in Step 5, apply a very "tight" or thin second coat of *Planiseal VS Fast*. Before applying the second coat of *Planiseal VS Fast*, "shave off" the "tops" of any bubbles that protrude off the surface of the floor, and then apply the additional *Planiseal VS Fast* tightly over the surface. This action will allow additional material to "wick" into and seal the void(s) in question.

Applications over cured *Planiseal VS Fast*

- Allow to dry until tack-free – typically for 4 to 6 hours at 73°F (23°C). Apply primers such as *Primer WE™* or *Primer T™* before installation of a self-leveling underlayment, or *Primer E™* or *Planiseal VS Fast* using the sand broadcast method before installing a self-leveling topping. Subsequent primer must be applied to *Planiseal VS Fast* within 48 hours of the *Planiseal VS Fast* application. In cases where the 48-hour window is exceeded, contact MAPEI's Technical Services Department for instructions.
- Floating or non-adhered floor systems can be installed directly over the cured *Planiseal VS Fast* per the manufacturer's recommendations.
- Reactive adhesives may be direct-bonded to *Planiseal VS Fast*. Water-based adhesives require application of a self-leveler before use. Due to the wide variety of adhesives, always complete a mockup and test to ensure the bond.
- If required, a second coat of *Planiseal VS Fast* may be applied over the first application of *Planiseal VS Fast* within 48 hours.

CLEANUP

Clean equipment before *Planiseal VS Fast* cures to a hardened state using an appropriate solvent or cleaning material. Cured material can only be removed mechanically.

RELATED DOCUMENTS

Crack Repair by Gravity Feed with Resin	ACI RAP Bulletin 2
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Refer to the MSDS for specific data related to VOCs, health and safety, and handling of product.

STATEMENT OF RESPONSIBILITY

Before using, user shall determine the suitability of the product for its intended use and user alone assumes all risks and liability whatsoever in connection therewith.

ANY CLAIM SHALL BE DEEMED WAIVED UNLESS MADE IN WRITING TO US WITHIN FIFTEEN (15) DAYS FROM DATE IT WAS, OR REASONABLY SHOULD HAVE BEEN, DISCOVERED.

We proudly support the following industry organizations:



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