



Planitop[®]

**Flowable two-component
repair mortar**



DESCRIPTION

Planitop 25 is a two-component, shrinkage-compensated, cementitious, flowable resurfacing mortar with corrosion inhibitor. Once mixed, the mortar is easily placed onto horizontal surfaces in thicknesses of 1/4" to 1" (6 mm to 2,5 cm) per coat. *Planitop 25* contains a high concentration of synthetic polymer, which produces a dense, durable resurfacing mortar with outstanding adhesion, flexural and compression strengths. It has very low permeability, offering high resistance to freeze/thaw cycles and chloride ion penetration. *Planitop 25* is formulated for demanding industrial repairs involving heavy impact and high abrasion, such as loading docks, warehouse floors, and areas subject to forklift and pallet jacks.

USES

- Use for horizontal concrete surface restoration from 1/4" to 1" (6 mm to 2,5 cm) deep, neat. For exposure to vehicular traffic, use a minimum thickness of 1/2" (12 mm). For applications deeper than 1" (2,5 cm), add properly graded clean pea gravel (maximum aggregate size of 1/2" [12 mm]). *Planitop 25* is effective in resurfacing large expanses and is suitable for precast, cast-in-place, post-tensioned or prestressed concrete repair.
- Use for renovating and resurfacing concrete slabs, such as manufacturing floors, warehouse floors, loading docks, parking decks and piers.
- *Planitop 25* is also used for treating concrete surface defects; filling honeycombs, voids and cavities; and protecting concrete against corrosion, carbonation and aggressive chemicals.

RECOMMENDED SUBSTRATES

- Properly prepared masonry and concrete at least 28 days old, stable and free of hydrostatic pressure

Contact MAPEI's Technical Services Department for installation recommendations regarding substrates and conditions not listed.

TECHNICAL NOTES

- *Planitop 25* is a two-component mortar requiring only the addition of the polymer *Planitop* Part B, which is available in a pre-measured unit for easy field use and control. Do not add other additives or cement to *Planitop 25*.
- *Planitop 25* can be easily placed using a screed, gauge rake or trowel. Vibratory screed is recommended for applications where large surface areas are being repaired.
- *Planitop 25* adheres well to old concrete surfaces and has excellent resistance to freeze/thaw conditions and de-icing salts. Before application of *Planitop 25*, mechanically roughen the concrete surface, saturate surface-dry (SSD) it and scrubcoat it to ensure a secure bond. Quickly apply *Planitop 25* while the scrubcoat is still wet. If the scrubcoat dries before placement of the mortar, reapply scrubcoat.
- *Planitop 25* is a fluid mortar that can be extended with selected aggregates for deeper applications up to 2" (5 cm). When extending, add up to 20% by weight (12 lbs. [5,44 kg]) of properly graded clean pea gravel (maximum aggregate size of 1/2" [12 mm]) that is saturated surface-dry (SSD).
- *Planitop 25* should be used at between 45°F and 95°F (7°C and 35°C).
- Do not use as an anchoring material.

INSTRUCTIONS

1. Surface Preparation

- 1.1 All substrates must be structurally sound, stable and solid.
- 1.2 Thoroughly clean the surface of any substance that could interfere with the bond of the installation material, including dirt, paint, tar, asphalt, wax, oil, grease, latex compounds, form release agents, laitance, loose toppings, foreign substances and any other residues.
- 1.3 Concrete surfaces must be mechanically profiled and prepared by shotblasting, sandblasting, waterjetting, scarifying or other engineer-approved methods to achieve a profile of +/- 1/8" (3 mm). Reference ICRI CSP Standards 7 to 9 for acceptable profile amplitude.
- 1.4 Concrete substrate and ambient temperatures should be between 45°F and 95°F (7°C and 35°C) before application. Temperatures must be maintained within this range for at least 4 hours after the installation of *Planitop 25*. For temperatures exceeding 85°F (29°C), use ACI hot-weather standards; chilling of the *Planitop* Part B can also be beneficial, maintaining the flow and working time when placing material in hot conditions.
- 1.5 Do not apply over standing water or wet surfaces.

2. Mixing

- 2.1 Into a clean mixing container, pour about 2/3 of *Planitop* Part B latex additive. Add only *Planitop* Part B.
- 2.2 Slowly add the of *Planitop 25* Part A powder (57.1 lbs. [25,9 kg]) to *Planitop* Part B latex additive while mixing, using a medium-speed mixer at 550 to 850 rpm. Next, add as much of the remaining latex additive as needed to achieve the desired consistency. The final quantity of *Planitop* Part B latex additive may vary from 0.84 to 1.05 U.S. gals. (3,18 to 3,97 L), depending on the desired product consistency and flow. Mix for up to 3 minutes, to a homogenous consistency.
- 2.3 Do not overmix.
- 2.4 Do not mix more material than can be applied within a 15- to 20-minute period.
- 2.5 *Planitop* Part B also may be used as a finishing aid.

3. Application

- 3.1 *Planitop 25* can be poured or pumped with a roto stator or piston pump onto a prepared horizontal surface. The maximum thickness per lift is 1" (2,5 cm) neat.
- 3.2 For applications between 1" and 2" (2,5 and 5 cm), extend the mix by adding up to 20% by weight (12 lbs. [5,44 kg]) of properly graded clean pea gravel (maximum aggregate size of 1/2" [12 mm]) that is saturated surface-dry (SSD).

- 3.3 When encountering exposed reinforcing steel bars, clean bars and coat with *Mapefer™ 1K* or *Planibond 3C* to protect against corrosion and to improve adhesion (see Technical Data Sheet for details).
- 3.4 For resurfacing areas that require sloping, use *Mapecem® 102* or *Mapecem 202* (see Technical Data Sheets for details). For an application thickness of 1/4" (6 mm) or less, use *Mapecem 101* (see Technical Data Sheet for details).
- 3.5 *Planitop 25* has a pot life of about 20 minutes at 73°F (23°C). Place material within the pot life. Application times will vary depending on climatic conditions.

4. Curing

- 4.1 During curing, to avoid premature evaporation, ensure *Planitop 25* is protected from excessive heat, direct sunlight or draft conditions.
- 4.2 Do not use a solvent-based curing compound.

5. Cleaning

Wash hands and tools promptly with water before material hardens. Cured material must be mechanically removed.

TECHNICAL DATA at 73°F (23°C) and 50% relative humidity

Physical state.....	Powder and latex additive
Shelf life.....	1 year in original, unopened packaging, stored in a dry, heated and covered place. Protect from freezing. If liquid is frozen, discard properly.
Maximum aggregate size in product.....	3/32" (2,5 mm)
Flammability.....	Flame spread: 0 Fuel contribution: 0 Smoke development: 0
Health and safety.....	Consult the Material Safety Data Sheet (MSDS) for safe-handling instructions.

Planitop 25 (mixed)

Mixing ratio.....	From 0.84 to 1.05 U.S. gals. (3,18 to 3,97 L) of Part B per 57.1-lb. (25,9-kg) Part A unit. Mix to desired consistency.
Color.....	Gray
Consistency of mix.....	Flowable mortar
Application temperature range.....	45°F to 95°F (7°C to 35°C)
Pot life.....	20 minutes
Initial set.....	60 minutes
Final set.....	70 minutes
Thickness per lift.....	Neat = 1/4" to 1" (6 mm to 2,5 cm); extended = 1" to 2" (2,5 to 5 cm)

Compressive strength – ASTM C109 (CAN/CSA-A5)

1 day.....	> 3,300 psi (22,8 MPa)
7 days.....	> 5,800 psi (40 MPa)
28 days.....	> 7,200 psi (49,7 MPa)

Flexural strength – ASTM C348 (CAN/CSA-A23.2-8C)

1 day.....	> 750 psi (5,17 MPa)
7 days.....	> 1,300 psi (8,97 MPa)
28 days.....	> 1,750 psi (12,1 MPa)

Modulus of elasticity – ASTM C469

28 days.....	> 2.49 x 10 ⁶ psi (17,2 GPa)
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Slant/shear bond strength – ASTM C882 (modified)

1 day.....	> 1,400 psi (9,66 MPa)
7 days.....	> 2,200 psi (15,2 MPa)
28 days.....	> 3,100 psi (21,4 MPa)

Splitting tensile strength (ASTM 496)

28 days.....	> 620 psi (4,28 MPa)
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Pull-out strength (rupture of concrete substrate) (CAN/CSA-A23.2-6B)

3 days.....	> 300 psi (2,07 MPa)
7 days.....	> 325 psi (2,24 MPa)
28 days.....	> 350 psi (2,41 MPa)

Volume change – ASTM C157 (modified)

28 days, dry-cured.....	-0.043%
28 days, wet-cured.....	+0.006%

Abrasion resistance – ASTM D4060

After 7 days Taber H22-500 g, 200 cycles.....	0.70 g
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Freeze/thaw resistance – ASTM C666-A

(CAN/CSA A23.2-9B), 300 cycles..... 105% durability factor

Resistance to de-icing salts – ASTM C672-A

(CAN/CSA A23.2-16C), 50 cycles..... 0 rating, no scaling

Permeability to chlorides – ASTM C1202

(AASHTO T277)..... 145 coulombs (very low permeability)

Yield per 66.3-lb. (30,1-kg) combined unit..... 0.47 cu. ft. (0,01 m³)

PACKAGING

Planitop 25 Part A powder (bag): 57.1 lbs. (25,9 kg)

Planitop Part B latex additive (jug): 1.05 U.S. gals. (3,97 L) at 9.17 lbs. (4,16 kg)

APPROXIMATE COVERAGES* per thickness for a 66.3-lb. (30,1-kg) combined unit

At 1/2" (12 mm)..... 12 sq. ft. (1,11 m²)

At 1" (2,5 cm)..... 6 sq. ft. (0,56 m²)

* Coverages shown are for estimating purposes only. Actual jobsite coverages may vary according to substrate conditions, type of equipment, thickness applied and application methods used.

Planitop® 25



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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For the most current product and warranty data, visit www.mapei.com.

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