



Planitop[®] 23

Vertical and Overhead, Two-Component Repair Mortar



DESCRIPTION

Planitop 23 is a two-component, fast-setting, polymer-modified, thixotropic, fiber-reinforced cementitious repair mortar with a corrosion inhibitor. *Planitop 23* is intended for vertical and overhead repairs, and contains silica fume to provide a durable, high-strength mortar in these applications.

FEATURES AND BENEFITS

- Fiber-reinforced
- Two-component
- Can be applied using a trowel
- Polymer-modified for added durability
- Features high early strength in 1 day
- Can be placed from 1/4" to 2" (6 mm to 5 cm)

WHERE TO USE

- Interior and exterior use
- For vertical and overhead structural concrete repairs and restoration
- For repairing and resurfacing concrete structures such as tunnels, bridges, overpasses, retaining walls, pools, fountains, beams, building facades, ceilings, balconies, ramps, walkways and more

Consult MAPEI's Technical Services Department for installation recommendations regarding uses not listed.

SURFACE PREPARATION

- Concrete surface must be clean, sound and free of loose particles,

efflorescence, paints, tar, grease, asphaltic materials, bond breakers, curing compounds, wax, and any foreign substance or any conditions that may affect proper bonding of the product and result in cracking, discoloration or changes in overall product performance.

- Saw-cut the perimeter of the repair area into a square with a minimum depth of 1/2" (12 mm).
- Mechanically profile and prepare concrete surfaces by engineer-approved methods in accordance with the most current ICRI Technical Guideline #310.2R concrete surface profile (CSP) #7 to #9.
- Ensure that the concrete substrate is saturated surface-dry (SSD) before installing *Planitop 23*.
- Ensure that all exposed reinforcing steel is prepared in accordance with the most current ICRI 310.1 guideline and coated with either *Mapefer™ 1K* or *Planibond® 3C*.

MIXING

Before product use, take appropriate safety precautions. Refer to the Safety Data Sheet for details.

1. Into a clean mixing container, pour 3/4 of the required amount of cool, latex additive (Part B).
2. Slowly add *Planitop 23* powder (Part A) to the latex additive (Part B) while mixing, using a low-speed drill and an appropriate mixing paddle.
3. Add the remaining 1/4 of latex additive (Part B) to achieve the desired consistency.
4. Mix for up to 3 minutes, scraping the sides to mix all of the powder, and remix to a smooth, homogenous consistency.

PRODUCT APPLICATION

Read all installation instructions thoroughly before installation.

1. Apply *Planitop 23* as a scrubcoat to the prepared SSD surface.
2. Immediately apply *Planitop 23* while the scrubcoat is still wet.
3. When applying additional coats of *Planitop 23*, wait for the previous lift to reach an initial set. Score or crosshatch the surface to promote mechanical adhesion of additional coats.
4. Finish to the surrounding area.

CURING

- Cure *Planitop 23* with wet burlap or plastic sheeting for the first 4 hours of curing. Alternatively, apply a water-based curing compound conforming to ASTM C309.

CLEANUP

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

LIMITATIONS

- Do not add other additives, cement or aggregates to *Planitop 23*.
- Minimum application thickness is 1/4" (6 mm).
- Do not exceed 2" (5 cm) when installing in overhead applications.
- Do not use solvent-based curing compounds.
- Repair configurations must be carefully considered and consistent with industry practices recommended by the American Concrete Institute (ACI) and the International Concrete Repair Institute (ICRI).
- Only use at temperatures between 45°F and 95°F (7°C and 35°C). For temperatures outside of this range, refer to the ACI's cold-weather or hot-weather application guidelines.

Product Performance Properties

Laboratory Tests	Results
VOCs (Rule #1168 of California's SCAQMD)	0 g per L
Compressive strength – ASTM C109 (CAN/CSA-A5)	
1 day	> 4,060 psi (28 MPa)
3 days	> 4,800 psi (33.1 MPa)
28 days	> 7,975 psi (55 MPa)
Flexural strength – ASTM C348 (CAN/CSA-A23.2-8C)	
1 day	> 780 psi (5.40 MPa)
7 days	> 1,300 psi (8.97 MPa)
28 days	> 1,680 psi (11.6 MPa)
Slant/shear bond strength – ASTM C882 (modified)	
1 day	> 1,160 psi (8 MPa)
28 days	> 2,175 psi (15 MPa)
Volume change – ASTM C157 (modified) (typical results)	
28 days, dry-cured	≤ -0.07%
28 days, wet-cured	+0.03%
Freeze/thaw resistance – ASTM C666-A (CAN/CSA A23.2-9B) at 300 cycles	Good – 100% durability factor
Resistance to de-icing salts – ASTM C672 (CAN/CSA A23.2-16C)	Rating 0 (50 cycles)
Permeability to chlorides – ASTM C1202 at 28 days	Very low – in the range of 100 to 1,000 coulombs
Modulus of elasticity (MOE) – ASTM C469 at 28 days	2 x 10 ⁶ psi (18.2 GPa)
Splitting tensile strength – ASTM 496 at 28 days	815 psi (5.62 MPa)

Shelf Life and Product Characteristics before mixing

Shelf life	1 year in original, unopened packaging, stored in a dry, heated and covered place. Protect liquid from freezing. If liquid is frozen, discard properly.
Physical state	Powder and latex additive

Protect containers from freezing in transit and storage. Provide for heated storage on site and deliver all materials at least 24 hours before work begins.

Application Properties

Color	Gray
Mixing ratio	Mix 1:1 of Part A to Part B
Consistency of mix	Thixotropic mortar
Application temperature range	45°F to 95°F (7°C to 35°C)
Pot life	20 minutes
Initial set	50 minutes
Final set	90 minutes
Thickness per lift	1/4" to 2" (6 mm to 5 cm)

Packaging

Size
Part A, Bag: 38.6 lbs. (17.5 kg)
Part B, Jug: 0.76 U.S. gal. (2.88 L)

Approximate Coverage* per 45.2 lbs. (20.5 kg) of mixed product

Yield	0.36 cu. ft. (0.0101 m ³)
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* Coverage shown is for estimating purposes only. Actual coverage may vary according to substrate conditions and setting practices.

Planitop 23



Refer to the SDS for specific data related to health and safety as well as product handling.

For information on MAPEI's commitment to sustainability and transparency, as well as how MAPEI products may contribute to green building standards and certification systems, contact sustainability_USA@mapei.com (USA) or sustainability-durabilite@mapei.com (Canada).

LEGAL NOTICE

The contents of this Technical Data Sheet ("TDS") may be copied into another project-related document, but the resulting document shall not supplement nor replace requirements per the TDS in effect at the time of the MAPEI product installation. For the most up-to-date TDS and warranty information, please visit our website at

www.mapei.com. **ANY ALTERATIONS TO THE WORDING OR REQUIREMENTS CONTAINED IN OR DERIVED FROM THIS TDS SHALL VOID ALL RELATED MAPEI WARRANTIES.**

Before using, the user must determine the suitability of our products for the intended use,

and the user alone assumes all risks and liability. **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.**

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