

Planitop 15

Form-and-Pour, One-Component Repair Mortar



DESCRIPTION

Planitop® 15 is a one-component, shrinkage-compensated, cementitious, fiber-reinforced, fluid mortar. *Planitop 15* contains a corrosion inhibitor and silica fume, and is well-suited for form-and-pour and form-and-pump applications where high early strength and flowability are required.

FEATURES AND BENEFITS

- Fiber-reinforced
- Can be installed using form-and-pour or form-and-pump methods
- Can be extended up to 50% by weight for full-depth repairs when properly installed reinforcing steel is incorporated
- Contains silica fume and a corrosion inhibitor
- Compatible with *Mapeshield™* / galvanic anodes

WHERE TO USE

- For interior and exterior applications
- For horizontal, vertical and overhead repairs when formed
- Areas of congested reinforcement
- For repairs greater than 3/8" (10 mm) in thickness

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

LIMITATIONS

- Do not overmix *Planitop 15*.
- Only use at between 45°F to 95°F (7°C to 35°C). Refer to the American Concrete Institute (ACI) for cold-weather or hot-weather application guidelines.
- *Planitop 15* may crack in hot or windy applications if not properly cured.
- Do not apply over standing water.

SURFACE PREPARATION

- Concrete surface must be clean, sound and free of loose particles, efflorescence, paints, tars, grease, asphaltic materials, bond breakers, curing compounds, wax, and any foreign substances or any conditions that might affect proper bonding of the product, resulting in possible cracking and altered product performance.
- Saw-cut the perimeter of the repair area into a square with a minimum depth of 3/8" (10 mm).
- Mechanically profile and prepare concrete surfaces by engineer-approved methods in accordance with the most current ICRI 310.2R guidelines, CSP #5 or greater.
- Ensure that the concrete substrate is saturated surface-dry (SSD) before installing *Planitop 15*. Alternatively, the prepared concrete can be coated with *Planibond 3C*.
- Ensure that all exposed reinforcing steel is prepared in accordance with the most current ICRI 310.1 guideline and coated with either *Planibond® 3C* or *Mapefer™ 1K*.
- Pretreat formwork with a form-release agent.

MIXING

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

1. *Planitop 15* requires 1 U.S. gal. (3.79 L) of water per 55-lb. (24.9-kg) bag.
2. Into a clean mixing container, pour 3/4 of the water.
3. Slowly add *Planitop 15* powder to the water while mixing, using a low-speed drill and an appropriate mixer. Mix for 1 to 2 minutes. While mixing, add the remaining water and continue mixing to a smooth, homogenous consistency.
4. For applications between 4" (10 cm) and full depth, extend up to 50% by weight (27.5 lbs. per 55-lb. bag [12.5 kg per 24.9-kg bag] of *Planitop 15*) with clean 3/8" (10 mm) pea gravel.

PRODUCT APPLICATION

Read all installation instructions thoroughly before installation.

1. Apply by form-and-pour or form-and-pump method into formwork on horizontal, vertical and overhead surfaces. Refer to ACI RAP 4 and RAP 5 for details about these placement techniques.
2. If the top of formwork is exposed, finish to the desired texture.
3. For hot and windy areas, the use of *Mapecrete® Film* is recommended.

CURING

- Protect *Planitop 15* from high winds and direct sunlight while it cures.
- Moist-cure any exposed *Planitop 15* with wet burlap or a polyethylene sheet, a fine mist of water or an appropriate ASTM C309-referenced curing compound.
- For improved curing, leave formwork in place for three days after application of *Planitop 15*.

CLEANUP

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

Product Performance Properties

Laboratory Tests	Results
Compressive strength – ASTM C109 (CAN/CSA-A5)	
1 day	> 4,350 psi (30 MPa)
7 days	> 8,600 psi (59.3 MPa)
28 days	> 10,875 psi (75 MPa)
Flexural strength – ASTM C348 (CAN/CSA-A23.2-8C)	
1 day	> 725 psi (5 MPa)
7 days	> 1,160 psi (8 MPa)
28 days	> 1,450 psi (10 MPa)
Modulus of elasticity – ASTM C469	
28 days	4.5 x 10 ⁶ psi (31.1 GPa)
Slant/shear bond strength – ASTM C882 (modified)	
1 day	> 1,850 psi (12.8 MPa)
28 days	> 3,040 psi (21.0 MPa)
Volume change – ASTM C157 (modified), typical value	
28 days, dry-cured	-0.08%
28 days, wet-cured	+0.11%
Freeze/thaw resistance – ASTM C666-A (CAN/CSA A23.2-9B), 300 cycles	
	100% durability factor
Resistance to de-icing salts – ASTM C672 (CAN/CSA A23.2-16C)	
	0 rating, no scaling (50 cycles)
Permeability to chlorides – ASTM C1202 (AASHTO T277)	
	Very low – 100 to 1,000 coulombs at 28 days
VOCs (Rule #1168 of California's SCAQMD)	
	0 g per L

Shelf Life

Shelf life	1 year when stored in original, unopened packaging at 73°F (23°C)
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Application Properties

mixed neat at a 15% water ratio (about 1 U.S. gal. [3.79 L])

Consistency of mix	Very flowable mortar
Pot life	60 minutes
Initial set	> 3 hours
Final set	< 10 hours
Thickness per lift, mixed neat	3/8" to 4" (10 mm to 10 cm)

Packaging

Size

Bag: 55 lbs. (24.9 kg)

Approximate Coverage*

per 55 lbs. (24.9 kg)

Mixture type	Yield
Neat	0.46 cu. ft. (0.013 m ³)
Extended with 27.5 lbs. (12.5 kg) of 3/8" (10 mm) pea gravel	0.6 cu. ft. (0.017 m ³)

**Coverage shown is for estimating purposes only. Actual jobsite coverage may vary according to substrate conditions and setting practices.*

ADDITIONAL INFORMATION

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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For the most current product data and BEST-BACKEDSM warranty information,
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