



PLANITOP 25
Two-Component Resurfacing Mortar

SECTION 03 01 30
MAINTENANCE OF CAST-IN-PLACE CONCRETE

PART 1 GENERAL

1.1 SECTION INCLUDES

- A. Products for maintenance of concrete, including the following:
 - 1. Horizontal concrete restoration.
 - 2. Renovating and resurfacing concrete slabs exposed to vehicular traffic.

1.2 RELATED SECTIONS

- A. Section 03 30 00 - Cast-in-Place Concrete.

1.3 REFERENCES

- A. ASTM International:
 - 1. ASTM C109 - Standard Test Method for Compressive Strength of Hydraulic Cement Mortars (Using 2-in. or [50-mm] Cube Specimens).

1.4 SUBMITTALS

- A. Submit under provisions of Section 01 30 00 - Administrative Requirements.
- B. Product Data: Manufacturer's data sheets on each product to be used, including:
 - 1. Preparation instructions and recommendations.
 - 2. Storage and handling requirements and recommendations.
 - 3. Installation methods.
- C. Verification Samples: For each finish product specified, two samples, minimum size 6" (150 mm) square representing actual product, color, and patterns.

1.5 QUALITY ASSURANCE

- A. Manufacturer Qualifications: Minimum 5 years' experience manufacturing similar products.
- B. Installer Qualifications: Minimum 2 years' experience installing similar products.
- C. Source Limitations: For repair products, obtain each color, grade, finish, type, and variety of product from single source and from single manufacturer with resources to provide products of consistent quality in appearance and physical properties.
- D. Mock-Up: Provide a mock-up for evaluation of surface preparation techniques and application workmanship.
 - 1. Finish areas designated by Architect.
 - 2. Do not proceed with remaining work until workmanship is approved by Architect.
 - 3. Refinish mock-up area as required to produce acceptable work.



1.6 PRE-INSTALLATION MEETINGS

- A. Convene at least two weeks prior to starting work of this section.

1.7 DELIVERY, STORAGE AND HANDLING

- A. Deliver and store products in manufacturer's unopened packaging bearing the brand name and manufacturer's identification until ready for installation.
- B. Handling: Handle materials to avoid damage.

1.8 PROJECT CONDITIONS

- A. Maintain environmental conditions (temperature, humidity and ventilation) within limits recommended by manufacturer for optimum results. Do not install products under environmental conditions outside manufacturer's recommended limits.

1.9 SEQUENCING

- A. Ensure that products of this section are supplied to affected trades in time to prevent interruption of construction progress.

PART 2 PRODUCTS

2.1 MANUFACTURERS

- A. Product Performance:

Compressive strength – ASTM C109	1 day > 3,300 psi (22.8 MPa) 3 days > 5,800 psi (40.0 MPa) 28 days > 7,200 psi (49.7 MPa)
Flexural strength – ASTM C348	1 day > 750 psi (5.17 MPa) 7 days > 1,300 psi (8.97 MPa) 28 days > 1,750 psi (12.1 MPa)
Slant/shear bond strength – ASTM C882	1 day > 1,400 psi (9.66 MPa) 7 days > 2,200 psi (15.2 MPa) 28 days > 3,100 psi (21.4 MPa)
Freeze/thaw resistance – ASTM C666-A at 300 cycles	105% durability factor
Resistance to de-icing salts – ASTM C672	0 rating – no scaling
Permeability to chlorides – ASTM C1202	Very low – 145 coulombs
- B. Acceptable Manufacturer:

MAPEI North America
1144 E. Newport Center Dr.; Deerfield Beach, FL 33442
Toll-Free for CRS Technical Services: Tel. 888-365-0614
Email: CRS@mapei.com
Web: www.mapei.com
- C. Requests for substitutions will be considered in accordance with provisions of Section 01 60 00 - Product Requirements.



- D. Substitutions: Not permitted.

2.2 POLYMER-MODIFIED HORIZONTAL REPAIR PRODUCTS

- A. Two-Component, Cementitious Flowable Repair Mortar for Resurfacing Horizontal Concrete: Packaged, dry mix for repair of concrete, and containing additive liquid added during mix.
 - 1. Product: Subject to compliance with requirements, provide MAPEI Corporation; Planitop 25.
 - 2. Compressive Strength: Not less than 7,200 psi (49.7 MPa) within 28 days when tested according to ASTM C109.

2.3 MISCELLANEOUS MATERIALS

- A. Portland Cement: ASTM C150/C 150M, Type I, II or III unless otherwise indicated.
- B. Water: Potable.

2.4 MIXES

- A. General: Mix products in clean containers according to manufacturer's written instructions.
 - 1. Do not add water, thinners or additives unless recommended by manufacturer.
 - 2. When practical, use manufacturer's premeasured packages to ensure that materials are mixed in proper proportions. When premeasured packages are not used, measure ingredients using graduated measuring containers; do not estimate quantities or use shovels or trowels as units of measure.
 - 3. Do not mix more materials than can be used within time limits recommended by manufacturer. Discard materials that have begun to set.
- B. Mortar Scrub Coat: Mix dry ingredients with enough water to provide consistency of thick cream.
- C. Concrete: Comply with Section 03 30 00 - Cast-in-Place Concrete.

PART 3 EXECUTION

3.1 PREPARATION

Follow the appropriate sections of ACI RAP Bulletin 7, "Spall Repair of Horizontal Concrete Surfaces."

- A. Concrete surface must be free of loose particles, efflorescence, paints, tars, grease, asphaltic materials, bond breakers, curing compounds, wax, and dry foreign substances or any conditions that may affect product performance or proper bonding.
- B. Mechanically profile and prepare concrete surfaces by engineer-approved methods in accordance with the most current ICRI 310.2R Guidelines, CSP #5 to #10.
- C. Ensure that the concrete substrate is saturated surface-dry (SSD) before installing Planitop 25.

3.2 MIXING

- A. Before product use, take appropriate safety precautions. Refer to the Safety Data Sheet for details. Into a clean mixing container, pour 3/4 of the required amount of Planitop latex



additive (Part B).

- B. Slowly add Planitop 25 powder (Part A) to Planitop Part B while mixing with a low-speed drill and an appropriate mixing paddle. Add the remaining latex additive to achieve the desired consistency. Mix for up to 3 minutes to a smooth, lump-free, homogeneous consistency.
- C. 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, SSD pea gravel (with a maximum aggregate size of 1/2" [12 mm]).
- D. Mix only as much material as can be applied within 15 to 20 minutes.

3.3 INSTALLATION

Read all installation instructions thoroughly before installation.

- A. Place a scrubcoat of Planitop 25 onto the SSD prepared concrete.
- B. Immediately pour or pump Planitop 25 with a rotor stator or piston pump onto the scrubcoat before it dries.
- C. Planitop 25 can be easily placed using a screed, gauge rake or trowel. A spiked roller is recommended for applications where large surface areas are being placed.
- D. Finish using a smoother.
- E. Allow Planitop 25 to stiffen before applying a broom texture.

3.4 CURING AND PROTECTION

- A. Cure Planitop 25 with wet burlap or plastic sheeting for the first 4 hours of curing. Alternatively, apply a water-based curing compound conforming to ASTM C309.

END OF SECTION