



**PLANITOP EL**  
**Self-Leveling, Portland-Cement-Based Topping**

**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. Maintenance of cast-in-place concrete.

**1.2 RELATED SECTIONS**

- A. Section 03 53 00 – Concrete topping.

**1.3 REFERENCES**

- A. ASTM International:
  - 1. ASTM C348 – Standard Test Method for Flexural Strength of Hydraulic Cement Mortars.
  - 2. ASTM C109 - Standard Test Method for Compressive Strength for 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.

**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 > 2,000 psi (13.8 MPa)   |
|                                  | 7 days > 4,000 psi (27.6 MPa)  |
|                                  | 28 days > 5,000 psi (34.5 MPa) |

|                               |                              |
|-------------------------------|------------------------------|
| Flexural Strength – ASTM C348 | 28 days > 750 psi (5.17 MPa) |
|-------------------------------|------------------------------|

- 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](mailto:CRS@mapei.com)  
Web: [www.mapei.com](http://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 SELF-LEVELING CONCRETE TOPPINGS

- A. Self-Leveling, Portland-Cement-Based Topping: Packaged, dry mix for repair of concrete.
  - 1. Product: Subject to compliance with requirements, provide MAPEI Corporation; Planitop EL
  - 2. Product shall be non-redispersible.
  - 3. Compressive Strength: Not less than 5,000 psi (34.5 MPa) within twenty-eight days when tested according to ASTM C109/C109M.



## 2.3 MISCELLANEOUS MATERIALS

- A. Portland Cement: ASTM C150/C150M, 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. Concrete: Comply with Section 03 30 00 - Cast-in-Place Concrete.

# PART 3 EXECUTION

## 3.1 EXAMINATION

- A. Properly prepared concrete at least 28 days old, stable, sound, dry and free from hydrostatic pressure.
- B. If substrate preparation is the responsibility of another installer, notify Architect of unsatisfactory preparation before proceeding.

## 3.2 PREPARATION

- 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 to obtain a concrete surface profile (CSP) of #3 to #5.
- C. Always use caulking or foam tape to round off any sharp corners that protrude into the room receiving the topping, as well as column bases, supports and equipment pedestals, etc., include the use of foam tape around the perimeter of the pour.
- D. Before the application of Planitop EL, always prime the prepared surface with MAPEI's Primer SN or Primer SN Fast at a rate of 80 to 133 sq. ft. per U.S. gallon (1.96 to 3.26 m<sup>2</sup> per L) using #10/#20 graded sand, immediately broadcast to refusal.
- E. Allow to cure for at least 12 hours. Sweep and/or vacuum the free sand from the substrate.

## 3.3 MIXING

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



- A. Planitop EL requires from 1 to 1.05 U.S. gal. (3.79 to 3.97 L) of water per 50-lb. (22.7-kg) bag.
- B. Into a clean mixing container, pour 3/4 of the required water.
- C. Using a low-speed drill and appropriate mixer, slow add the Planitop EL powder to the water. Mix from 1 to 2 minutes.
- D. While mixing, add the remaining water and continue to mix to achieve a smooth, homogeneous consistency.

### 3.3 INSTALLATION

Read all installation instructions thoroughly before installation.

- A. Pour material from mixing vessels onto the prepared sand broadcast floor, working from one side to the other in a ribbon.
- B. Immediately gauge the depth of the placed Planitop EL with a gauge rake to the desired application thickness.
- C. After gauging Planitop EL to the desired thickness, use a smoother paddle or a spiked roller over the gauged area.
- D. If more Planitop EL is required for the area, pour the next mixed product into the already placed Planitop EL to minimize mottling and air bubbles.
- E. Allow to cure 24 to 36 hours. Planitop EL will form a glossy film upon curing, similar to the finish of a hard-troweled slab.
- F. Planitop EL may be polished 36 to 48 hours after placement.
- G. Planitop EL may be treated with MAPEI's Mapecrete Hard LI, Mapecrete Hard SB or Mapecrete Hard SI densifier. Refer to the appropriate technical data sheet (TDS) for more information.
- H. Planitop EL can have Mapecrete Protector FF applied to polished or unpolished product once cured to aid in protecting the final surface.

END OF SECTION