



PLANISEAL 288
Flexible Cementitious Waterproofing Mortar

SECTION 07 16 13
Polymer-Modified Cement Waterproofing

PART 1 GENERAL

1.1 SECTION INCLUDES

- A. Products for maintenance of concrete, including the following:
 - 1. Polymer-modified, cementitious coating for waterproofing.
 - 2. Horizontal, vertical and overhead waterproofing.

1.2 RELATED SECTIONS

- A. Section 07 10 00 – Dampproofing and Waterproofing.

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).
 - 2. ASTM C1059 – Standard Specification for Latex Agents for Bonding Fresh to Hardened Concrete.
 - 3. ASTM E96 – Standard Test Method for Water Vapor Transmission of Materials.

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 inches (150 mm) square representing actual product, color and patterns.

1.5 QUALITY ASSURANCE

- A. Manufacturer Qualifications: Minimum 5 years' experience in manufacturing similar products.
- B. Installer Qualifications: Minimum 2 years' experience in installing similar products.
- C. 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 MANUFACTURER

- A. Product Performance:
 - Compressive strength – ASTM D695
 - 28 days > 3,400 psi (23.4 MPa)
 - Flexural strength – ASTM C307
 - 28 days > 725 psi (5 MPa)
 - Adhesion tensile strength – ASTM C1583
 - 28 days > 145 psi (1 MPa)
 - Resistance to hydrostatic pressure Up to 1 bar (33.9 or ft. or 10.3 m) of water head pressure, positive side
 - Vapor permeability – ASTM E96 4.8 perms
 - Color Concrete gray and white
- 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 CEMENTITIOUS COATINGS FOR WATERPROOFING



- A. Two-Component, Slightly Flexible, Polymer-Modified, Cementitious Waterproofing and Protective Mortar for Concrete and Masonry: Packaged, dry mix for repair of concrete, and containing a liquid latex additive added during mixing.
 - 1. Product: Subject to compliance with requirements, provide MAPEI Corporation; Planiseal 288.
 - 2. Compressive strength no less than 3,400 psi (23.4 MPa) when tested according to ASTM D695.

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.

PART 3 EXECUTION

3.1 EXAMINATION

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

3.2 PREPARATION

- A. 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.
- B. Concrete surfaces must be mechanically profiled and prepared by engineer-approved methods, to achieve an open-textured International Concrete Repair Institute (ICRI) concrete surface profile (CSP) of #3.
- C. Seal cracks and spalled areas with appropriate MAPEI repair products.
- D. Surfaces must be saturated surface-dry (SSD), with no standing water at the time of application.

3.3 MIXING

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



- A. Mix complete units of Parts A and B. To achieve a thicker consistency, use 90% of Part B liquid.
- B. Pour the desired amount of Part B liquid into a clean suitable container. Slowly add Part A powder while mixing with a low-speed mixer.
- C. Mix thoroughly for 2 to 3 minutes until a homogeneous mixture is obtained. Ensure that all Part A powder on the sides and bottom of the mixing container is blended into the mix.
- D. Allow the mixture to stand for about 5 minutes. Then remix and apply.

3.4 INSTALLATION

Read all installation instructions thoroughly before installation.

- A. Planiseal 288 can be applied by trowel, stiff nylon bristle brush or spray equipment. Ensure that the material is thoroughly worked into the substrate to fill all pores and voids.
- B. Application of 2 to 3 coats will be required. Ensure that the previous coat is sufficiently dry before applying the next coat (typically after 5 to 6 hours, depending on the substrate temperature and absorbability). The second coat should be applied perpendicular to the first coat.
- C. For trowelable application: Apply the first coat using the brush or trowel for the first coat. Allow to harden for 5 to 6 hours and apply the second coat with a flat trowel.
- D. For spray application: Apply the first coat using the brush or trowel method. Use a hopper gun spray equipment, textured sprayer or rotor/stator pump. Allow 5 to 6 hours between coats. After the final layer, rub the surface with a fine sponge to create a uniform surface texture.
- E. Ensure that each additional coat is applied within 24-hour timeframe. If 24 hours is exceeded, employ light-grit mechanical abrasion before the next application.
- F. For waterproofing balconies: Fill in all spalls with an appropriate MAPEI product and apply a polyurethane sealant to wall-to-slab transitions. After the material has dried, apply a 1/16" (about 62 mils) layer of Planiseal 288 over the entire balcony. While Planiseal 288 is still wet, apply Mapetex Sel or a fiberglass mesh along all static hairline cracks, wall-to-slabs transitions and patched areas to reinforce the first layer. Embed the mesh, remove any wrinkles, and cover with an additional coat of Planiseal 288 at 40 mils in thickness.
- G. A third coat may need to be applied in extreme cases of hydrostatic pressure.

3.5 CURING

- A. Protect from hot and windy conditions during curing.

END OF SECTION