



MAPELASTIC SMART
Roller-Grade, Flexible, Cementitious Membrane for Waterproofing
and Protecting Concrete Masonry

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.
- B. Section 07 11 16 – Cementitious Dampproofing.

1.3 REFERENCES

- A. ASTM International:
 - 1. 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:

Perm rating of 5/64" (2 mm)	< 1.0 perms
Coating – ASTM E96	
Minimum temperature when in service	14° F (-10° C)
Adhesion to concrete	
After 7 days at 73°F (23°C) and 50% relative humidity + 21 days in water	130 psi (0,09 MPa)
Elongation DIN 53504 (modified)	
After 28 days at 73°F (23°C) and 50% relative humidity	130%
Waterproofing in accordance with EN 12390/8 (modified)	Waterproof

Fracture-recovering capacity:

Crack bridging at breakage of non-reinforced Mapelastic Smart

After 28 days at 73°F (23°C) and 50% relative humidity	Width 5/64" (2 mm)
After 7 days at 73°F (23°C) and 50% relative humidity + 21 days in water	Width 1/16" (1.5 mm)

Crack bridging at breakage of Mapelastic Smart membrane reinforced with Mapetex Sel

After 28 days at 73°F (23°C) and 50% relative humidity	Width > 1/8" (1.5 mm)
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- 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 WATERPROOFING

- A. Two-Part, Flexible, Cementitious Membrane for Waterproofing and Protecting Concrete, Masonry, Ceramic and Marble: Packaged, dry and liquid mix for waterproofing.
 - 1. Product: Subject to compliance with requirements, provide MAPEI Corporation; Mapelastic Smart
 - 2. Permeability: About 1 perm at 80 mils thickness when tested according to ASTM E96.

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 concrete, masonry and ceramic surfaces. The surface to be treated must be sound, stable and clean.
- 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 clean and free of loose particles, efflorescence, paints, tars, grease, asphaltic materials, bond breakers, curing compounds, wax and any foreign substances.
- B. Mechanically profile and prepare concrete surfaces by engineer-approved methods in accordance with the most current ICRI 310.2R guidelines to obtain a CSP of #1 to #3.
- C. Repair all surface defects (spalls, cracks, etc.) by engineer-approved methods.
- D. In areas of elevation changes (horizontal to vertical), install Fiberglass Mesh per its Technical Data Sheet.



- E. Ensure that the concrete substrate is saturated surface-dry (SSD) before installing Mapelastastic Smart.

3.3 MIXING

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

- A. Pour one half of the Part B (liquid) into a suitable clean container. Slowly add all the Part A (powder) while stirring with a mechanical mixer (do not mix by hand). Using a low-speed drill and an appropriate mixing paddle, mix Mapelastastic Smart for 2 to 3 minutes, until a homogenous mixture is achieved.
- B. Add the remaining half of the Part B (liquid) to the mixture. Mix for another 2 minutes until a homogenous mixture is again achieved.

3.4 INSTALLATION

Read all installation instructions thoroughly before installation.

- A. Mapelastastic Smart can be applied by roller, brush or plaster pump.
- B. Apply Mapelastastic Smart to a prepared, saturated-surface dry (SSD) substrate to a thickness of 40 to 60 mils.
- C. For best performance, install Fiberglass Mesh, ensuring that it is pressed firmly into the freshly applied Mapelastastic Smart.
- D. Continue applying Mapelastastic Smart and Fiberglass Mesh, covering the entire installation area that will receive tile or toppings.
- E. Within 4 to 5 hours of the first application of Mapelastastic Smart, install a second layer of Mapelastastic Smart to obtain a total thickness of 80 mils.
- F. Finish to the desired texture.
- G. Allow curing for 16 to 24 hours before installation of ceramic tile or cement-based toppings.

3.5 CURING

- A. Mapelastastic Smart is self-curing and does not require any curing compounds.

END OF SECTION