



PLANISEAL MB
Moisture Barrier and Consolidating Epoxy

SECTION 09 05 61 13
Moisture Vapor Emission Control

PART 1 GENERAL

1.1 SECTION INCLUDES

- A. Products for maintenance of concrete, including the following:
 - 1. Moisture barriers for concrete.
 - 2. Consolidating epoxy primers.

1.2 RELATED SECTIONS

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

1.3 REFERENCES

- A. ASTM International:
 - 1. ASTM E96/E96M - Standard Test Methods for Water Vapor Transmission of Materials.
 - 2. ASTM F3010 – Standard Practice for Two-Component Resin Based Membrane Forming Moisture Mitigation Systems for Use Under Resilient Floor Coverings.

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 of 5 years' experience in manufacturing similar products.
- B. Installer Qualifications: Minimum of 2 years' experience in installing similar products.

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:

Permeability – ASTM E96-05	< 0.1 perms at < 10 mils DFT
Reduction of moisture vapor – ASTM E96-05	> 96% at 8 mils DFT
Pull-off adhesion / bond strength – ASTM D7234	> 1,000 psi (6.9 MPa) with failure in concrete substrate at 28 days
Solids content	100%
Resistance to high alkalinity (pH 14) – ASTM D1308 with 10% and 30% solution of sodium hydroxide	14-day spot test, covered – no effect 14-day spot test, uncovered – no effect 14-day immersion – no effect

- 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 MOISTURE BARRIERS

- A. 100%-Epoxy Moisture Barrier and Consolidating Primer designed to effectively stop moisture-related moisture with toppings, as well as act as a surface-consolidating epoxy primer.



1. Product: Subject to compliance with requirements, provide MAPEI Corporation; Planiseal MB.
2. Reduction of moisture barrier not less than 96% when tested according to ASTM E96-05.

2.3 MISCELLANEOUS MATERIALS

- A. Portland Cement: ASTM C150, 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. Concrete substrates that have been mechanically prepared using dustless engineer-approved methods to an International Concrete Repair Institute (ICRI) concrete surface profile (CSP) of #2 to #3. Substrates with a profile greater than CSP #3 will realize lower coverage rates. The substrate profile should not exceed CSP #6.
- B. Sound, fully cured gypsum or lightweight substrates requiring surface consolidation before application of additional flooring systems.
- C. Weak concrete substrates capable of a direct pull of 60 psi (0.41 MPA) or greater that require consolidation, or concrete substrates with hairline cracks that require treatment.
- D. Planiseal MB may be installed on concrete substrates that have had at least 7 days to cure. When installing on green concrete, be aware that continued shrinkage in the substrate during curing may lead to the formation of surface cracks that penetrate Planiseal MB. Cracks generated by substrate movement are not covered by the MAPEI warranty.
- E. Planiseal MB may be used over substrates exhibiting relative humidity of up to 100% (when tested in accordance with ASTM F2170). In all cases, the surface temperature of the prepared concrete slab must be at least 5°F (2.8°C) above the dew point to avoid condensation on the concrete surface as the Planiseal MB hardens.

3.2 PREPARATION

- A. All substrates must be structurally sound, stable, solid and free of bond-inhibiting or bond-breaking materials such as curing compounds, topical and penetrating sealers, oil residue, dust and grease.
- B. If outgassing is a concern (which may lead to pinholing in the primer surface), wait 16 to 24 hours after shotblasting before applying Planiseal MB.
- C. Mechanically prepare the surface to obtain a CSP of #2 to #3 by shotblasting. Ensure that all



old adhesives, contaminants, etc., are completely removed.

- D. Mechanically prepare cracks, control joints and construction joints.
- E. Expansion and movement joints must be honored through the finished flooring system.
- F. Do not acid-etch surfaces before applying Planiseal MB.

3.3 MIXING

- A. Before product use, take appropriate safety precautions. Refer to the Safety Data Sheet for details. Premix Part A for 2 to 3 minutes to a homogeneous consistency using a low-speed mixer (at 300 to 450 rpm) and a Jiffy mixing paddle.
- B. Pour Part B into the Part A container and mix thoroughly for 3 minutes to a smooth, homogeneous consistency. Do not mix at high speeds, which can trap air within the mixed material.

3.4 INSTALLATION

Read all installation instructions thoroughly before installation.

- A. Pour and spread the entire unit of any mixed Planiseal MB onto the substrate within 5 minutes of mixing
- B. Apply Planiseal MB to the substrate and immediately pull it tight to the surface with a squeegee. This first pass or prime coat effectively “self-primes” the substrate, driving the air out of the concrete. Follow within 30 to 45 minutes with a single-coat application of Planiseal MB to achieve the required dry film thickness (DFT) on the surface. Refer to the “Approximate Coverage” chart on the Technical Data Sheet (TDS).
- C. Spread the Planiseal MB mixture using a 3/16" to 1/4" (4.5 to 6 mm) notched squeegee and, if required, back-roll with a caged roller that has a short nap from 1/4" to 3/8" (6 to 10 mm).
- D. Construction, expansion or isolation joint treatment: Ensure that inside edges of these joints receive a consistent film of Planiseal MB applied with a brush. Complete joint treatment by placing a backer rod and appropriate joint sealant before installing flooring.
- E. Apply the entire contents of the mixed unit onto the substrate to cover it entirely with a wet film thickness (WFT) of about 8 mils. Use a quality paintbrush for the hard-to-reach areas.
- F. Ensure that all voids and pinholes are filled/sealed before moving on to the flooring phase. When applying over very porous concrete, Planiseal MB may exhibit what appear to be “air bubbles.” This apparently trapped air is a function of the low-viscosity Planiseal MB having penetrated into the concrete pores, sealing them and forcing out the air to the surface.
- G. If any doubt remains about the 100% sealing of these voids, apply a very thin second coat of Planiseal MB.
- H. Allow to dry until tack-free – typically from 5 to 6 hours at 73°F (23°C). In cases where a desired finish is a topping, such as Ultratop or Ultratop SP, apply Primer SN as recommended on the product’s Technical Data Sheet (TDS). Follow NIOSH safety standards when broadcasting with sand. Remove the excess sand on the following day by vacuum, and apply Ultratop or Ultratop SP according to the TDS.

END OF SECTION