Version: Aug. 24, 2009

MAPEI®

Planiseal 88™

Cement-based waterproofing coating

GREEN INNOVATION

DESCRIPTION

Planiseal 88 is a one-component, polymer-modified, cementitious waterproofing coating for concrete and masonry surfaces.

USES

- *Planiseal 88* is used for waterproofing horizontal, vertical and overhead surfaces for interior or exterior concrete applications, such as floors, walls, retaining walls, wet rooms, pools, planters, irrigation canals, culverts, concrete jersey barriers, beams, columns, building facades, overpasses and piers exposed to positive or negative hydrostatic pressure.

RECOMMENDED SUBSTRATES

- Properly prepared masonry and concrete at least 28 days old, stable and free of hydrostatic pressure.

Contact MAPEI's Technical Services Department for installation recommendations regarding substrates and conditions not listed.

TECHNICAL NOTES

- *Planiseal 88* ensures good adhesion to properly prepared concrete and masonry substrates.
- *Planiseal 88* is intended for horizontal, vertical and overhead surfaces exposed to positive and negative hydrostatic pressures.
- When hardened, *Planiseal 88* is highly resistant to water and freeze/thaw cycles.
- *Planiseal 88* requires only the addition of water. For superior performance, mix with diluted *Planicrete® AC* (see Technical Data Sheet for details) in lieu of water. Do not add other additives, cement or aggregates to *Planiseal 88*.
- *Planiseal 88* can be applied using a trowel or brush.
- *Planiseal 88* adheres tenaciously to old concrete surfaces. Before application of *Planiseal 88*, roughen concrete surfaces to ensure a secure bond. Do not use *Planiseal 88* for structural concrete repairs.
- *Planiseal 88* can only be used between 45°F to 95°F (7°C to 35°C).

INSTRUCTIONS

1. Surface Preparation

1.1 All substrates must be structurally sound, stable and solid.

1.2 Thoroughly clean 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.

1.3 Concrete surfaces must be mechanically profiled and prepared by shotblasting, sandblasting, waterjetting, scarifying, diamond-grinding or other engineer-approved methods. Reference ICRI CSP Standards 2 to 5 for acceptable profile height.

1.4 Concrete substrate and ambient room temperatures must be at least 45°F (7°C) and must not exceed 95°F (35°C) prior to application.

1.5 Dampen surfaces to achieve a saturated surface-dry (SSD) condition prior to the application of *Planiseal 88*. Do not apply onto surfaces that are wet or that have standing water on them.

2. Mixing

2.1 Into a clean mixing container, pour cool, clean potable water. See below for water amount, depending on the desired application.

2.1.1 Trowel grade: 6 to 6-1/2 U.S. qts. (5,68 to 6,15 L) of water per 55-lb. (25-kg) bag.

2.1.2 Brush grade: 6 to 6-1/2 U.S. qts. (5,68 to 6,15 L), plus an additional 8 U.S. oz. (0,24 L) of water per 55-lb. (25-kg) bag.

2.2 Slowly add *Planiseal 88* to the water while mixing with a "Jiffy" paddle and drill. Mix up to 4 minutes until you achieve a smooth, homogenous consistency. Let slake (sit in container) for about 10 minutes, remix and apply to surface.

2.3 To obtain mortar/coating with superior adhesion and waterproofing characteristics, mix with 1 part of *Planicrete® AC* to 1 part of cool, clean water (see Technical Data Sheet for details). The combined amount of *Planicrete AC* and water should equal the mixing ratios listed in 2.1.1 or 2.1.2, depending on the desired application.

TECHNICAL DATA (based on 73°F [23°C] and 50% relative humidity)

Physical state	Powder
Color	Gray or white
Shelf life	1 year in original bag, in dry, heated, and covered place
Apparent density	1,32
Dry solids content	100%
Flammability	Flame spread: 0; Fuel contribution: 0 Smoke development: 0
Health and safety	Consult the Material Safety Data Sheet (MSDS) for safe-handling instructions.

***Planiseal 88* (mixed)**

Color	Gray or white
Mixing ratio by weight	
Trowel grade	22 to 24% water/powder
Brush grade	24 to 25% water/powder
Mixing ratio by volume	
Trowel grade	6 to 6-1/2 U.S. qts. (5,68 to 6,15 L) per 55-lb. (25-kg) bag
Brush grade	6 to 6-1/2 U.S. qts. (5,68 to 6,15 L), plus an additional 8 U.S. oz. (0,24 L) of water per 55-lb. (25-kg) bag
Consistency of mix	Plastic mortar to slurry coat
Density	107 lbs. per cu. ft. (1,72 kg per L)
pH	12
Application temperature range	45°F to 95°F (7°C to 35°C)
Pot life	60 minutes
Recoating time	5 hours minimum, 24 hours maximum
Compressive strength – ASTM C109 (CAN/CSA-A5)	
7 days	> 3,500 psi (24,1 MPa)
28 days	> 3,600 psi (24,8 MPa)
Flexural strength – ASTM C348 (CAN/CSA-A23.2-8C)	
7 days	> 1,000 psi (6,90 MPa)
28 days	> 1,100 psi (7,59 MPa)
Pull-out strength (rupture of concrete) – ASTM D4541 (CAN/CSA-A23.2-6B)	
7 days	> 150 psi (1,03 MPa)
28 days	> 170 psi (1,17 MPa)
Water absorption – ASTM C67	12,7%
Resistance to freeze/thaw cycles	Good
Resistance to de-icing salts – ASTM C672, 40 cycles (CAN/CSA-A23.2-16C)	Good – 1, rating (very slight scaling)
Permeability to chlorides – ASTM C1202 (AASHTO T277)	Good – 300 coulombs (very low)
PACKAGING	Bag: 55 lbs. (25 kg)

APPROXIMATE COVERAGE* (total application thickness)

Damp-proofing (about 3/64" [1,2 mm])	159 sq. ft. per 55-lb. bag (14,8 m^2 per 25 kg)
Protection against the penetration of light moisture (about 5/64" [2 mm])	89 to 133 sq. ft. per 55-lb. bag (8,27 to 12,4 m^2 per 25 kg)
Protection for reservoirs or water-immersed structures (about. 1/8" [3 mm])	59 to 67 sq. ft. per 55-lb. bag (5,48 to 6,23 m^2 per 25 kg)
Protection against negative hydrostatic pressures (about 3/16" [4,5 mm])	38 to 44 sq. ft. per 55-lb. bag (3,53 to 4,09 m^2 per 25 kg)

** Coverage/thickness data shown are approximate and used for estimating purposes only. Actual job-site coverages may vary according to substrate conditions, type of equipment, thickness applied and application methods used.*

2.4 Do not overmix. Overmixing or moving the mixer up and down during the mixingprocess could cause air entrapment, which could shorten pot life.

2.5 Do not mix more material than can be applied within 60 minutes at 73°F (23°C).

3. Application

3.1 *Planiseal 88* can be applied with a trowel or a stiff bristle brush.

3.2 The first coat must completely fill and cover all holes, cavities and static cracks. Work this coat horizontally into the surface, ensuring a uniform coat.

3.3 The second coat must be applied after first coat has developed sufficient strength, typically within 5 to 6 hours, but not to exceed 24 hours. Work this coat vertically into the surface, ensuring that the uniform coat fills all voids.

3.4 A third coat may need to be applied in extreme cases of hydrostatic pressure.

3.5 When encountering exposed reinforcing steel bars, clean bars and coat with *Planibond™ 3C* (see Technical Data Sheet for specific information) to protect against corrosion and to improve adhesion.

Note: Use *Planitop® 12*, *Planitop 15*, *Planitop 18*, *Planitop 23* or *Planitop 25* repair mortars (see Technical Data Sheets for specific information) for deeper patch repair around the exposed reinforcing steel.

4. Curing

Wash tools and hands promptly with water before material hardens. Cured material must be mechanically removed.

STATEMENT OF RESPONSIBILITY

Before using, user shall determine the suitability of the product for its intended use and user alone assumes all risks and liability whatsoever in connection therewith. **ANY CLAIM SHALL BE DEEMED WAIVED UNLESS MADE IN WRITING TO US WITHIN FIFTEEN (15) DAYS FROM DATE IT WAS, OR REASONABLY SHOULD HAVE BEEN, DISCOVERED.**

We proudly support the following industry organizations:

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For the most current product and warranty data, visit www.mapei.com.

Edition Date: August 14, 2009