



PlanisealTM 88

Cement-Based Waterproofing Coating



DESCRIPTION

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

FEATURES AND BENEFITS

- Ideal for horizontal, vertical and overhead surfaces exposed to negative as well as positive hydrostatic pressures
- Great adhesion to properly prepared concrete and masonry substrates
- Highly resistant to water penetration and freeze/thaw cycles
- Applicable by trowel or brush
- Breathable and compatible with high-performance coatings
- Contributes points toward LEED-certified projects

<u>LEED Points Contribution</u>	<u>LEED Points</u>
MR Credit 5, Regional Materials*	Up to 2 points
IEQ Credit 4.2, Low-Emitting	
Materials – Paints & Coatings	1 point

* Using this product may help contribute to LEED certification of projects in the categories shown above. Points are awarded based on contributions of all project materials.

WHERE TO USE

- For waterproofing horizontal, vertical and overhead surfaces
- For interior or exterior concrete applications, such as 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

LIMITATIONS

- Not for use on traffic bearing surfaces
- Requires only the addition of water. For superior performance, mix Planiseal 88 with Planicrete[®] AC diluted with water (3 parts water to 1 part Planicrete AC). Do not add other additives, cement or aggregates to Planiseal 88.
- Before application of Planiseal 88, roughen old concrete surfaces to ensure proper bond.
- Only use between 45°F to 95°F (7°C to 35°C).

SUITABLE SUBSTRATES

- Properly prepared, structurally sound, fully cured concrete substrates (at least 28 days old)

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



SURFACE PREPARATION

- All substrates must be structurally sound, stable and solid.
- Thoroughly clean surface of any substance that could interfere with the bond of waterproofing material, including dirt, paint, tar, asphalt, wax, oil, grease, latex compounds, form release agents, laitance, loose toppings, efflorescence, foreign substances and any other residues.
- Concrete surfaces must be mechanically profiled and prepared by abrasive blasting, sandblasting, waterjetting, scarifying, diamond-grinding or other engineer-approved methods. Reference ICRI CSP Standards 2 to 5 for acceptable profile height.
- Concrete substrate and ambient room temperatures must be between 45°F and 95°F (7°C and 35°C) before application.
- Dampen surfaces to achieve a saturated surface-dry (SSD) condition before the application of *Planiseal 88*. Relieve hydrostatic pressure from substrate before application of *Planiseal 88*.

MIXING

Note: Choose all appropriate safety equipment before use. Refer to Material Safety Data Sheet (MSDS) for more information.

1. Into a clean mixing container, pour cool, clean potable water. See below for water amount, depending on the desired application.
 - Trowel-grade: 6 to 6-1/2 U.S. qts. (5,68 to 6,15 L) of water per 55-lb. (24,9-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. (24,9-kg) bag.
2. Slowly add *Planiseal 88* to the water while mixing with a "jiffy" paddle and drill. Mix up to 4 minutes until a smooth, homogenous consistency is achieved. Let slake (i.e., sit in container) for about 10 minutes, remix and apply to surface.
3. To obtain mortar/coating with superior adhesion and waterproofing characteristics, mix with 1 part of *Planicrete[®] AC* to 3 parts of cool, clean water. The combined amount of *Planicrete AC* and water should equal the mixing ratios listed above, depending on the desired application.
4. Avoid overmixing, or moving the mixer up and down during the mixing process, as it could trap air and shorten pot life.

PRODUCT APPLICATION

1. Read all installation instructions thoroughly before installation.
2. Apply *Planiseal 88* with a hawk and trowel or a stiff nylon-bristle brush.
3. The first coat must completely fill and cover all holes, cavities and static cracks. Ensure a uniform, well-bonded coat by working the material aggressively into the surface. Apply in a horizontal direction across the surface.
4. Apply a second coat after the 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.
5. A third coat may need to be applied in extreme cases of hydrostatic pressure.
6. Clean all exposed steel reinforcement and coat with *MapeterTM 1K* or *Planibond[®] 3C* (see respective Technical Data Sheet for details) to protect against corrosion.

CURING AND CLEANUP

- Wash tools and hands promptly with water before material hardens.
- Cured material must be mechanically removed.
- Reference ACI 308 regarding curing. Do not use solvent-based curing compounds.

Product Performance Properties

Laboratory Tests	Results
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-off strength (rupture of concrete) – ASTM C1583 (CAN/CSA-A23.2-6B)	
28 days	> 145 psi (1 MPa)
Permeance (ASTM E-96)	21.6 perms (mixed with water); 17.3 perms (mixed with <i>Planicrete AC</i> , diluted 1:1)
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)	Very low – in the range of 100 to 1000 coulombs

Shelf Life and Application Properties (before mixing)

Shelf life	1 year in original bag, in dry, heated, and covered place
Physical state	Powder
Color	Gray or white

Protect containers from freezing in transit and storage. Provide for heated storage on site and deliver all materials at least 24 hours before work begins.

Application Properties (mixed)

Laboratory Tests	Results
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. (24,9-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. (24,9-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	1 hour
Recoating time	5 hours minimum, 24 hours maximum

CSI Division Classifications

Cementitious Waterproofing	07 16 00
Maintenance of Concrete	03 01 00

Packaging

Product Code	Size
8088025	Bag: 55 lbs. (24,9 kg), gray
8088125	Bag: 55 lbs. (24,9 kg), white

Approximate Product Coverage

Size	Yield*
Damp-proofing (about 3/64" [1,2 mm])	159 sq. ft. per 55-lb. bag (14,8 m ² per 24,9 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 24,9 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 24,9 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 24,9 kg)

* Yield shown is for estimating purposes only. Actual jobsite yield may vary according to substrate conditions and setting practices.

PlanisealTM 88



RELATED DOCUMENTS

Standard Specification for Curing Concrete	ACI 308.1
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Refer to MAPEI's MSDS for specific data related to VOCs, health and safety, and handling of product.

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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Edition Date October 11, 2011
PR643 S88D_J11Evp © 2011 MAPEI Corporation.
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