

Mapelastic Smart

Roller-Grade, Flexible, Cementitious, Intermediate Waterproofing Membrane for Concrete Protection



DESCRIPTION

Mapelastic® Smart is a flexible, cementitious membrane for protecting new and repaired concrete structures. Mapelastic Smart is designed as an intermediate waterproofing membrane.

FEATURES AND BENEFITS

- Protects against water and aggressive elements
- Can be used on horizontal and vertical surfaces
- Remains flexible in most environments
- Easily applied with roller, brush or plaster pump
- Two components: a bag of powder with a predetermined mixing liquid

INDUSTRY STANDARDS AND APPROVALS

- ANSI: Exceeds A118.10 standard (Waterproofing Membranes for Thin-Set Ceramic Tile)
- IAPMO: Listed for use as shower pan liner

WHERE TO USE

- As an intermediate waterproofing on concrete block before application of MAPEI's *Elastocolor*® coatings
- As an intermediate waterproofing around window and door openings
- As an intermediate waterproofing in showers and fountains before tile installing
- As an intermediate waterproofing on balconies before installation of cement-based toppings

SURFACE PREPARATION

- 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.
- 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.
- Repair all surface defects (spalls, cracks, etc.) by engineer-approved methods.
- In areas of elevation changes (horizontal to vertical), install *Mapeband™ TPE* per its Technical Data Sheet.
- Ensure that the concrete substrate is saturated surface-dry (SSD) before installing *Mapelastic Smart*.

MIXING

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

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

PRODUCT APPLICATION

Read all installation instructions thoroughly before installation.

1. *Mapelastic Smart* can be applied by roller, brush or plaster pump.
2. Apply *Mapelastic Smart* to a prepared, saturated-surface dry (SSD) substrate to a thickness of 40 to 60 mils.
3. For best performance, install *Mapetex™ Sel*, ensuring that it is pressed firmly into the freshly applied *Mapelastic Smart*.
4. Continue applying *Mapelastic Smart* and *Mapetex Sel*, covering the entire installation area to receive tile or toppings.
5. Within 4 to 5 hours of the first application of *Mapelastic Smart*, install a second layer of *Mapelastic Smart* to obtain a total thickness of 80 mils.
6. Finish to the desired texture.
7. Allow curing for 16 to 24 hours before installation of ceramic tile or cement-based toppings.

CURING

- *Mapelastic Smart* is self-curing and does not require any curing compounds.

CLEANUP

- Wash tools with water immediately after use and before the mortar sets. Once the product has set, it can only be removed by mechanical means.

LIMITATIONS

- Apply *Mapelastic Smart* at temperatures between 46°F and 95°F (8°C and 35°C).
- Do not install over substrates containing asbestos.
- Always utilize *Mapetex Sel* between the first and second applications of *Mapelastic Smart*.
- Always apply *Mapelastic Smart* at 80 mils in two coats.
- Do not apply *Mapelastic Smart* at temperatures lower than 46°F (8°C) or in areas that will consistently be below 14°F (-10°C).
- Do not add cement, aggregate or water to *Mapelastic Smart*.
- Do not leave *Mapelastic Smart* as an exposed surface.
- Do not expose the application to rain and water for the first 24 hours.

Product Performance Properties

Laboratory Tests	Results
Consistency	Part A: Powder Part B: Liquid
Color	Part A: Gray Part B: White
Density	Part A: 87.4 lbs./cu. ft. (1,4 g/cm ³) Part B: 62.4 lbs./cu. ft. (1,0 g/cm ³)
Hazard classification in accordance with 99/45/CE	Part A: Irritant Part B: None

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.

Final Performance

Laboratory Tests	Results
Perm rating of 5/64" (2 mm) coating (ASTM E96)	< 1.0 perm
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 (0,90 MPa)
Elongation DIN 53504 (modified)	
After 28 days at 73°F (23°C) and 50% relative humidity	120%
Waterproofing in accordance with EN 12390/8 (modified) 1.5 bar, 7 days positive	Waterproof; no penetration
Fracture-recovering capacity:	
Crack bridging at breakage of nonreinforced <i>Mapelastic Smart</i> at 73°F (23°C)	
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 and 21 days in water	Width 1/16" (1,5 mm)
Crack bridging at breakage of <i>Mapelastic Smart</i> membrane reinforced with nonwoven fabric (<i>Mapetex Sel</i>) at 73°F (23°C)	
After 28 days at 73°F (23°C) and 50% relative humidity	Width > 1/8" (3 mm)

Shelf Life and Application Properties

at 73°F (23°C) and 50% relative humidity

Laboratory Tests	Results
Shelf life (in original, unopened container in a dry, heated place)	Part A: 1 year; Part B: 1 year
Color	Gray
Mixing ratio	Part A : Part B = 1 : 1
Consistency	Fluid
Mixed density	100 lbs. per cu. ft. (1 600 kg per m ³)
Density after spray application	137 lbs. per cu. ft. (2 200 kg per m ³)
Recommended application temperature range	46°F to 95°F (8°C to 35°C)
Pot life	1 hour
Drying time between coats	4 to 6 hours
Curing time before application of tile or stone	16 to 24 hours
Curing time before flood-testing (flood-test before applying tiles or alternate finish)	72 hours minimum
Curing time before water immersion and freeze/thaw exposure	5 to 7 days

Provide additional curing time in cooler or more humid conditions.

CSI Division Classification

Dampproofing and Waterproofing

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Packaging

Size

Bag, Part A: 33.3 lbs. (15,1 kg)

Jug, Part B: 2 U.S. gals. (7,57 L)

Approximate Coverage*

Size	Yield
Per mixed unit at 5/64" (2 mm) thickness	Application by brush or roller: 90 to 115 sq. ft. (8,36 to 10,7 m ²) Application by spray gun: 70 to 90 sq. ft. (6,50 to 8,36 m ²)

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

ADDITIONAL INFORMATION

Refer to the SDS for specific data related to health and safety as well as product handling.

For information on MAPEI's commitment to sustainability and transparency, as well as how MAPEI products may contribute to green building standards and certification systems, contact sustainability_USA@mapei.com (USA) or sustainability-durabilite@mapei.com (Canada).

LEGAL NOTICE

The contents of this Technical Data Sheet ("TDS") may be copied into another project-related document, but the resulting document shall not supplement nor replace requirements per the TDS in effect at the time of the MAPEI product installation. For the most up-to-date TDS and warranty information, please visit our website at www.mapei.com. **ANY ALTERATIONS TO THE WORDING OR REQUIREMENTS CONTAINED IN OR DERIVED FROM THIS TDS SHALL VOID ALL RELATED MAPEI WARRANTIES.**

Before using, the user must determine the suitability of our products for the intended use, and the user alone assumes all risks and liability. **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.**

CONTACT INFORMATION

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For the most current product data and BEST-BACKEDSM warranty information, visit www.mapei.com.

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