



# Mapecem<sup>®</sup> Premix

## Fast-Setting Screed Mortar



### DESCRIPTION

*Mapecem Premix* is a fast-setting, premixed cement-based mortar for concrete repairs and subfloor preparation work. Mixed exclusively with water, *Mapecem Premix* provides an easy-to-use, high-compressive-strength, fast-setting mortar that sets completely within 24 hours without shrinkage cracks. Thanks to MAPEI's High-Hydrated Cement Technology (HCT™), *Mapecem Premix* offers superior drying-out characteristics for quick curing and does not contribute to efflorescence. When properly used, *Mapecem Premix* will allow installation of ceramic tile and natural-stone flooring after only 3 to 4 hours and installation of floor covering (such as vinyl, wood, rubber, linoleum and carpet) after 16 to 18 hours.

### FEATURES AND BENEFITS

- Repairs concrete from 1/4" to 4" (6 mm to 10 cm) thick
- Allows tile setting in 3 to 4 hours
- Allows installation of floor covering in 16 to 18 hours

### WHERE TO USE

- Fast-track concrete repairs and interior/exterior concrete subfloor preparation
- For building slopes and access ramps from at least 1/4" to 4" (6 mm to 10 cm) thick
- For filling trenches, holes and cuts in existing concrete up to 4" (10 cm) deep
- For new and old concrete subfloor repairs and leveling from 1/4" to 4" (6 mm to 10 cm) thick

- For building shower bases and curbs up to 4" (10 cm) thick

### LIMITATIONS

- Do not use on vertical surfaces.
- Exterior areas must be waterproofed with an appropriate MAPEI waterproofing membrane.
- Do not exceed 2" (5 cm) in thickness when leveling or repairing concrete subfloor areas larger than 16 sq. ft. (1,49 m<sup>2</sup>).
- Do not use in areas where hydrostatic or moisture problems exist.
- Use only when the substrate temperature is between 50°F and 100°F (10°C and 38°C).
- Do not use as a wear surface.
- In environments subject to freeze/thaw conditions or where increased durability is desired, replace water with undiluted *Planicrete*<sup>®</sup> AC.

### SUITABLE SUBSTRATES

- Clean, rough-textured and completely cured concrete with a profile of at least 1/8" (3 mm)

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



## SURFACE PREPARATION

- The supporting substrate must be structurally sound, solid, clean and free of dust, oil, grease, paint, tar, wax, curing agents, primer, sealer, laitance, loose particles, debris and any other substance that may reduce or prevent adhesion.
- Existing concrete must be completely cured, and the contact surface must have a sufficiently textured profile of a minimum  $\pm 1/8"$  [3 mm] to provide a good mechanical bond. Reference International Concrete Repair Institute (ICRI) concrete repair profiles (CSP) #7 to #9 for an acceptable profile.
- Mechanically remove all loose particles, old patching compounds, weak topping, paint, primer and curing agent residues. Roughen smooth, dense concrete surfaces by using sandblasting, waterblasting or shotblasting; scarifying; or rough grinding as required.
- Over well-supported, structurally solid wood, plywood, oriented strand board (OSB), steel and dimensionally unstable substrates, install a polyethylene sheeting (greater than 30 mils thick) or an appropriate cleavage membrane over the entire substrate. Next, apply a *Mapecem Premix* wire-mesh-reinforced floating screed at least 1-3/8" (3,5 cm) thick. This type of work is restricted to interior installations only.

See the "Surface preparation requirements" reference guide in the Tile & Stone Installation Systems section of MAPEI's Website.

## MIXING

Choose all appropriate safety equipment before use. Refer to the Safety Data Sheet for details.

- *Mapecem Premix* is a preblended mortar. Do not add any Portland cement or other ingredients, except *Planicrete AC* as a potential admixture.
- In environments subject to freeze/thaw conditions or where increased durability is desired, replace water with undiluted *Planicrete AC*.
- Always use clean mixing containers and tools.
- Use a low-speed mortar mixer or hand mixer (at no more than 375 rpm).

### For a slurry bond coat

- Mix equal parts (by volume) of *Mapecem Premix* with *Planicrete AC* while slowly and continuous mixing. (A slurry bond coat can also be made from a rapid-setting MAPEI polymer-modified mortar mixed with water.)

### For a mortar mix

1. Into a clean container, pour 80 to 85 U.S. oz. (2,37 to 2,51 L) of clean, potable water or *Planicrete AC*. Gradually add 50 lbs. (22,7 kg) of *Mapecem Premix* while slowly and continuously mixing. Do not add any Portland cement or other ingredients.

Note: Give special attention to gauging the exact amount of water required in the mix, so that *Mapecem Premix* mortar is properly packed in place, screeded or troweled without surface laitance. Excess water will retard drying and curing. Do not mix *Mapecem Premix* mortar with less than the recommended water quantity, as this may cause only partial hydration and weak mechanical strength.

2. Mix for 1 to 2 minutes until a homogenous initial mix is achieved. Hand-scrape the container's sides and bottom as well as the mixer paddles to blend in unmixed powdery material. Resume mixing and mix thoroughly until all the material is mixed to a homogenous, plastic, paste-like consistency.

## PRODUCT APPLICATION

Read all installation instructions thoroughly before installation.

1. Apply, pack, screed and level each mortar batch in the shortest possible time and, in all cases, within 20 minutes at 73°F (23°C). Do not allow mortar to remain in the container or mixer for longer than 20 to 30 minutes. Higher temperatures will shorten the pot life; therefore, adjust the batch size and working pattern accordingly.
2. Discard unused, partially set or dry mortar. Do not add water for remixing or apply any mortar that has already started setting.
3. Pre-wet the existing concrete surface with water, to provide a saturated surface-dry (SSD) contact surface. Remove all excess water from the surface.
4. Apply the *Mapecem Premix* slurry bond coat mixture with a stiff brush or broom immediately before applying *Mapecem Premix*. Apply the slurry bond coat as you go (in a limited area), so that the slurry bond coat is still fresh when the *Mapecem Premix* mortar is applied. Agitate (stir) the slurry bond coat frequently to keep the mix homogenous. Do not allow the slurry bond coat to dry partially or completely before the *Mapecem Premix* mortar mix is pressure-applied into the slurry bond coat. If a rapid-setting, polymer-modified slurry bond coat is used, contact MAPEI's Technical Services Department.
5. Using a trowel, work the *Mapecem Premix* mortar into the wet slurry bond coat or a *Planibond® EBA* binder to achieve a good penetration and a good bond to the concrete surface.
6. Apply, firmly pack and screed the mortar mix to the required thickness. Firmly established wood, metal or *Mapecem Premix* mortar screed guides can be used to ensure the proper thickness.
7. Do not wet the surface of the freshly applied mortar. *Mapecem Premix* mortar must be dry-cured.
8. Let the *Mapecem Premix* mortar dry-cure and harden undisturbed for about 20 to 50 minutes, depending on temperature and humidity conditions.

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## Product Performance Properties

Laboratory Tests	Results
Compressive strength when mixed with water – ASTM C109 (CAN/CSA-A5)	
24 hours	> 2,000 psi (13,8 MPa)
7 days	> 3,000 psi (20,7 MPa)
28 days	> 4,000 psi (27,6 MPa)

## Shelf Life and Application Properties

Shelf life	1 year when stored in sealed unopened packaging in dry, heated well-ventilated conditions. Protect from moisture and excessive heat.
Color	Natural gray
Pot life	20 to 30 minutes
Ready for foot traffic*	2 to 3 hours
Ready for cement-based toppings*	After 4 hours
Ready for ceramic tile and natural stone*	After 3 to 4 hours
Ready for floor covering (vinyl, wood, rubber, linoleum and carpet)*	After 16 to 18 hours (subject to moisture emission test)
Resistance to moisture	Excellent

\* Ready times may vary based on temperature, humidity, substrate porosity, thickness of application and jobsite conditions. Allow Mapecem Premix to dry completely before installing moisture-sensitive floor coverings or membranes.

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.

## Packaging

Size
Bag: 50 lbs. (22,7 kg)

## Approximate Coverage\*\* per 50 lbs. (22,7 kg)

Thickness	Coverage**
1/4" (6 mm)	18.1 sq. ft. (1,68 m <sup>2</sup> )
1" (2,5 cm)	4.5 sq. ft. (0,42 m <sup>2</sup> )
2" (5 cm)	2.3 sq. ft. (0,21 m <sup>2</sup> )
4" (10 cm)	1.1 sq. ft. (0,10 m <sup>2</sup> )

\*\* Coverage shown is for estimating purposes only. Actual coverage may vary depending on substrate condition, type of equipment used, actual thickness applied, handling and application procedures.

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9. Finish the surface to the required plane and texture using a steel trowel, a wood float, or a steel trowel and broom.

## EXPANSION AND CONTROL JOINTS

- Provide expansion and control joints at the perimeter edge of the floor, around columns, curbs and other areas where a change of plane occurs and at the intersection between areas of different substrates.
- Install control joints lengthwise and crosswise at regular spacing intervals according to needs and/or specifications. When *Mapecem Premix* mortar is to be covered by ceramic tile or natural-stone flooring, follow TCNA Detail EJ-171 (or TTMAC Detail MJ301) recommendations for building and spacing expansion and control joints.
- Leave a width of at least 3/8" (10 mm) for joint space. Temporarily fill in this joint width with cardboard, polystyrene or cork until the joint is ready to be filled permanently with a recommended expansion joint material.

## CLEANUP

When fresh, *Mapecem Premix* mortar is easily removed from hands, tools and equipment with water. If allowed to set and harden, it can only be removed through mechanical abrasion.

## PROTECTION

- Depending on temperature and humidity conditions, restrict foot traffic for at least 2 to 3 hours after installation.

- For installations of wood and resilient flooring, wait at least 16 to 18 hours or until the moisture content of the mortar is sufficiently low.
- For installations of ceramic tile and natural stone, *Mapecem Premix* mortar should be sufficiently dry after 3 to 4 hours.

## RELATED DOCUMENTS

Reference Guide: Surface Preparation Requirements for tile and stone installation systems

At [www.mapei.com](http://www.mapei.com)

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](mailto:sustainability_USA@mapei.com) (USA) or [sustainability-durabilite@mapei.com](mailto:sustainability-durabilite@mapei.com) (Canada).

## LEGAL NOTICE

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